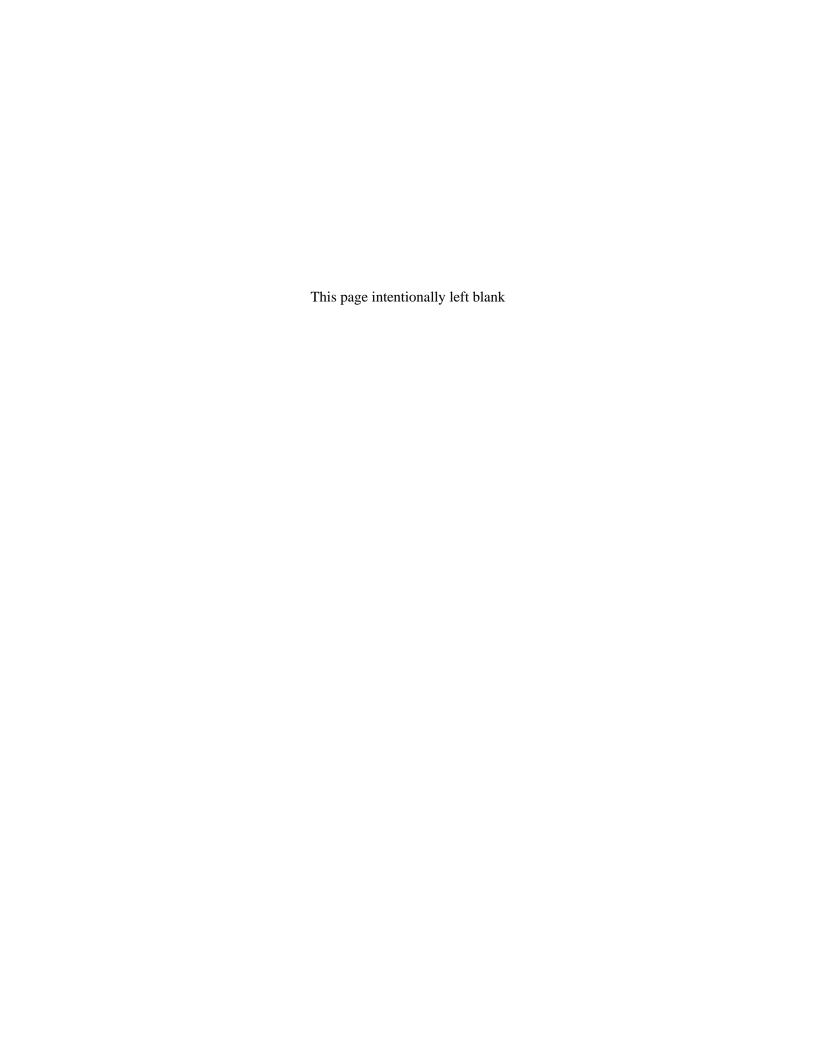
U.S. Army Corps of Engineers Permit Northeast Energy Direct Project Section 3, Appendix 3 Wetland and Watercourse Report

Section 3 - Appendix 3

Inventory and Delineation of Wetlands and Watercourses along the Massachusetts Portion of the Northeast Energy Direct Project

This Appendix was formatted in its entirety as part of the Final FERC 7(c) Application, filed on November 20, 2015 (PF-14-22-000), Environmental Reports, Volume I; therefore, appendix references and page numbers contained within this document are not consistent with this permit application.



INVENTORY AND DELINEATION OF WETLANDS AND WATERCOURSES ALONG THE MASSACHUSETTS PORTION OF THE NORTHEAST ENERGY DIRECT PROJECT

Tennessee Gas Pipeline Company, L.L.C. 1001 Louisiana Street Houston, Texas 77002

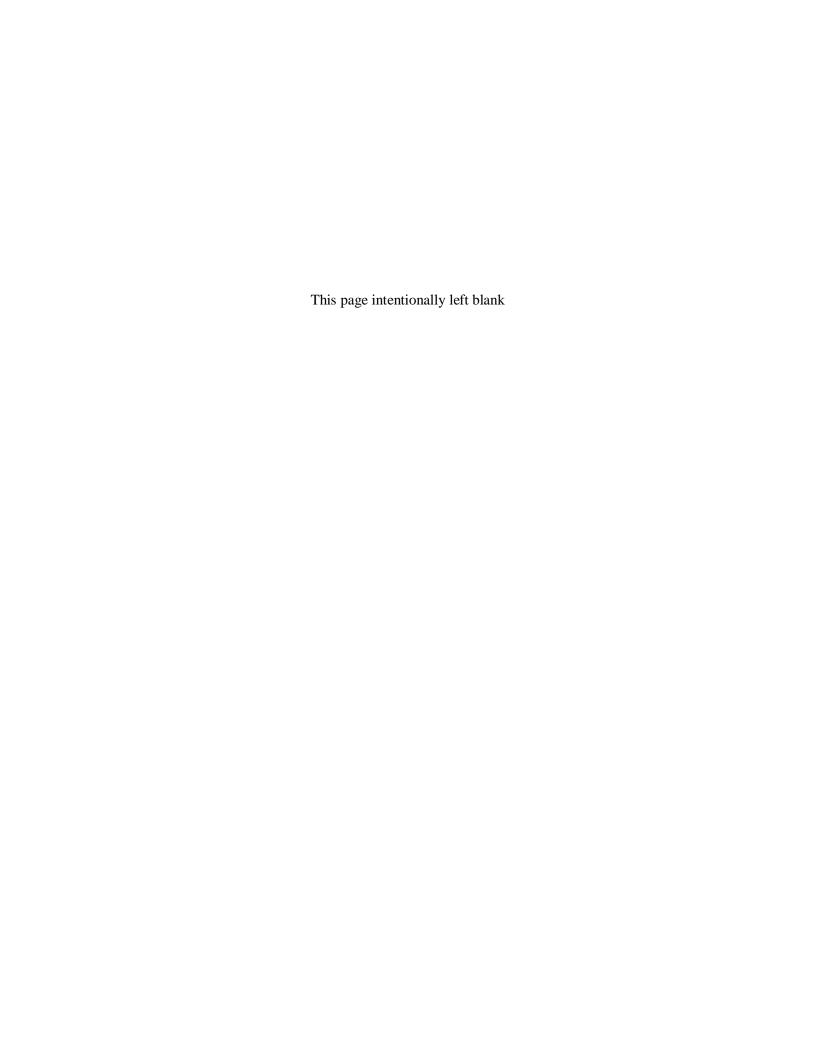


TABLE OF CONTENTS

1.0	INTI	RODUCTION	2e-1			
2.0	WETLAND AND WATERCOURSE REGULATIONS					
	2.1	Section 404 – Clean Water Act	2e-8			
	2.2	Massachusetts Department of Environmental Protection Regulations	2e-9			
3.0	WET	TLAND DELINEATION PROCEDURES	2e-10			
	3.1	Wetland Delineation Procedures	2e-10			
	3.2	Waterbody Delineation Procedures	2e-11			
	3.3	Pre-Survey Desktop Investigations	2e-11			
	3.4	Field Surveys	2e-11			
	3.5	Wetland Classification.	2e-15			
	3.6	Post-Survey Desktop Analysis	2e-16			
4.0	RES	ULTS	2e-17			
	4.1	Wetland Vegetation	2e-17			
	4.2	Wetland Soils	2e-17			
	4.3	Watercourses	2e-18			
5.0	REF	ERENCES	2e-19			

2e-ii

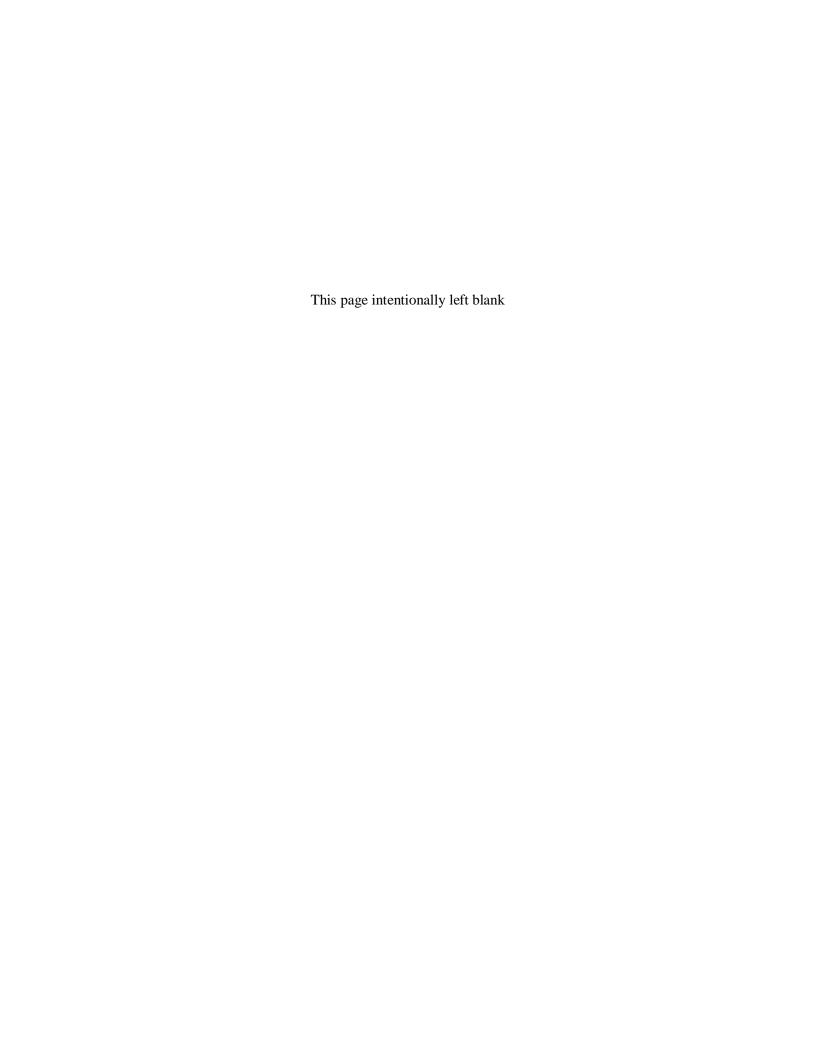
TABLE OF CONTENTS (Continued) LIST OF TABLES

Table 2e-1 Summary of Project Facilities in Massachusetts	2e-3
Table 2e-2 Feature Identification Nomenclature.	2e-12
Table 2e-3 Wetland Soil Indicators for the Northcentral and Northeast Region	2e-13
Table 2e-4 Wetland Hydrology Indicators for the Northcentral and Northeast Region	2e-15
Table 2e-A1 Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Dir Project	
Table 2e-A2 Waterbodies Identified Along the Massachusetts Portion of the Northeast Energy Project	

2e-iii

TABLE OF CONTENTS (Continued) LIST OF ATTACHMENTS

APPENDIX 2e-A:	Tables
Table 2e-A1	Wetlands Identified along the Massachusetts Portion of the Northeast Energy Direct Project
Table 2e-A2	Waterbodies Identified along the Massachusetts Portion of the Northeast Energy Direct Project
APPENDIX 2e-B:	Wetland and Waterbody Locations Identified on USGS 7.5 Minute Topographic Map Excerpts (provided under separate cover in Volume II, Appendix E of the FERC Environmental Report)
APPENDIX 2e-C:	Wetland and Waterbody Locations Identified on Aerial Alignment Sheets (provided under separate cover in Volume II, Appendix F, of the FERC Environmental Report)
APPENDIX 2e-D:	Army Corps of Engineers Wetland Data Sheets and Photographs
APPENDIX 2e-E:	Army Corps of Engineers Waterbody Data Sheets and Photographs



1.0 INTRODUCTION

This report provides a summary of wetland and watercourse inventories and delineations conducted along the Massachusetts portions of the proposed Northeast Energy Direct Project ("NED Project" or "Project"). The proposed project, as currently configured, would involve the construction of approximately 420-miles of new pipeline and pipeline looping (<u>i.e.</u>, the installation of additional pipe to adjacent to the existing pipeline) in Pennsylvania, New York, Massachusetts, New Hampshire and Connecticut. The entire proposed NED Project facilities are as follows:

- Approximately 41 miles of pipeline looping on Tennessee's 300 Line in Pennsylvania;
- Approximately 133 miles of new pipeline to be generally co-located with the certificated Constitution Pipeline Project ("Constitution")¹ in Pennsylvania and New York (extending from Tennessee's existing 300 Line near Auburn, Pennsylvania to Wright, New York);
- Approximately 54 miles of pipeline generally co-located with Tennessee's existing 200 Line and an existing utility corridor in New York;
- Approximately 64 miles of pipeline generally co-located with an existing utility corridor in Massachusetts:
- Approximately 70 miles of pipeline generally co-located with an existing utility corridor in New Hampshire (extending southeast to Dracut, Massachusetts);
- Approximately 58 miles of various laterals and a pipeline loop in Massachusetts, New Hampshire, and Connecticut to serve local markets;
- Construction of nine new compressor stations and 15 new meter stations, and modifications to existing compressor and meter stations throughout the Project area; and
- Construction of appurtenant facilities, including mainline valves ("MLVs"), cathodic protection, and pig facilities through the Project area.

The Project is proposed by Tennessee Gas Pipeline Company ("Tennessee"), a wholly-owned subsidiary of Kinder Morgan, Inc. and a major supplier of natural gas to utilities and power generators in the Northeast. The Massachusetts Portion of the Project consists of approximately 64 miles of 30-inch-diameter pipeline, beginning at the New York/Massachusetts border and extending to the Massachusetts/New Hampshire border in Franklin County in western Massachusetts. This mileage also includes the portion of mainline from the New Hampshire/Massachusetts border to Dracut in Middlesex County in eastern Massachusetts (as part of the Wright to Dracut Pipeline Segment). Portions of the Wright to Dracut Pipeline Segment will be located in New York, Massachusetts, and New Hampshire. Approximately 63 miles of this new proposed mainline pipeline (beginning at the New York/Massachusetts border) will be generally co-located with an existing utility corridor to the extent

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¹ On December 2, 2014, the Commission issued an Order Issuing Certificates and Approving Abandonment, Constitution Pipeline Company, LLC, 149 FERC 61,199 (2014), for the Constitution Pipeline Project, which adopted the recommendations from the Constitution "Final Environmental Impact Statement: Constitution Pipeline and Wright Interconnect Projects," FERC Environmental Impact Statement ("EIS") No. 0249F, Docket Numbers CP13-499-000, CP13-502-000, and PF12-9-000 ("Constitution Final EIS ["FEIS"]") issued October 24, 2014. Information contained within this WDR related to the Constitution Pipeline Project was based on the routing included in the FEIS, as approved by the certificate order.

26-2

practicable, feasible, and in compliance with existing law. The remainder of the proposed mainline pipeline facilities in Massachusetts will be new pipeline right-of-way ("ROW").

Additionally, Tennessee is proposing five separate new laterals in Massachusetts as part of the Project:

- The 30-inch diameter Maritimes Delivery Line will be 0.75 miles in length and will extend from the Market Path Tail Station to an interconnect with the Maritimes and Northeast Pipeline System.
- The 24-inch diameter Lynnfield Lateral will be 14.28 miles in length. Approximately 8.95 miles of the 14.28 miles will be co-located with an existing utility corridor.
- The 24-inch diameter Peabody Lateral will be 5.32 miles in length and will extend from the new Lynnfield Lateral proposed as part of the Project. Construction of this lateral will include a take-up and relay of Tennessee's existing 8-inch-diameter Beverly-Salem Colonial Delivery Lateral pipeline.
- The 20-inch diameter Haverhill Lateral (Massachusetts Portion) will be approximately 9.27 miles in length that will extend from Massachusetts through New Hampshire. Construction of this lateral will include a partial take-up and relay of Tennessee's existing 10-inch diameter Haverhill Lateral pipeline. Approximately 7.23 miles of the 9.27 miles will be located in Massachusetts. The entire 7.23 miles in Massachusetts will be co-located with an existing utility corridor and 6.95 miles will be a take-up and relay of the existing Haverhill Lateral within Tennessee's existing ROW.
- The 12-inch-diameter Fitchburg Lateral Extension (Massachusetts Portion) will be 13.97 miles in length. This lateral will be an extension of Tennessee's existing Fitchburg Lateral which will connect to the Wright to Dracut Pipeline Segment in New Hampshire. Approximately 8.89 miles (of which 3.71 miles will be co-located with an existing utility corridor) of the 13.97 miles will be located in Massachusetts.

In addition to the pipeline facilities, the NED Project includes construction of three new compressor stations in Massachusetts. A summary of Project facilities in Massachusetts is detailed in Table 2e-1. Additional NED Project facilities include use of access roads and contractor yards.

This report discusses the methods used to identify boundaries of both the state and federal wetlands and watercourses encountered along the Massachusetts portion of the Project and summarizes the findings of the surveys. Onsite and offsite wetland and watercourse investigations in Massachusetts were conducted between October 13, 2014, and September 15, 2015. It contains wetland data between Wright to Dracut Pipeline Segment (Massachusetts Portion), Segment G, MP 0.00 to MP 2.53, Wright to Dracut Pipeline Segment (Massachusetts Portion), Segment H, MP 0.00 to MP 28.61, Wright to Dracut Pipeline Segment (Massachusetts Portion), Segment K, MP 0.00 to MP 2.44, Maritimes Delivery Line, Segment L, MP 0.00 to MP 0.75, Lynnfield Lateral, Segment N, MP 0.00 to MP 14.28, Peabody Lateral, Segment O, MP 0.00 to MP 5.32, Haverhill Lateral (Massachusetts Portion), Segment P, MP 0.00 to MP 6.95 and MP 8.99 to MP 9.27, and Fitchburg Lateral Extension (Massachusetts Portion), Segment Q, MP 5.08 to MP 10.37. Because the route determination and survey access permission process are ongoing, additional delineation submissions will be necessary to complete the process of jurisdictional boundary line verification and approval.

Table 2e-1 Summary of Project Facilities in Massachusetts

Facility Name	Facility Type	New / Modified	Associated Pipeline ¹	County	Segment ²	Milepost ³	Length (miles) ⁴			
Massachusetts										
Wright to Dracut Pipeline Segment	Pipeline	New	N/A	Berkshire	G	N/A	21.39			
Wright to Dracut Pipeline Segment	Pipeline	New	N/A	Hampshire	G	N/A	5.55			
Wright to Dracut Pipeline Segment	Pipeline	New	N/A	Franklin	G	N/A	5.73			
Wright to Dracut Pipeline Segment	Pipeline	New	N/A	Franklin	Н	N/A	28.61			
Wright to Dracut Pipeline Segment	Pipeline	New	N/A	Middlesex	K	N/A	2.44			
Maritimes Delivery Line	Pipeline	New	N/A	Middlesex	L	N/A	0.75			
Lynnfield Lateral	Pipeline	New	N/A	Middlesex	N	N/A	9.45			
Lynnfield Lateral	Pipeline	New	N/A	Essex	N	N/A	4.83			
Peabody Lateral	Pipeline	New	N/A	Essex	О	N/A	5.32			
Haverhill Lateral	Pipeline	New	N/A	Middlesex	P	N/A	2.77			
Haverhill Lateral	Pipeline	New	N/A	Essex	P	N/A	4.46			
Fitchburg Lateral Extension	Pipeline	New	N/A	Middlesex	Q	N/A	5.29			
Fitchburg Lateral Extension	Pipeline	New	N/A	Worcester	Q	N/A	3.60			
North Adams Check	Meter Station	New	Wright to Dracut Pipeline Segment	Berkshire	G	7.32	N/A			

Table 2e-1 Summary of Project Facilities in Massachusetts

Facility Name	Facility Type	New / Modified	Associated Pipeline ¹	County	Segment ²	Milepost ³	Length (miles) ⁴
Market Path Mid Station 2	Compressor Station	New	Wright to Dracut Pipeline Segment	Berkshire	G	17.09	N/A
West Greenfield	Meter Station	New	Wright to Dracut Pipeline Segment	Franklin	Н	9.29	N/A
Market Path Mid Station	Compressor Station	New	Wright to Dracut Pipeline Segment	Franklin	Н	23.98	N/A
Market Path Tail Station	Compressor Station	New	Wright to Dracut Pipeline Segment	Middlesex	K	1.05	N/A
Maritimes	Meter Station	New	Maritimes Delivery Line	Middlesex	L	0.75	N/A
200-1 Check	Meter Station	New	Lynnfield Lateral	Essex	N	14.28	N/A
Haverhill Check	Meter Station	New	Haverhill Lateral	Middlesex	P	1.53	N/A
Fitchburg Lateral Check	Meter Station	New	Fitchburg Lateral Extension	Worcester	Q	13.97	N/A
Longmeadow ⁵	Meter Station	New	Existing TGP Line 200-2	Hampden	N/A	Proposed Facility	N/A
Everett ⁵	Meter Station	New	Existing TGP Line 270C-1100	Middlesex	N/A	Proposed Facility	N/A
North Adams Custody (20103) ⁵	Meter Station	Modified	Existing TGP Line 256A-100	Berkshire	N/A	Existing Facility	N/A
Lawrence (20121) ⁵	Meter Station	Modified	Existing TGP Line 270B-400	Essex	N/A	Existing Facility	N/A

Table 2e-1 Summary of Project Facilities in Massachusetts

Facility Name	Facility New / Type Modified		Associated Pipeline ¹	County	Segment ²	Milepost ³	Length (miles) ⁴
Southbridge (20108) ⁵	Meter Station	Modified	Existing TGP Line 264A-100	Worcester	N/A	Existing Facility	N/A
Spencer (20191) ⁵	Meter Station	Modified	Existing TGP Line 264B-100	Worcester	N/A	Existing Facility	N/A
Lunenburg (20949) ⁵	Meter Station	Modified	Existing TGP Line 268A-100	Worcester	N/A	Existing Facility	N/A
Lexington (20192) ⁵	Meter Station	Modified	Existing TGP Line 200-1	Middlesex	N/A	Existing Facility	N/A
Burlington (20341) ⁵	Meter Station	Modified	Existing TGP Line 270A-100	Middlesex	N/A	Existing Facility	N/A
Arlington (20115) ⁵	Meter Station	Modified	Existing TGP Line 270A-100	Middlesex	N/A	Existing Facility	N/A
Reading (20136) ⁵	Meter Station	Modified	Existing TGP Line 270C-200	Middlesex	N/A	Existing Facility	N/A
Essex (20323) ⁵	Meter Station	Modified	Existing TGP Line 270C-500	Essex	N/A	Existing Facility	N/A
Pittsfield (20102) ⁵	Meter Station	Modified	Existing TGP Line 256A-200	Berkshire	N/A	Existing Facility	N/A
North Adams Regulator ⁵	Regulator	New	Existing TGP Line 256A-100	Berkshire	N/A	Proposed Facility	N/A
Wilmington Regulator ⁵	Regulator	New	Existing TGP Line 270C-200	Middlesex	N/A	Proposed Facility	N/A
					Massachu	setts Total	100.19

Table 2e-1 Summary of Project Facilities in Massachusetts

Facility Name	Facility Type	New / Modified	Associated Pipeline ¹	County	Segment ²	Milepost ³	Length (miles) ⁴
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¹ N/A-Not Applicable for proposed pipelines. This column indicates the associated pipeline segment for each aboveground facility (compressor stations, meter stations, and regulators).

² Each segment is associated with its own set of mileposts beginning at MP 0.00.

³ N/A-Not Applicable for proposed pipeline facilities. Mileposts are provided for the existing compressor station and the existing and new meter stations located along new proposed pipeline segments only. Mileposts are not provided for meter stations located along TGP's existing system.

⁴ N/A-Not Applicable for aboveground facilities (compressor stations, meter stations, and regulators). Pipeline length applies only to the proposed pipeline facilities as reflected on the alignment sheets.

⁵ Mileposts for these facilities are not provided because these facilities are located along other pipeline segments of Tennessee's existing system that are not proposed to be modified as part of this Project.

Tennessee Gas Pipeline Company, L.L.C. a Kinder Morgan company

Inventory and Delineation of Wetlands and Watercourses
Along the Massachusetts Portion of the
Northeast Energy Direct Project

2e-7

Tables listing wetlands and watercourses identified during the course of the surveys are located in Appendix 2e-A. The tables include only those field-delieated wetlands and waterbodies which are located within the Project workspace and will be impacted by construction or operation of the Project. Additional wetlands and watercourses identified in the survey corridor but not impacted by the proposed Project configuration will be included in any future delineation submissions. Appendix 2e-B and Appendix 2e-C contain the wetland and watercourse mapping associated with the Project. Appendix 2e-D contains the field data forms which were used to document the wetland delineations, including representative wetland photographs. Appendix 2e-E contains the field data forms which were used to document the watercourse delineations, including representative watercourse photographs.

26-8

2.0 WETLAND AND WATERCOURSE REGULATIONS

Wetlands and watercourses subject to state or federal jurisdiction based upon the Federal Clean Water Act and the Massachusetts Department of Environmental Protection ("MADEP"), Freshwater Wetlands Protection Act ("WPA"), Massachusetts General Law ("MGL") Chapter 131, section 40, implemented by 310 Code of Massachusetts Regulations ("CMR") 10.00, and their implementing regulations and mapping requirements are identified..

2.1 SECTION 404 – CLEAN WATER ACT

Wetlands, springs, and other waters of the United States are regulated under Section 404 of the Federal Clean Water Act ("CWA"; 33 U.S.C. 1341) by the U.S. Army Corps of Engineers ("USACE"). Under 33 Code of Federal Regulations ("CFR") Part 328.3(a), the term "waters of the U.S." include:

- 1. All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
- 2. All interstate waters including interstate wetlands;
- 3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters:
 - i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - iii. Which are used or could be used for industrial purpose by industries in interstate commerce:
- 4. All impoundments of waters otherwise defined as waters of the United States under the definition;
- 5. Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
- 6. The territorial seas;
- 7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section.
- 8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

The term "wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328.3(b)).

26-9

Under 33 CFR 328.4(c), the limits of federal jurisdiction for non-tidal waters of the United States extend to:

- 1. the ordinary high water mark In the absence of adjacent wetlands; or
- 2. beyond the ordinary high water mark to the limit of the adjacent wetlands when adjacent wetlands are present; or
- 3. to the limit of the wetland when the water of the United States consists only of wetlands

Wetlands and waterbodies meeting these criteria are subject to federal jurisdiction under Section 404 of the Federal Clean Water Act.

2.2 <u>MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL</u> PROTECTION REGULATIONS

In Massachusetts, wetlands and watercourses are regulated by the MADEP under the Massachusetts Wetlands Protection Act (WPA MGL c.131 s.40). The WPA defines Bordering Vegetated Wetlands ("BVW") as "freshwater wetlands which border on creeks, rivers, streams, ponds and lakes and includes wet meadows, marshes, swamps and bogs. Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants." The WPA also defines Riverfront Area as being associated with, "any natural flowing body of water that empties to any ocean, lake, pond, or other river and which flows throughout the year." The Massachusetts Rivers Protection Act (MGL c.258, Acts of 1996) further protects Riverfront Area and defines it as "a 200-foot wide corridor on each side of a perennial river or stream, measured from the mean annual high-water line of the river."

Bank is defined as the portion of land surface which normally abuts and confines a water body, occurs between a water body and a BVW (310 CMR 10.54(2)(a)). While the Land Under Water Bodies and Water Ways is the land beneath any creek, river, stream, pond or lake, and is therefore also associated with these streams (310 CMR (2)(a)). The limit of this resource area is bound by the mean annual low water level, with Bank resource areas adjacent to it.

The boundary of Bordering Land Subject to Flooding (BLSF) is the estimated lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm. This boundary is determined by reference to the most recently available flood profile data prepared by the Federal Emergency Management Agency (310 CMR 10.57(2)(a)(3)).

3.0 WETLAND DELINEATION PROCEDURES

This report describes area surrounding the current proposed Project Route located in the following counties and township in the State of Massachusetts:

- Berkshire County Hancock, Lanesborough, Chesire, Dalton, Hinsdale, Peru, and Windsor
- Hampshire County Plainfield
- Franklin County Ashfield, Conway, Shelburne, Deerfield, Montague, Erving, Northfield, and Warwick
- Middlesex County Dracut, Tewksbury, Wilmington, North Reading, Reading, and Townsend
- Essex County Andover, Lynnfield, Middleton, Peabody, Danvers, and Methuen
- Worcester County Lunenburg

The attached alignment sheets with wetland and waterbody locations (Appendix 2e-C) identify the Project location in Berkshire, Hampshire, Franklin, Middlesex, Essex, and Worcester Counties and major mileposts along the proposed alignment.

Identification of regulated wetland and waterbody boundaries occurred within a 400-foot wide survey corridor centered over the proposed pipeline (200 feet either side of the pipe centerline) when traversing greenfield, and a 250-foot wide survey corridor where the proposed pipeline is co-located with an existing utility (50 feet on the utility side and 200 feet on the non-utility side), from October 13, 2014, through September 15, 2015 (Study Area). Only land parcels where survey access permission was granted by landowners were surveyed. Therefore, many wetlands identified within the Study Area are incomplete and end at no-access parcel boundaries. Survey access has been granted by approximately 33 percent of landowners in the Study Area in Massachusetts. As of September 15, 2015, surveys have been completed on approximately 28.54 miles (28 percent) of the Study Area in Massachusetts.

For the purpose of this state-specific report, all of the features identified within the Study Area have been refined to only those features falling within the limits of the Project workspace corridor. These features fall within either the limits of both the temporary workspace and permanent ROW or partially within either one of these areas.

This report does not detail survey of all temporary and permanent access roads and some ancillary facilities listed in Section 1.0. Once these areas are identified, access permission is granted, and the sites are surveyed, they will be listed and described as part of the Study Area within subsequent submittals.

3.1 WETLAND DELINEATION PROCEDURES

The term wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328.3(b)). Under 33 CFR 328.4(c), the limits of federal jurisdiction for non-tidal waters of the United States extend to:

1. the ordinary high water mark In the absence of adjacent wetlands; or

- 2. beyond the ordinary high water mark to the limit of the adjacent wetlands when adjacent wetlands are present; or
- 3. to the limit of the wetland when the water of the United States consists only of wetlands

The wetland delineation methods ("1987 Corps Manual", USACE, Environmental Laboratory 1987 and "NC/NE Regional Supplement"; USACE 2012), were used to identify and delineate wetlands along the proposed Project alignment in Massachusetts. Though Massachusetts has developed a wetland delineation manual (MADEP 1995) for identification of bordering vegetated wetlands, this manual makes use of methods and information found in the 1987 Corps Manual while offering detailed alternative methods to provide users with a selection to suit a range of circumstances. For consistency in wetland delineation methods and in application of current approved professional standards for wetland delineation, all wetlands were delineated using the 1987 Corps Manual and NC/NE Regional Supplement.

3.2 WATERBODY DELINEATION PROCEDURES

Under 33 CFR 328.4(c), "the limits of federal jurisdiction for non-tidal waters of the United States, in the absence of adjacent wetlands, is the ordinary high water mark." Waterbody types were classified as perennial, intermittent, or ephemeral, as defined in 72 F.R. 11196-11197. Perennial streams ("P") were categorized as waterbodies that have flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow and runoff from rainfall is a supplemental source of water for perennial streams. Intermittent streams ("I") were categorized as waterbodies that have flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water and runoff from rainfall is a supplemental source of water for stream flow. Ephemeral streams ("E") were categorized as waterbodies that have flowing water only during, and for short duration after, precipitation events in a typical year. Emphemeral stream beds are located above the water table year-round. Groundwater is not a source of water for emphemeral streams and runoff from rainfall is the primary source of water for stream flow. Preliminary waterbody classifications were made during initial field surveys and were confirmed based on a desktop analysis of USGS hydrographic dataset (US Department of the Interior 2014). Additionally, each waterbody was reviewed for the water quality standard and classification assigned by the MADEP to surface waters as described in 314 CMR 4.00 Surface Water Quality Standards.

3.3 PRE-SURVEY DESKTOP INVESTIGATIONS

Prior to the commencement of field surveys, information from multiple sources was reviewed to determine the potential extent of wetlands within the survey areas. Pre-survey information reviewed included: USGS topographical quadrangles, National Wetland Inventory Maps, Natural Resource Conservation Service – Web Soil Surveys, Mass GIS Resource Mapping that includes Massachusetts Natural Heritage Endangered Species Program ("NHESP") datalayers.

3.4 FIELD SURVEYS

During the field investigations along the ROWs, the boundary between the water resource (wetland and/or watercourse) and non-regulated area were delineated and marked with survey flagging hung on vegetation at approximately 15 to 30-foot intervals. For wetlands, vegetation, soils, and hydrology data were assessed during the field surveys to determine if the wetland parameters were satisfied. The "top of

bank" was used to demarcate the limits of a watercourse when no wetlands were adjacent to the channel. Data plots documenting the wetland boundaries were established at specific locations within each wetland series. Field data summary sheets were completed at each data plot for the wetland and watercourse resource surveys (see Appendix 2e-D and Appendix 2e-E). Each wetland and waterbody was given a unique alphanumeric designation to assist in field survey location and documentation using the feature identification nomenclature in Table 2e-2 (Town, team, feature, and feature number). The Boundary Line and Flag Number are identified in one number representing both features. For example, CS-B-W003-101 is interpreted as "Chesire, Team B, Wetland Feature 003, Boundary Line 100, Flag Number 101. Mileposts on field data summary sheets are reported in feet.

Table 2e-2
Feature Identification Nomenclature
Town Abbreviation – Team # – Feature IDXXX – Flag # (Wetlands & Waterbodies)
and Start/End designation (if applicable)

and Start/End designation (if applicable)							
County	Town	Abbreviation	Team	Feature	Feature Number	Boundary Line	Flag Number
	Chesire	CS					
	Dalton	DA					
	Hancock	HA					
Berkshire	Hinsdale	HN					
	Lanesborough	LN					
	Peru	PE					
	Windsor	WR		W – Wetland S – Stream	001, 002, 003, etc.		101, 102, 103, etc. 201, 202, 203, etc.
	Andover	AN					
	Danvers	DN	A–Z A1–Z1				
Essex	Lynnfield	LY					
ESSEX	Methuen	ME				100, 200,	
	Middleton	MD				300, etc.	
	Peabody	PB					
	Reading	RD					
	Tewksbury	TK					
	Wilmington	WL					
Middlesex	Dracut	DR					
Titladiosen	Lunenburg	LU					
	North Reading	NR	- -				
	Townsend	TN					
Hampshire	Plainfield	PL					
Franklin	Ashfield	AS					

Table 2e-2 Feature Identification Nomenclature Town Abbreviation – Team # – Feature IDXXX – Flag # (Wetlands & Waterbodies) and Start/End designation (if applicable)

	(1000)						
County	Town	Abbreviation	Team	Feature	Feature Number	Boundary Line	Flag Number
	Conway	CN					
	Deerfield	DF					
	Erving	ER					
	Montague	MO					
	Northfield	NO					
	Shelburne	SH					
	Warwick	WK					

The specific methods for characterizing and evaluating vegetation, hydrology, and soils for a wetland determination were performed as follows:

• Soils: At the center of each data plot, the soil profile was recorded to determine the hydric soil status. Borings were taken with a hand-held auger to depths necessary to accurately determine a soil's hydric status (typically 18 to 24 inches below ground surface). The information collected for each soil profile included soil horizons, depth, texture, color, and the presence or absence of redoximorphic features. Colors of the soil matrix and redox features were identified using Munsell Soil Color Charts. All hydric soil determinations were based on criteria established in the USACE Northcentral and Northeast Regional Supplement (2012), along with Field Indicators of Hydric Soils in the United States (NRCS 2010) Additionally, the presence of any saturation and/or standing water encountered during the soil profile description was noted. The wetland soil indicators are listed in Table 2e-3.

Table 2e-3
Wetland Soil Indicators for the Northcentral and Northeast Region

Hydric Soi	Indicators for Problematic Hydric Soil	
Histosol (A1)	Dark Surface (S7) (LRR R, MLRA 149B)	2cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR R, MLRA 149B)	Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR K, L)	5cm Mucky Peat or Peat (S3) (LRR K, L, R)

Table 2e-3
Wetland Soil Indicators for the Northcentral and Northeast Region

Hydric Soi	Indicators for Problematic Hydric Soil	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Dark Surface (S7) (LRR K, L, M)
Stratified Layers (A5)	Depleted Matrix (F3)	Polyvalue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Thin Dark Surface (S9) (LRR K, L, R)
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Iron-Mg Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)		Red Parent Material (F21)
Stripped Matrix (S6)		Very Shallow Dark Surface (TF12)

- Vegetation: Species abundance in both non-wetland and wetland communities was visually estimated. Dominant trees and shrubs/saplings were recorded within a 30-foot and 15-foot radius, respectively, from the center of each documentation plot. Woody vines were recorded within a 30-foot radius plot. Dominant herbaceous vegetation was recorded within a 5-foot radius plot. Plant species were identified using appropriate botanical reference material for the region. The hydrophytic indicator status of each species was identified using the North American Digital Flora: National Wetland Plant List (Lichvar and Kartesz 2009). Indicators of hydrophytic vegetation are satisfied by the rapid assessment if all dominant species are rated as OBL or FACW (Indicator 1), the dominance test if more than 50% of the dominant species are OBL, FACW, and/or FAC (Indicator 2), or the prevalence index is less than or equal to 3.0 (Indicator 3) based on the USACE NCNE Regional Supplement (USACE 2012).
- Hydrology: Site hydrology was evaluated during field surveys by initially observing whether the
 soil at the surface was inundated or saturated. If the ground surface was dry, the depth to
 freestanding groundwater or saturated soil was measured, and the presence or absence of other
 indicators of wetland hydrology (e.g., drift lines, water-stained leaves, etc.) was noted. The
 wetland hydrology criterion was met if one or more primary or two or more secondary field
 indicators were present (USACE 2012). The wetland hydrology indicators are listed in Table 2e4.

Table 2e-4
Wetland Hydrology Indicators for the Northcentral and Northeast Region

Primary (minimum of	Secondary Indicators (minimum of two is required)	
Surface Water (A1)	Aquatic Fauna (B13)	Surface Soil Cracks (B6)
High Water Table (A2)	Marl Deposits (B15)	Drainage Patters (B10)
Saturation (A3)	Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1)	Oxidized Rhizospheres on Living Roots (C3)	Dry Season Water Table (C2)
Sediment Deposits (B2)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Drift Deposits (B3)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thick Muck Surface (C7)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Sparsely Vegetated Concave Surface (B8)		Microtopographic Relief (D4)
Water Stained Leave (B9)		FAC-Neutral Test (D5)

Wetland and watercourse flag positions and data plot locations were field located using a Global Positioning System ("GPS") handheld Trimble[®] Yuma[®] tablet computer unit coupled with AECOM's proprietary mobile Geographic Information System ("GIS") field application software, Environmental Mobile Application for Projects ("EMAP"). The collected GPS data points were then differentially corrected by post-processing and plotted out on aerial photograph imagery.

3.5 WETLAND CLASSIFICATION

While in the field, the various wetlands and watercourses were classified according to the "Cowardin system" as Palustrine Forested ("PFO"), Palustrine Emergent ("PEM"), Palustrine Scrub-Shrub ("PSS") and Palustrine Open Water ("POW"), as further described below. In some cases, a wetland complex contained more than one wetland classification type. In those situations, each wetland type is listed and the first classification type represents the more dominant characteristic.

• Palustrine Forested Wetlands (PFO)

Forested wetlands are characterized by woody vegetation that is six meters (approximately 20 feet) tall or taller and normally includes an overstory of trees, an understory of young trees and/or shrubs and an herbaceous layer.

• Palustrine Scrub-Shrub Wetlands (PSS)

Scrub-shrub wetlands are typically dominated by woody vegetation less than six meters (approximately 20 feet) tall. Scrub-shrub land types may represent a successional stage leading to a forested wetland and includes shrubs, saplings, and trees or shrubs that are small and/or stunted due to environmental conditions.

• Palustrine Emergent Wetlands (PEM)

Emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes not including mosses and lichens. These wetlands maintain the same appearance year after year, and are typically dominated by perennial plants that are present for the majority of the growing season.

• Palustrine Open Water (POW)

Areas of permanent open water that border on palustrine systems are referred to as POW. Areas of open water may exist as man-made or natural waterbodies.

3.6 POST-SURVEY DESKTOP ANALYSIS

The wetland and watercourse boundaries were plotted on aerial imagery and subsequently reviewed and confirmed. The aerial-based wetland plans in Appendix 2e-C: Alignment Sheets with Wetland and Waterbody Locations, show the locations of the delineated resources relative to the proposed limits of the Project in Massachusetts. Water quality designations were determined using Massachusetts mapping resources.

4.0 RESULTS

Appendix 2e-A includes tables highlighting the wetlands and watercourses identified during these investigations. Appendix 2e-B and Appendix 2e-C provide project mapping depicting the locations of the inventoried wetlands and watercourses; Appendix 2e-C includes the wetlands and watercourses data forms; and Appendix 2e-D provides representative site photographs of wetlands and watercourses located within the Massachusetts study area.

As illustrated in Tables 2e-A1 and 2e-A2 (Appendix 2e-A), a total of 116 wetlands and 65 watercourses were identified in association with the Massachusetts study area during the October 13, 2014, through September 15, 2015, investigations. A total of 81 wetlands examined in this study area are classified either wholly or in-part as PFO. A total of 36 wetlands examined during this study are classified either wholly or in-part as PSS, and another 31 wetlands examined during this study are classified either wholly or in-part as PEM. The wetland totals include only those field-delieated wetlands and waterbodies which are located within the Project workspace and will be impacted by construction or operation of the Project. Additional wetlands and watercourses identified in the survey corridor but not impacted by the proposed Project configuration will be included in any future delineation submissions.

4.1 WETLAND VEGETATION

The wetlands inventoried during the course of these investigations ranged from the drier PFO wetlands, to PEM wetlands and deepwater habitat. Common species encountered in the various PFO wetlands during the investigations included: Eastern hemlock (*Tsuga canadensis*) red maple (*Acer rubrum*), American elm (*Ulmus americana*), northern arrowwood (*Viburnum dentatum*), spicebush (*Lindera benzoin*), arrowleaf tearthumb (*Persicaria sagittatum*), skunk cabbage (*Symplocarpus foetidus*), sensitive fern (*Onoclea sensibilis*), winterberry (*Ilex verticillata*), cinnamon fern (*Osmundastrum cinnamomeum*), poison ivy (*Toxicodendron radicans*), jewelweed (*Impatiens capensis*), and swamp white oak (*Quercus bicolor*).

Common vegetation species encountered during the PSS wetland investigations included: red maple, multiflora rose (*Rosa multiflora*), silky dogwood (*Cornus amomum*), northern arrowwood, arrowleaf tearthumb, sensitive fern, jewelweed, woolgrass (*Scirpus cyperinus*), and reed canary grass (*Phalaris arundinacea*).

Common vegetation types found within the PEM wetland areas included: common cattail (*Typha latifolia*), jewelweed, arrowleaf tearthumb, woolgrass, willow (*Salix* spp.), arrowwood, meadowsweet (*Spiraea latifolia*), purple loosestrife (*Lythrum salicaria*), lurid sedge (*Carex lurida*), aster spp. (*Symphyotrichum spp.*), goldenrods (*Solidago* spp.), soft rush (*Juncus effusus*), Joe-Pye-weed (*Eutrochium maculatum*), sedges (*Carex* spp.) and sensitive fern. See Appendix 2e-D for additional details and site specific information for each wetland area.

4.2 WETLAND SOILS

Multiple soil types representing a wide variety of soil series designations were identified during this wetland and watercourse inventory. Soils described in the various wetlands appear to have formed in parent material including glacial till, glaciolacustrine sediments and glacial outwash. The soil types were identified as poorly drained to very poorly drained mineral soil with varying degrees of organics, and

Tennessee Gas Pipeline Company, L.L.C. a Kinder Morgan company

Inventory and Delineation of Wetlands and Watercourses
Along the Massachusetts Portion of the
Northeast Energy Direct Project

2e-18

included fine sandy loams, silt loams, sandy loams and mucks. Many areas were also identified as frequently flooded. Poor drainage was noted in areas with the presence of deep organic soils, sapric material in the surface layers, high organic contents in the topsoil and/or prolonged standing water. Additionally, varying degrees of stoniness and rockiness were observed. In the more developed and industrial portions of the study area, the wetland soils were often described as, or officially mapped as, disturbed.

See Appendix 2e-D for additional soils details and site specific information for each wetland area.

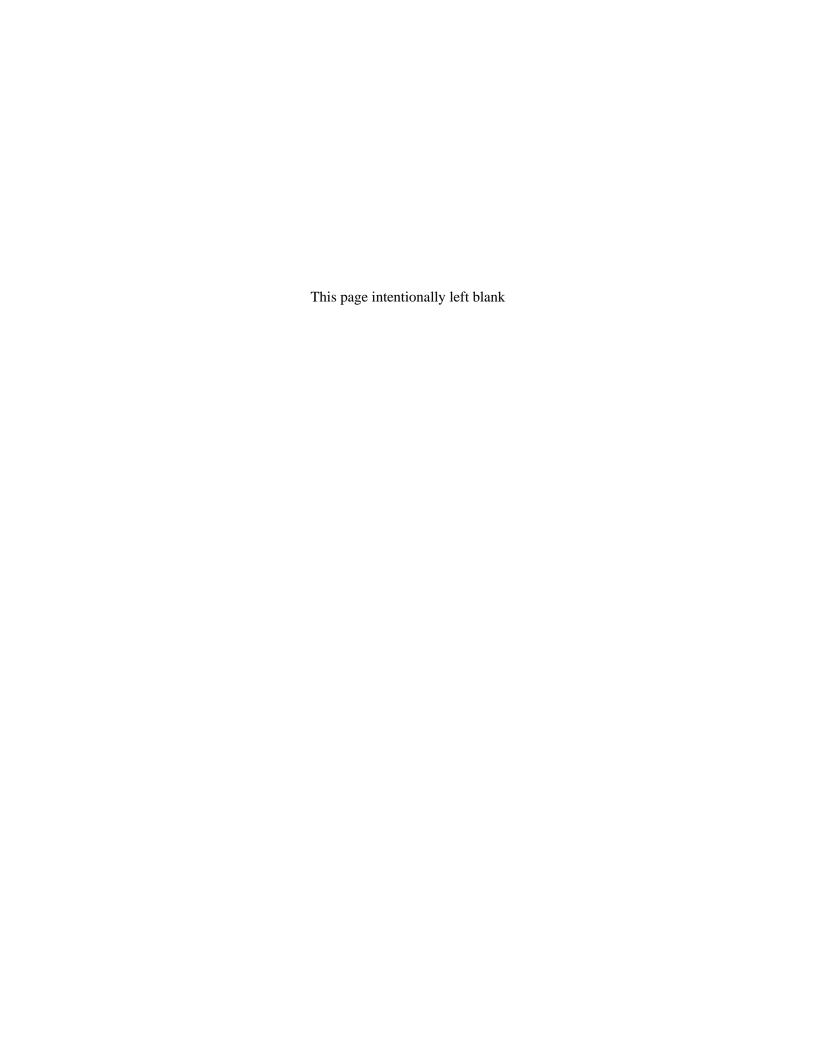
4.3 WATERCOURSES

The watercourses encountered during this inventory varied greatly in type, size and character. Some of the streams that were inventoried are natural, whereas others were anthropic. Silty sediments, sand, rock, gravel, riprap, and/or cobble bottoms dominated the natural stream beds that were inventoried. The shape, height, susceptibility to erosion and direction of flow of the individual watercourses also varied. Anthropic watercourses that were inventoried included those with culverts and corrugated and smooth drainage pipes, retention ponds, and anthropic farm ponds.

See Appendix 2e-E and for additional details and site specific information for each watercourse area.

5.0 REFERENCES

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APPENNDIX 2e-A

Tables

- Table 2e-A1 Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project
- Table 2e-A2 Waterbodies Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

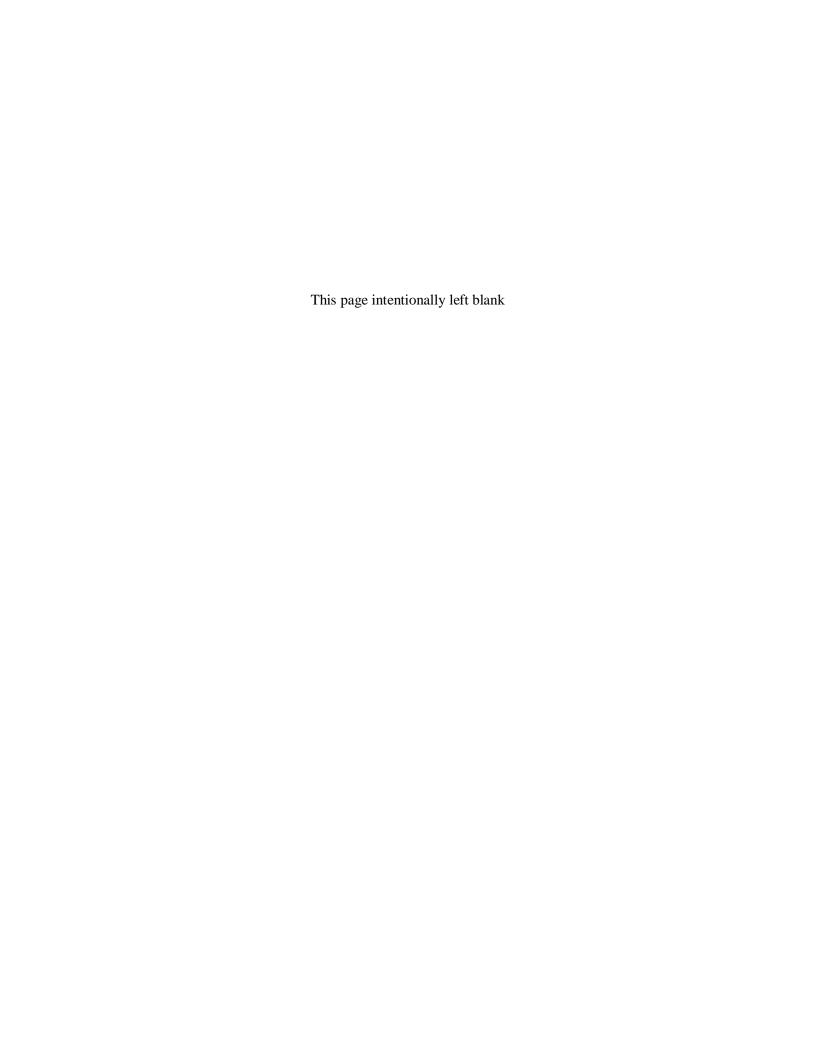


Table 2e-A1
Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

Facility Name	Segment ¹	Milepost ²	Wetland Identificaiton Number ³	Wetland Class ⁴	Wetland Hydrology Indicator ⁵	Hydrophytic Vegetation Indicator ⁶	Hydric Soil Indicator ⁷	Wetland Description
Tuestiey Turne	Segment	1. Incpose	1 (4111002	CIUDS	Pipeline Facilities	Indicator	110100001	Treduita Description
Wright to Dracut Pipeline Segment	G	0.75	HA-N-W001-PFO	PFO	A2 A3 B10	DT PI	F3	Slope - Mid
Wright to Dracut Pipeline Segment	G	8.29	CS-M-W002-PEM	PEM	C4 B10 D5	DT PI	F3	Slope - mid
Wright to Dracut Pipeline Segment	G	13.52	HN-M-W001-PFO	PFO	A2 C1 A3 B10	DT PI	F3 S4	Depression
Wright to Dracut Pipeline Segment	G	13.58	HN-M-W002-PFO	PFO	A2 A3 D5	DT	S4 S5	Stream Fringe
Wright to Dracut Pipeline Segment	G	13.59	HN-M-W002-PSS	PSS	A1 D5	DT PI	F3 F2 S4	Depression
Wright to Dracut Pipeline Segment	G	13.90	HN-M-W004-PSS	PSS	C4 A3 B10 D5	DT PI	F3	Slope - mid
Wright to Dracut Pipeline Segment	G	14.01	HN-N-W005-PFO	PFO	A2 C4 B10 D2		F6	Depression
Wright to Dracut Pipeline Segment	G	14.01	HN-M-W005-PFO	PFO	A2 C4 D5	DT	F3	Depression
Wright to Dracut Pipeline Segment	G	14.01	HN-M-W005-PSS	PSS	A2 C4 D5	DT PI	F3	Depression
Wright to Dracut Pipeline Segment	G	14.04	HN-N-W005-PSS	PSS	C3 D5 D2	DT PI	F6	Depression
Wright to Dracut Pipeline Segment	G	14.63	HN-M-W007-PEM	PEM	C4 A3 D5 D2	DT PI	A11 F3	Depression
Wright to Dracut Pipeline Segment	G	14.66	HN-M-W006-PSS	PSS	A3 B10 D5	DT PI	F3	Depression
Wright to Dracut Pipeline Segment	G	14.74	HN-N-W006-PSS	PSS	A2 A3 A1 B10 D2	DT PI	F3	Depression
Wright to Dracut Pipeline Segment	G	14.87	HN-N-W001-PSS	PSS	A3 A1 D5	DT PI	A1	Depression
Wright to Dracut Pipeline Segment	G	14.98	HN-N-W002-PFO	PFO	A2 A3 A1 B10 D2		F3	Slope - mid
Wright to Dracut Pipeline Segment	G	15.14	HN-M-W008-PFO	PFO	A2 A3 D4	DT PI	F3	Flat

Table 2e-A1
Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project										
Facility Name	Segment ¹	Milepost ²	Wetland Identificaiton Number ³	Wetland Class ⁴	Wetland Hydrology Indicator ⁵	Hydrophytic Vegetation Indicator ⁶	Hydric Soil Indicator ⁷	Wetland Description		
Wright to Dracut Pipeline Segment	G	15.19	HN-M-W008-PSS	PSS	A2 D5	DT PI	F3	Flat		
Wright to Dracut Pipeline Segment	G	15.51	HN-M-W009-PFO	PFO	A2 A3 B10 D5	DT PI	F3	Slope - mid		
Wright to Dracut Pipeline Segment	G	15.56	HN-M-W011-PFO	PFO	A2 A3 B10 D2	DT	F3 F12	Slope - toe		
Wright to Dracut Pipeline Segment	G	15.57	HN-M-W010-PSS	PSS	A2 C4 A3 D5	DT PI	F3 F12	Slope - mid		
Wright to Dracut Pipeline Segment	G	18.71	WR-M-W012-PSS	PSS	A2 C3 C4 A3 B10 D5	DT PI	F3	Depression		
Wright to Dracut Pipeline Segment	G	19.16	WR-N-W002-PFO	PFO	A2 C3 C4 A3 A1 B10 D5 D2 D3	DT PI	F3F8	Depression		
Wright to Dracut Pipeline Segment	G	19.19	WR-N-W002-PSS	PSS	A2 C3 C4 A3 A1 C8 B10 D5 D2	RT DT PI	S5	Floodplain Terrace		
Wright to Dracut Pipeline Segment	G	20.37	WR-M-W015-PFO	PFO	A2 A3 A1 B9 B10 D5	RT DT PI	F3	Slope - Mid		
Wright to Dracut Pipeline Segment	G	20.43	WR-M-W016-PFO	PFO	A2 A3 B9 B10 D5	DT	S4	Slope - Mid		
Wright to Dracut Pipeline Segment	G	20.62	WR-M-W020-PFO	PFO	A2 A3 A1 B9 B10 D5	DT MA	S4	Slope - Mid		
Wright to Dracut Pipeline Segment	G	21.98	PL-M-W006-PFO	PFO	A2 C3 A3 A1 NONE	PI	S4	Slope - Mid, Logging road access area		
Wright to Dracut Pipeline Segment	G	22.02	PL-M-W004-PFO	PFO	A2 A3 B9 D5 D4	DT	A2	Depression		
Wright to Dracut Pipeline Segment	G	22.05	PL-E-W001-PFO	PFO	A2 A3 A1 B9		F3	Depression, Use PL-M-W004_UPL as a representative upland plot		
Wright to Dracut Pipeline Segment	G	23.27	PL-M-W002-PEM	PEM	A2 A3 A1 B10 D5	RT DT PI	F3	Depression		
Wright to Dracut Pipeline Segment	G	23.42	PL-M-W001-PFO	PFO	A2 C3 A3 B9 D5		F3	Depression		

Table 2e-A1
Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project										
Facility Name	Segment ¹	Milepost ²	Wetland Identificaiton Number ³	Wetland Class ⁴	Wetland Hydrology Indicator ⁵	Hydrophytic Vegetation Indicator ⁶	Hydric Soil Indicator ⁷	Wetland Description		
Wright to Dracut Pipeline Segment	G	23.43	PL-M-W007-PSS	PSS	A2 A3 NONE	DT PI	F3	Flat		
Wright to Dracut Pipeline Segment	G	25.18	PL-E-W003-PEM	PEM	C4 A3 D5	RT DT PI	S4	Slope - mid		
Wright to Dracut Pipeline Segment	G	25.20	PL-E-W003-PFO	PFO	A2 A3 A1 B9 B10 D5 D2 B16	RT DT PI	A2	Stream fringe		
Wright to Dracut Pipeline Segment	G	25.25	PL-E-W003-PSS	PSS	A2 A3 D5 D2	RT DT PI	A11 S6	Depression		
Wright to Dracut Pipeline Segment	G	25.58	PL-E-W002-PFO	PFO	C4 B10 D5 D4	MA	F3	Stream fringe		
Wright to Dracut Pipeline Segment	G	26.72	PL-M-W009-PEM	PEM	A2 C3 C4 A3 A1 B9 D5 C9	DT PI	F3	Depression		
Wright to Dracut Pipeline Segment	G	26.73	PL-M-W009-PFO	PFO	A2 C3 C4 A3 A1 B9 C9	DT	F3	Depression		
Wright to Dracut Pipeline Segment	G	26.80	PL-M-W010-PFO	PFO	A2 C4 A3 A1 B9 B10 D4	DT	S4	Depression		
Wright to Dracut Pipeline Segment	G	26.96	AS-M-W001-PFO	PFO	C4 A3 B10 D5 D2 D4	DT PI MA	F3	Stream finge floodplain		
Wright to Dracut Pipeline Segment	G	27.07	AS-M-W001-PSS	PSS	A2 C3 C4 A3 A1 D5 D2	RT DT PI	F3 F6	Stream fringe		
Wright to Dracut Pipeline Segment	G	27.55	AS-M-W004-PFO	PFO	A2 A3 A1 B9 C8 B10 D5 D4	RT DT PI MA	A1	Depression		
Wright to Dracut Pipeline Segment	G	27.90	AS-M-W005-PFO	PFO	A2 C4 A3 A1 B10 D5	RT DT PI	S5	Slope - mid		
Wright to Dracut Pipeline Segment	G	28.05	AS-M-W005-PSS	PSS	C3 C4 B10 D5	RT DT PI	A11F3	Slope - mid		
Wright to Dracut Pipeline Segment	G	28.17	AS-M-W006-PFO	PFO	A2 C4 A3 A1 B9 B10 D5	DT MA	F3	Depression		
Wright to Dracut Pipeline Segment	G	28.85	AS-M-W008-PFO	PFO	A2 C4 A3 B9 D5 D4	RT DT	F6	Depression		
Wright to Dracut Pipeline Segment	G	28.93	AS-M-W009-PFO	PFO	A2 C3 A3 A1 B9 B10 D5	RT DT PI	F6	Depression		

Table 2e-A1
Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

wetanus identified Along the Massachusetts Portion of the Northeast Energy Direct Project										
Facility Name	Segment ¹	Milepost ²	Wetland Identificaiton Number ³	Wetland Class ⁴	Wetland Hydrology Indicator ⁵	Hydrophytic Vegetation Indicator ⁶	Hydric Soil Indicator ⁷	Wetland Description		
Wright to Dracut Pipeline Segment	G	29.00	AS-M-W010-PFO	PFO	C4 A3 B10 D2	RT DT	F3	Depression		
Wright to Dracut Pipeline Segment	G	29.05	AS-M-W011-PFO	PFO	A2 C4 A3 D2 D4		A3 A2	Depression		
Wright to Dracut Pipeline Segment	G	29.17	AS-M-W012-PFO	PFO	A2 A3 B10 D5 D2	DT PI	A2	Depression		
Wright to Dracut Pipeline Segment	G	29.20	AS-M-W013-PEM	PEM	A2 C3 A3 A1 D5 D3	PI	F7 F6	Depresion, Tree stratum reduced to '15		
Wright to Dracut Pipeline Segment	G	29.50	AS-M-W014-PEM	PEM	A2 C1 C3 A3 D5 D2	RT DT PI	F3 A4	Depression, Beaver damn downstream has inundated the PEM wetland upstream		
Wright to Dracut Pipeline Segment	G	29.54	AS-M-W014-PFO	PFO	A2 C3 C4 A3 A1 B9 D5 D4	RT DT	A2	Depression		
Wright to Dracut Pipeline Segment	G	29.62	AS-M-W015-PFO	PFO	C3 C4 B9 B10 D5	RT	F3	Slope - mid		
Wright to Dracut Pipeline Segment	G	29.75	AS-M-W016-PFO	PFO	C3 C4 B10 D5	DT	F3	Slope - mid		
Wright to Dracut Pipeline Segment	G	29.93	AS-M-W017-PSS	PSS	A2 C4 A3 D5	RT DT PI	F3	Slope - mid		
Wright to Dracut Pipeline Segment	G	31.49	AS-M-W018-PFO	PFO	A2 C4 A3 B10 D5	RT DT PI	F3	Depression		
Wright to Dracut Pipeline Segment	G	31.71	AS-M-W021-PEM	PEM	C3 C4 D5 D2	RT PI	F6	Floodplain Terrace		
Wright to Dracut Pipeline Segment	Н	4.18	CN-M-W002-PFO	PFO	A2 C3 C4 A3 A1 B10 D5 D3	DT PI	F3	Slope - toe, Veg. disturbance due to logging operation in surrounding forest		
Wright to Dracut Pipeline Segment	Н	4.20	CN-M-W002-PEM2	PEM	C3 C4 B10 D5	DT PI	F3	Depression, Veg. disturbance due to power line maintenance		
Wright to Dracut Pipeline Segment	Н	4.23	CN-M-W002-PEM	PEM						
Wright to Dracut Pipeline Segment	Н	4.39	CN-M-W003-PSS	PSS	A2 C4 A3 B10 D5 D2	PI	F3	Slope - mid, Floodplain		

Table 2e-A1
Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project										
Facility Name	Segment ¹	Milepost ²	Wetland Identificaiton Number ³	Wetland Class ⁴	Wetland Hydrology Indicator ⁵	Hydrophytic Vegetation Indicator ⁶	Hydric Soil Indicator ⁷	Wetland Description		
Wright to Dracut Pipeline Segment	Н	4.39	CN-M-W003-PFO	PFO	C3 C4 D2	DT	F3	Slope - toe, Stream fringe		
Wright to Dracut Pipeline Segment	Н	4.48	CN-M-W004-PFO	PFO	A2 C4 A3 B10 D5	DT PI	F3	Slope - mid, Recent forestry activity by landowner		
Wright to Dracut Pipeline Segment	Н	16.34	ER-M-W002-PFO	PFO	B9 B10 D4	DT MA	F3	Depression		
Wright to Dracut Pipeline Segment	Н	21.56	NO-M-W003-PSS	PSS	C3 C4 B10 D5 D2	DT PI	F7 F3 F6	Slope - toe, Use NO-M-W004-UPL as representative upland plot		
Wright to Dracut Pipeline Segment	Н	21.63	NO-M-W004-PSS	PSS	C3 C4 B10 D5 D2	DT	F7 F3 F6	Slope - mid		
Wright to Dracut Pipeline Segment	Н	23.07	NO-M-W001-PEM	PEM	C3 C4 B8 B9 D5 D3 B6	PI	S4	Depression		
Wright to Dracut Pipeline Segment	Н	23.07	NO-M-W001-PFO	PFO	C4 B9 D4		F3	Depression		
Wright to Dracut Pipeline Segment	Н	23.22	NO-M-W002A-PEM	PEM	C3 C4 B9 NONE D3	DT PI	F3 F12	Depression, Access road bisects wetland		
Wright to Dracut Pipeline Segment	Н	23.87	NO-L-W006-PSS	PSS	A2 A3 B10	DT PI	F3	Slope - mid, Use NO-L-W007-UPL as representative upland plot		
Wright to Dracut Pipeline Segment	Н	23.89	NO-L-W008-PSS	PSS	A2 A3 B10	RT DT PI	F3	Slope - mid, Use NO-L-W007-UPL as representative upland plot		
Wright to Dracut Pipeline Segment	Н	27.76	WK-M-W001-PFO	PFO	C3 C4 B9 D5 D4	DT PI	F6	Depression		
Wright to Dracut Pipeline Segment	K	1.75	DR-J-W004-PEM	PEM	B13 A2 A3 A1 B9 B10 D2	DT PI	A2	Flat, Use Dr-J-W003-Upl As Representative Upland Plot		
Wright to Dracut Pipeline Segment	K	1.76	DR-J-W004-PSS	PSS	A2 A3 D2	DT PI	A2	Slope - Toe, Use Dr-J-W003-Upl As Repsentative Upland Plot		
Wright to Dracut Pipeline Segment	K	1.78	DR-J-W003-PFO	PFO	B13 A2 A3 B8 B9 D2	DT PI	F3	Depression		
Lynnfield Lateral	N	2.99	AN-K-W002-PFO	PFO	C4 A3 B10 D2	DT PI	A3 A11 A2	Depression		
Lynnfield Lateral	N	3.11	AN-K-W003-PFO	PFO	B9 B10 D2 D1	DT PI	F6	Depression, Stunted Vegetation - Buttressed Tree Roots		

Table 2e-A1
Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

wettands identified Along the Wassachusetts Fortion of the Northeast Energy Direct Floject									
Facility Name	Segment ¹	Milepost ²	Wetland Identificaiton Number ³	Wetland Class ⁴	Wetland Hydrology Indicator ⁵	Hydrophytic Vegetation Indicator ⁶	Hydric Soil Indicator ⁷	Wetland Description	
Lynnfield Lateral	N	3.26	TK-K-W002-PFO	PFO	B4 A3 B9 B10	DT PI	A11	Depression	
Lynnfield Lateral	N	4.38	TK-K-W001-PFO	PFO	A2 A3 B9 D2	DT PI	A3	Depression	
Lynnfield Lateral	N	5.90	AN-K-W006-PFO	PFO	A3 B10 D2	DT PI	A1	Depression	
Lynnfield Lateral	N	6.15	TK-K-W004-PFO	PFO	A2 A3 B9 B10 D2	DT PI	A1	Depression	
Lynnfield Lateral	N	6.33	TK-K-W005-PFO	PFO	A2 A3 B9 D2	DT PI	F3	Depression	
Lynnfield Lateral	N	6.34	TK-K-W005-PEM	PEM	A2 A3 D2	DT PI	A3	Stream Fringe	
Lynnfield Lateral	N	7.33	AN-K-W008-PFO	PFO	A3 B8 B9 D2	DT PI	A1	Depression	
Lynnfield Lateral	N	7.73	AN-M-W001-PEM	PEM	A2 C1 A3 D5 D2 D4	DT PI	A1	Depression	
Lynnfield Lateral	N	7.87	AN-K-W011-PEM	PEM	A2 C1 A3 D4	DT PI	A1	Depression	
Lynnfield Lateral	N	7.88	AN-K-W011-PFO	PFO	A2 C1 A3 D4	DT PI	A1	Depression	
Lynnfield Lateral	N	8.04	AN-G-W002-PSS	PSS	A3 A1 B10 D2	DT PI	F2 S9	Depression	
Lynnfield Lateral	N	8.29	WL-K-W002-PEM	PEM	A2 B7 A3 NONE	DT PI	OTHER	Depression	
Lynnfield Lateral	N	13.55	RD-K-W001-PFO	PFO	A2 C1 A3 B9 D4	DT PI	A1	Depression	
Lynnfield Lateral	N	13.59	RD-K-W001-PSS	PSS	A2 C1 A3 B9 D4	DT PI	A1	Depression	
Peabody Lateral	О	0.07	LY-D-W001-PEM	PEM	A3	DT PI	F6	Depression	
Peabody Lateral	О	0.10	LY-P-W001-PFO	PFO	A2 A3 A1 B9	DT PI	F3	Depression	

Table 2e-A1
Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

	vectarius fueriurieu Along the Wassachusetts Fortion of the Northeast Energy Direct Floject											
Facility Name	Segment ¹	Milepost ²	Wetland Identificaiton Number ³	Wetland Class ⁴	Wetland Hydrology Indicator ⁵	Hydrophytic Vegetation Indicator ⁶	Hydric Soil Indicator ⁷	Wetland Description				
Peabody Lateral	0	0.14	LY-P-W001-PSS	PSS	A2 A3 A1 B9	DT PI	F3	Depression				
Peabody Lateral	0	0.21	LY-D-W002-PFO	PFO	C3 A3 B9 D4	DT PI	F6	Depression				
Peabody Lateral	0	0.28	LY-D-W002-PEM	PEM	A3	DT PI	A11	Depression, Soil, Vegetation And Hydrology Disturbed By Gas Line				
Peabody Lateral	0	0.47	LY-D-W003-PFO	PFO	A3 B9	DT PI	A11 F6	Depression				
Peabody Lateral	0	0.51	LY-M-W002-PFO	PFO	B9 D5 D2 D4	DT PI	A11 F3	Floodplain Terrace				
Haverhill Lateral	P	4.77	ME-P-W004-PEM	PEM	A2 A3 A1 B9 NONE	DT PI	F3 A2	Depression				
Haverhill Lateral	P	4.78	ME-P-W004-PFO	PFO	A2 A3 B9 NONE	DT PI	F3 A1	Depression				
Haverhill Lateral	P	5.54	ME-P-W005-PEM	PEM	A2 A3 B9 NONE	DT PI	A12	Flat				
Haverhill Lateral	Р	5.60	ME-P-W005-PSS	PSS	A2 A3 NONE	DT PI	A1	Slope - Mid				
Haverhill Lateral	Р	5.66	ME-P-W005-PFO	PFO	A2 A3 NONE	DT PI	A3 A2 A1	Flat				
Haverhill Lateral	P	6.30	ME-P-W001-PEM	PEM	A2 A3 A1	RT DT PI	F3	Depression, Soils Were Disturbed Due To Gas Line. Due To Snow Melt Flood Levels And Bank Full Conditions Present				
Haverhill Lateral	P	6.34	ME-P-W001-PFO	PFO	A2 A3 A1	DT PI	F3 F2	Depression, Flood Levels And Bank Full Due To Snow Melt Conditions				
Haverhill Lateral	P	6.67	ME-E-W001-PEM	PEM	C3 B9 NONE	DT PI	S 5	Depression				
Haverhill Lateral	P	6.96	ME-P-W007-PSS	PSS	C3 A3 NONE	DT PI	F3	Slope - Toe				
Haverhill Lateral	P	9.16	ME-E-W004-PFO	PFO	A2 A3 B9 D2	DT PI	A2	Depression				

Table 2e-A1
Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

			Wetland		iviassaciasetts i ortion or the more				
			Identificaiton	Wetland		Hydrophytic Vegetation	Hydric Soil		
Facility Name	Segment ¹	Milepost ²	Number ³	Class ⁴	Wetland Hydrology Indicator ⁵	Indicator ⁶	Indicator ⁷	Wetland Description	
Fitchburg Lateral Extension	Q	13.87	LU-D-W001-PFO	PFO	A3 B2 B9 D2		F3	Depression	
Aboveground Facilities									
Wright to Dracut Pipeline									
Segment	G	17.07	WR-M-W023-PEM	PEM	C3 C4 D5 D1	DT PI	F3	Slope - Toe	
Wright to Dracut Pipeline									
Segment	G	23.69	NO-L-W002-PFO	PFO	A2 A3 B10	DT PI	F6	Depression	
Wright to Dracut Pipeline									
Segment	Н	23.69	NO-L-W016-PFO	PFO	A2 A3 A1 B9 D2	DT MA	S5	Depression	
Wright to Dracut Pipeline									
Segment	Н	23.79	NO-L-W007-PEM	PEM	A3 D2	RT DT PI	F3	Slope - Mid	
Wright to Dracut Pipeline									
Segment	K	1.05	DR-N-W009-PFO	PFO	C3 A3 NONE	DT PI	A6	Flat	
Wright to Dracut Pipeline									
Segment	K	1.05	DR-N-W010-PFO	PFO	A3 NONE	DT PI	F3	Flat	
Maritimes Delivery Line	L	1.05	DR-N-W003-PFO	PFO	A3 B9 NONE	DT PI	F3	Depression	
Maritimes Delivery Line	L	1.05	DR-N-W004-PFO	PFO	A2 A3 B9 NONE	DT PI	A2	Depression	
Maritimes Delivery Line	L	1.05	DR-N-W005-PFO	PFO	A2 A3 B9 B10	DT PI	F3	Stream Fringe	
					Contractor Yards				
NED C 0700		17.10	WD M WO11 DEM	DEM.	12.05	DT DI	C 4	December	
NED-G-0700	G	17.19	WR-M-W011-PEM	PEM	A2 D5	DT PI	S4	Depression	
NED-K-0100	K	1.48	DR-G-W003-PFO	PFO	A3 B8 B10 D2	DT PI	S 5	Slope - Mid	
NED-K-0100	K	1.48	DR-D-W002-PFO	PFO	C3 A3	RT DT PI	A11 F3	Depression	
NED-K-0100	K	1.48	18 DR-D-W003-PFO PFO A3 B9 RT DT PI		זת דעד דים	A11 F3	Danrassian		
NED-K-0100	N.	1.40	אטט-۲۲U איניטי-אר	rrU	110 NIDITI		АПГЭ	Depression	
NED-K-0100	K	1.48	DR-D-W004-PFO	PFO	CO C3 A3 B9 RT DT PI		A11 F3	Depression	
NED-K-0100	K	1.48	DR-D-W005-PFO	PFO	A3 B9	RT DT PI	A11 F3	Depression	

Table 2e-A1
Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

		1		entified Along th	e Massachusetts Portion of the Nortl	least Energy Direct Project		
Facility Name	Segment ¹	Milepost ²	Wetland Identificaiton Number ³	Wetland Class ⁴	Wetland Hydrology Indicator ⁵	Hydrophytic Vegetation Indicator ⁶	Hydric Soil Indicator ⁷	Wetland Description
NED-K-0100	K	1.48	DR-G-W001-PFO	PFO	A3 A1 B9 D2	DT PI	F3	Slope - Toe, Use DR-G-W005-Upl As Representative Upland Plot
NED-K-0100	K	1.48	DR-A-W002-PFO	PFO	A3 B9 D4	DT PI	A11 F3 S1	Depression
NED-K-0100	K	1.48	DR-A-W001-PFO	PFO	A2 A3 B9 B10	DT	A11 F3	Drainageway
NED-K-0100	K	1.48	DR-G-W002-PSS	PSS	A2 A3 D2	DT PI	F3	Slope - Toe, Use DR-A-W001-Upl As Representative Upland Plot
NED-K-0100	K	1.48	DR-D-W001-PSS	PSS	A3 NONE	DT PI	F3	Flat
NED-K-0100	K	1.48	DR-D-W001-PFO	PFO	A2 A3 NONE	DT PI	F3	Slope - Mid
NED-K-0100	K	1.48	DR-D-W006-PFO	PFO	A2 A3 NONE	DT PI	F6	Slope - Mid
NED-K-0100	K	1.48	DR-G-W005-PFO	PFO	A3 A1	DT PI	F3	Slope - Toe
NED-K-0100	K	1.48	DR-G-W006-PFO	PFO	A1 D2	DT PI	F3	Slope - Mid, Use Dr-G-W005-Upl As Representative Upland Plot
NED-K-0100	K	1.48	DR-G-W004-PFO	PFO	A3 A1 D2	DT PI	S4 S5	Slope - Mid
NED-K-0100	K	1.48	DR-G-W002-PFO	PFO	A2 A3 D2	DT PI	F3 S4	Slope - Mid, Use DR-A-W001-Upl As Representative Upland Plot
					Access Roads			
NED-TAR-G-1300	G	13.57	HN-M-W002-PFO	PFO	A2 A3 D5	DT	S4 S5	Stream Fringe
NED-TAR-G-1300	G	13.57	HN-M-W002-PEM	PEM	A2 C1 C3	DT PI	A1	Depression
NED-TAR-G-1300	G	13.57	HN-M-W004-PSS	PSS	C4 A3 B10 D5	DT PI	F3	Slope - Mid
NED-TAR-G-1300	G	13.57	HN-M-W010-PSS	PSS	A2 C4 A3 D5	DT PI	F3 F12	Slope - Mid
NED-TAR-G-1300	G	13.57	HN-M-W011-PFO	PFO	A2 A3 B10 D2	DT	F3 F12	Slope - Toe
NED-TAR-G-1400	G	17.32	WR-M-W002-PEM	PEM	C3 C4 A3 D5	RT DT PI	A11 F3	Flat
NED-TAR-G-1800	G	21.57	PL-M-W004-PFO	PFO	A2 A3 B9 D5 D4	DT	A2	Depression

Table 2e-A1
Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

Facility Name	Segment ¹	Milepost ²	Wetland Identificaiton Number ³	Wetland Class ⁴	Wetland Hydrology Indicator ⁵	Hydrophytic Vegetation Indicator ⁶	Hydric Soil Indicator ⁷	Wetland Description
NED-TAR-G-1800	G	21.57	PL-M-W004-PEM	PEM	A2 C1 A3 A1 D5 D4	RT DT PI	A1	Depression
NED-TAR-G-1800	G	21.57	PL-E-W001-PFO	PFO	A2 A3 A1 B9		F3	Depression, Use PL-M-W004_Upl As Representative Upland Plot
NED-TAR-G-2000	G	25.34	PL-E-W002-PEM	PEM	A2 A3 A1 D5 D2	RT DT PI	A2	Depression
NED-TAR-G-2000	G	25.61	PL-E-W002-PFO	PFO	C4 B10 D5 D4	MA	F3	Stream Fringe
NED-TAR-G-2300	G	27.23	AS-M-W002-PSS	PSS	A2 C4 A3 B10 D5	RT DT PI	F3	Depression
NED-TAR-G-2300	G	27.23	AS-M-W003-PSS	PSS	C3 C4 B10 D5	RT DT PI	F3 F12	Slope - Mid
NED-TAR-G-2600	G	29.41	AS-M-W014-PEM	PEM	A2 C1 C3 A3 D5 D2	RT DT PI	F3 A4	Depression, Beaver Dam Downsteam Has Inundated The Pem Wetland Upstream
NED-TAR-G-2600	G	29.41	AS-M-W014-PSS	PSS	A2 C4 A3 B10 D5	RT DT PI	A11 F3	Slope - Mid, Surface Hydrolic Connection To Smith Brook
NED-TAR-G-2600	G	29.41	AS-M-W014-PFO	PFO	A2 C3 C4 A3 A1 B9 D5 D4	RT DT	A2	Depression
NED-TAR-G-2600	G	29.41	AS-M-W015-PFO	PFO	C3 C4 B9 B10 D5	RT	F3	Depression
NED-TAR-H-0300	Н	2.29	CN-M-W001-PFO	PFO	A2 A3 B10 D5 D4	DT PI	F2 F6	Depression
NED-TAR-H-0500	Н	4.14	CN-M-W003-PSS	PSS	A2 C4 A3 B10 D5 D2	PI	F3	Slope - Mid, Floodplain
NED-TAR-H-1800	Н	22.91	NO-M-W002A-PEM	PEM	C3 C4 B9 NONE D3	DT PI	F3 F12	Depression, Access Road Bisects Wetland
NED-TAR-H-1800	Н	22.91	NO-M-W002-PEM	PEM	C3 C4 B10 D3	DT PI	F3 F12	Depression
NED-TAR-K-0100	K	0.1	DR-D-W008-PSS	PSS	A3	DT PI	S4 A12	Depression
NED-TAR-N-1000	N	8.53	WL-P-W003-PSS	PSS	A3 A1 B9	DT PI	F3	Depression

¹ Each segment is associated with its own set of mileposts beginning at 0.00

² Mileposts for Contractor Yards and Access Roads are given as nearest MP, which indicates the point at which the Access Road or Contractor Yard connects with the pipeline construction ROW, or closest MP to the construction ROW if there is no direct connection.

³ Wetland series number generated to identify wetlands within and adjacent to the Project corridor in accordance with the feature identification nomenclature described in Table 2e-2.

⁴ Wetlands classification according to Cowardin et al 1979; PEM = Palustrine Emergent Wetland; PFO = Palustrine Forested Wetland; PSS = Palustrine Scrub-Shrub Wetland; POW = Palustrine Open Water; Other = accommodates all other wetland types.

Table 2e-A1 Wetlands Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

			Wetland					
			Identificaiton	Wetland		Hydrophytic Vegetation	Hydric Soil	
Facility Name	Segment ¹	Milepost ²	Number ³	Class ⁴	Wetland Hydrology Indicator ⁵	Indicator ⁶	Indicator ⁷	Wetland Description

⁵ Wetland Hydrology Indicators are described in Table 2e-4.

⁶ RT = Rapid Test (all dominant species are rated as OBL or FACW); DT=Dominance Test (more than 50% of the dominant species are OBL, FACW, and/or FAC); PI = Prevelance Index is less than or equal to 3.0.

⁷ Hydric Soil Indicators are described in Table 2e-3.

Table 2e-A2
Waterbodies Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

	W	aterbodies Ident	ified Along the Massaci	nusetts Portion of the Northeast Energy Direct	Project		
Facility Name	Segment ¹	Nearest Milepost ²	Waterbody Identification Number ³	Waterbody Name ⁴	Waterbody Frequency Type ⁵	Water Quality Designation/Fishery Classification ⁶	Crossing Length (ft) ⁷
			Pip	peline Facilities			
Wright to Dracut Pipeline Segment	G	0.69	HA-N-S001	UNT to Kinderhook Creek	I	B/CFR	36
Wright to Dracut Pipeline Segment	G	0.76	HA-N-S002	UNT to Kinderhook Creek	I	B/CFR	10
Wright to Dracut Pipeline Segment	G	13.53	HN-M-S001	UNT to Cleveland Brook	P	B/CFR	10
Wright to Dracut Pipeline Segment	G	13.59	HN-M-S002	UNT to Cleveland Brook	P	B/CFR	0
Wright to Dracut Pipeline Segment	G	14.65	HN-M-S003	UNT to Cady Brook	Е	A/CFR	0
Wright to Dracut Pipeline Segment	G	14.96	HN-M-S004	Cady Brook	P	A/HQ/CFR	23
Wright to Dracut Pipeline Segment	G	14.96	HN-M-S004A	Cady Brook	I	A/CFR	26
Wright to Dracut Pipeline Segment	G	15.41	HN-N-S001	UNT to Cady Brook	P	A/CFR	26
Wright to Dracut Pipeline Segment	G	15.55	HN-N-S002	UNT to Cady Brook	I	B/CFR	12
Wright to Dracut Pipeline Segment	G	17.75	WR-M-S005	UNT to Westfield Brook	P	B/CFR	0
Wright to Dracut Pipeline Segment	G	18.88	WR-M-S009	UNT to Westfield Brook	P	B/HQ/CFR	19
Wright to Dracut Pipeline Segment	G	19.10	WR-M-S016	UNT to Westfield Brook	P	B/CFR	15
Wright to Dracut Pipeline Segment	G	19.15	WR-M-S018	UNT to Westfield Brook	I	B/CFR	29
Wright to Dracut Pipeline Segment	G	19.18	WR-M-S019	UNT to Westfield Brook	P	B/CFR	22
Wright to Dracut Pipeline Segment	G	19.20	WR-M-S017B	UNT to Westfield Brook	P	B/CFR	14
Wright to Dracut Pipeline Segment	G	19.21	WR-M-S017C	UNT to Westfield Brook	I	B/CFR	0
Wright to Dracut Pipeline Segment	G	20.63	WR-M-S015	UNT to Westfield River	I	B/CFR	0
Wright to Dracut Pipeline Segment	G	25.26	PL-E-S003	UNT to Meadow Brook	I	B/CFR	8
Wright to Dracut Pipeline Segment	G	25.49	PL-E-S002	UNT to Meadow Brook	P	B/CFR	20
Wright to Dracut Pipeline Segment	G	25.58	PL-E-S001A	UNT to Meadow Brook	I	B/CFR	12
Wright to Dracut Pipeline Segment	G	26.81	PL-M-S003	UNT to North Branch Swift River	I	B/CFR	0
Wright to Dracut Pipeline Segment	G	26.93	PL-M-S004	UNT to North Branch Swift River	I	B/CFR	0
Wright to Dracut Pipeline Segment	G	27.09	AS-M-S001	Billings Brook	P	B/HQ/CFR	51
Wright to Dracut Pipeline Segment	G	27.20	AS-M-S002	Swift River	P	B/HQ/CFR	0
Wright to Dracut Pipeline Segment	G	27.48	AS-M-S003	UNT to Swift River	P	B/CFR	9
Wright to Dracut Pipeline Segment	G	27.97	AS-M-S004	Ford Brook	NF	B/HQ/CFR	419
Wright to Dracut Pipeline Segment	G	28.99	AS-M-S006	UNT to Swift River	I	B/HQ/CFR	5
Wright to Dracut Pipeline Segment	G	29.06	AS-M-S007	UNT to Swift River	P	B/HQ/CFR	5
Wright to Dracut Pipeline Segment	G	29.17	AS-M-S008	UNT to Swift River	I	B/CFR	9
Wright to Dracut Pipeline Segment	G	29.51	AS-M-S009B	UNT to Smith Brook	P	A/CFR	4

Table 2e-A2
Waterbodies Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

	W	aterbodies Ident	ified Along the Massach	usetts Portion of the Northeast Energy Dire	ct Project		
Facility Name	Segment ¹	Nearest Milepost ²	Waterbody Identification Number ³	Waterbody Name ⁴	Waterbody Frequency Type ⁵	Water Quality Designation/Fishery Classification ⁶	Crossing Length (ft)
Wright to Dracut Pipeline Segment	G	29.50	AS-M-S009A	Smith Brook	P	A/CFR	75
Wright to Dracut Pipeline Segment	G	29.85	AS-M-S010	UNT to South River	I	B/CFR	21
Wright to Dracut Pipeline Segment	G	31.71	AS-M-S011	UNT to Bear River	P	B/CFR	7
Wright to Dracut Pipeline Segment	Н	4.21	CN-M-S005	UNT to Deerfield River	P	B/CFR	11
Wright to Dracut Pipeline Segment	Н	4.62	CN-M-S003	UNT to Deerfield River	I	B/CFR	9
Wright to Dracut Pipeline Segment	Н	4.63	CN-M-S004	UNT to Deerfield River	P	B/CFR	5
Wright to Dracut Pipeline Segment	Н	15.72	MO-M-S002	UNT to Millers River	I	В	0
Wright to Dracut Pipeline Segment	Н	15.72	MO-M-S002A	UNT to Millers River	Е	В	6
Wright to Dracut Pipeline Segment	Н	16.07	ER-M-S001	Millers River	P	В	84
Wright to Dracut Pipeline Segment	Н	16.40	ER-M-S002	UNT to Millers River	I	В	13
Wright to Dracut Pipeline Segment	Н	23.72	NO-L-S002	UNT to Millers Brook	I	В	11
Wright to Dracut Pipeline Segment	Н	23.82	NO-G-S002	UNT to Millers Brook	I	В	0
Wright to Dracut Pipeline Segment	K	1.68	DR-E-S006	UNT to Trout Brook	P	В	0
Wright to Dracut Pipeline Segment	K	1.69	DR-E-S006A	UNT to Trout Brook	P	В	0
Lynnfield Lateral	N	2.91	AN-K-S001A	UNT to Ames Pond	Е	В	11
Lynnfield Lateral	N	3.28	TK-K-S001	UNT to Ames Pond	Е	В	0
Lynnfield Lateral	N	4.39	TK-K-S002	UNT to Meadow Brook	P	В	13
Lynnfield Lateral	N	6.12	TK-K-S003	UNT to Shawsheen River	P	В	11
Lynnfield Lateral	N	6.34	TK-K-S004A	UNT to Shawsheen River	P	В	13
Lynnfield Lateral	N	6.62	TK-K-S005	Shawsheen River	P	В	0
Lynnfield Lateral	N	6.81	AN-P-S001	UNT to Shawsheen River	P	В	0
Lynnfield Lateral	N	7.73	AN-K-S004	UNT to Shawsheen River	P	В	10
Lynnfield Lateral	N	8.01	AN-G-S003	UNT to Shawsheen River	P	В	0
Lynnfield Lateral	N	8.10	WL-K-S001	UNT to Shawsheen River	I	В	0
Lynnfield Lateral	N	8.77	WL-P-S002	UNT to Martins Brook	NF	В	338
Haverhill Lateral	P	2.36	ME-P-S004	UNT to Harris Brook	P	В	0
Haverhill Lateral	P	3.63	ME-P-S007B	UNT to Harris Brook	I	В	0
Haverhill Lateral	P	3.73	ME-P-S007	UNT to Harris Brook	I	В	30
Haverhill Lateral	P	4.49	ME-P-S005	UNT to Bartlett Brook	NF	В	19
Fitchburg Lateral Extension	Q	13.37	LU-K-S001	UNT to Falulah Brook	I	В	3
Fitchburg Lateral Extension	Q	13.61	LU-A-S001A	UNT to Falulah Brook	Е	В	13

Table 2e-A2
Waterbodies Identified Along the Massachusetts Portion of the Northeast Energy Direct Project

Facility Name	Segment ¹	Nearest Milepost ²	Waterbody Identification Number ³	Waterbody Name ⁴	Waterbody Frequency Type ⁵	Water Quality Designation/Fishery Classification ⁶	Crossing Length (ft) ⁷						
Fitchburg Lateral Extension	Q	13.62	LU-A-S001B	UNT to Falulah Brook	E	В	0						
	Aboveground Facilities												
Market Path Mid Station 3	Н	23.98	NO-G-S001	UNT to Millers Brook	P	В	N/A						
			Co	ontractor Yards									
NED-K-0100	K	1.41	DR-A-S001	UNT to Potash Brook	E	В	N/A						
NED-K-0100	K	1.50	DR-A-S001B	UNT to Potash Brook	E	В	N/A						
				Access Roads									
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						

¹ Each segment is associated with its own set of mileposts beginning at 0.00

² Mileposts for Contractor Yards and Access Roads are given as nearest MP, which indicates the point at which the Access Road or Contractor Yard connects with the pipeline construction ROW, or closest MP to the construction ROW if there is no direct connection.

³ Waterbody series number generated to identify waterbodies within and adjacent to the Project corridor in accordance with the feature identification nomenclature described in Table 2e-2.

⁴ Unnamed tributary: waterbody is not mapped as a tributary on available GIS data layers; tributary name will be identified based on review of USGS topographical mapping in the final filing.

⁵ P = perennial; I = intermittent; E = Ephemeral; NF = No Flow; AP = Artificial Path; C = Connector

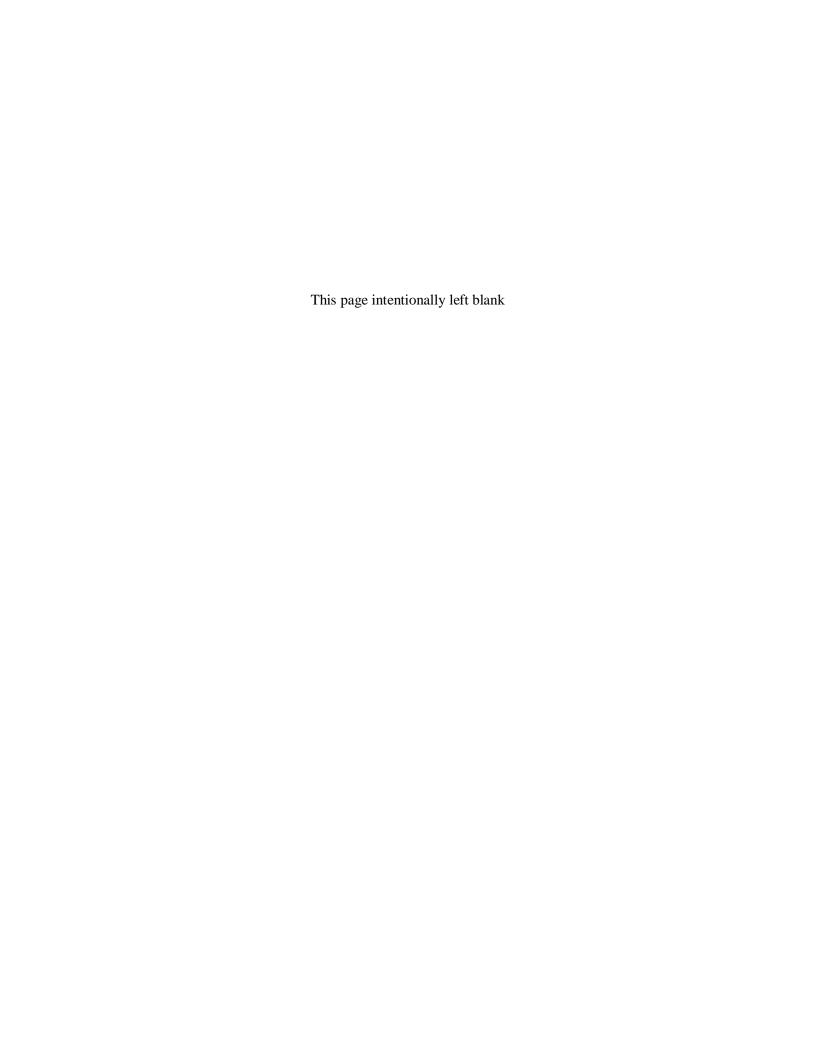
⁶ Water quality classifications were identified through a desktop review of available GIS data layers.

⁷ Existing waterbodies will not be impacted. Any improvements to existing culverts will be permitted as necessary.

APPENNDIX 2e-B

Wetland and Waterbody Locations Identified on USGS 7.5 Minute Topographic Map Excerpts

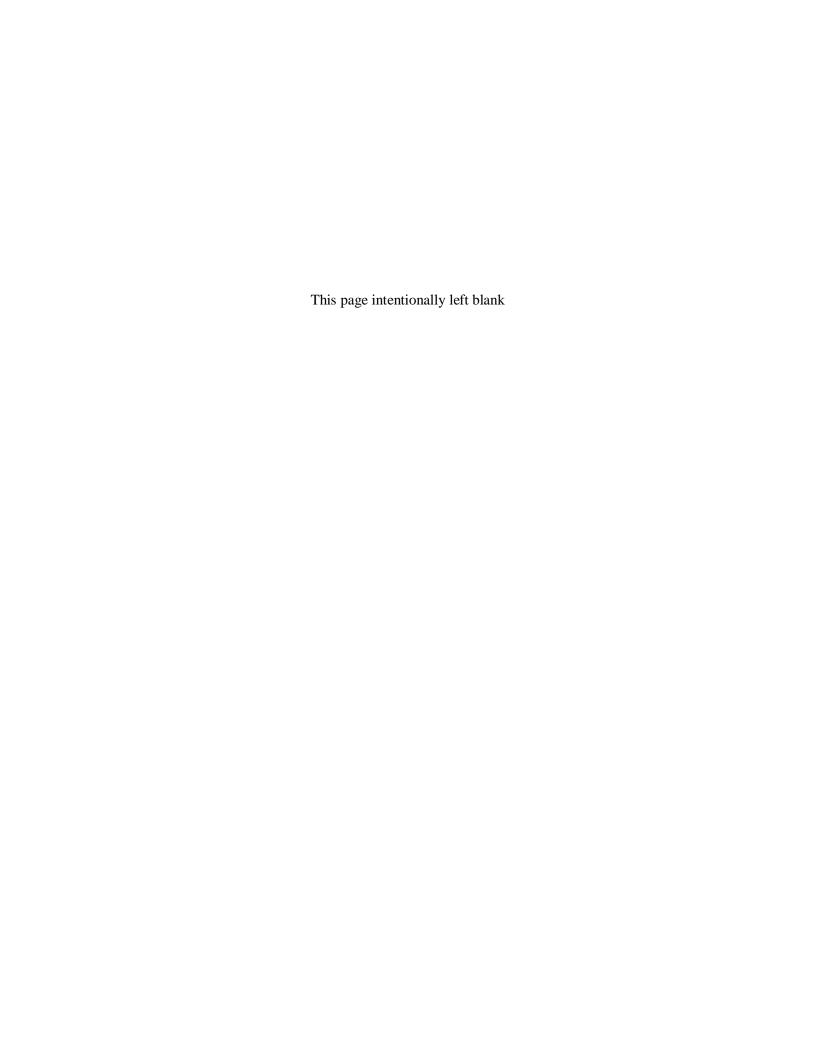
(provided under separate cover in Volume II, Appendix E of the FERC Environmental Report)



APPENNDIX 2e-C

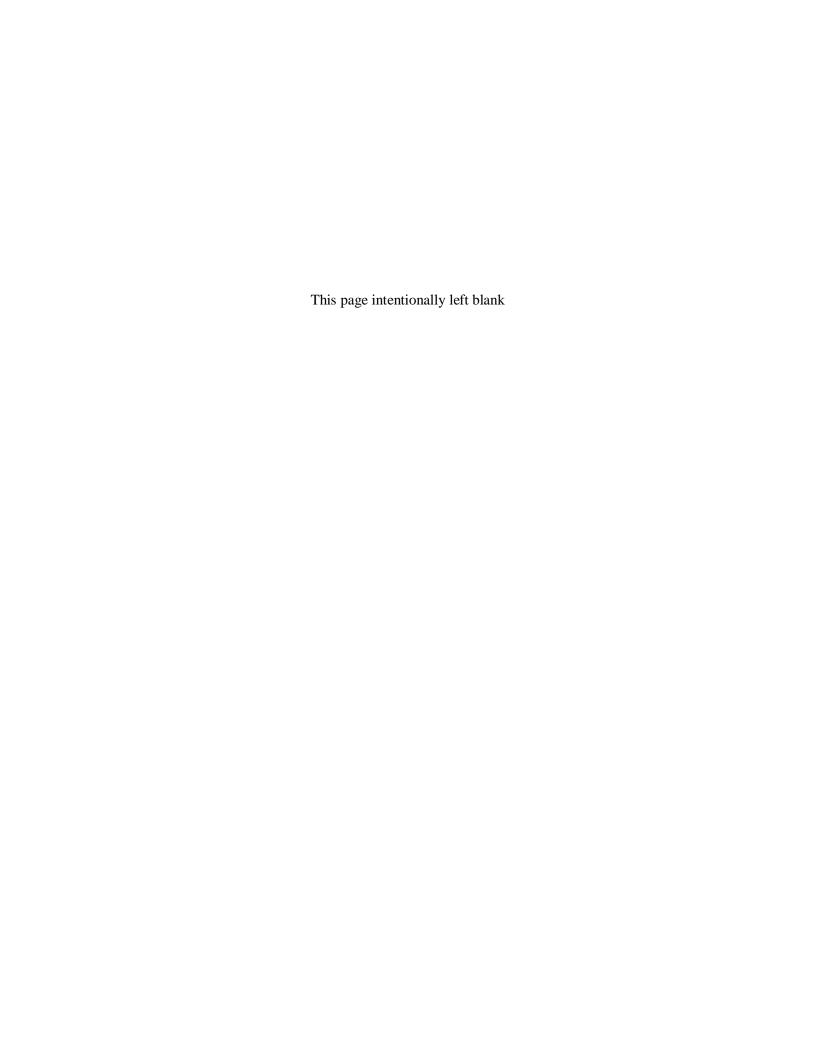
Wetland and Waterbody Locations Identified on Aerial Alignment Sheets

(provided under separate cover in Volume II, Appendix F, of the FERC Environmental Report)



APPENDIX 2e-D

Army Corps of Engineers Wetland Data Sheets and Photographs





WE	TLAND) DET	ERN	IINATI	ON F	ORM - N	Northc	ent	tral an	d No	ortheas	t Region	1	
☑ Centerline ☐ Re-R	oute	Acces	ss Roa	d 🗖	Ancilla	ry Facility		Trar	nsmission	Line	☐ Oth	ner		
Project/Site: NED			ı	Milepost:	4047.	4	County:		Berksl	hire		Date:	06/13/201	15
Applicant/Owner: Kinder Mo	organ						State:	MA		Samp	oling Poin	t: HA-N-W	001-PFO	
Investigators: N		Quad Na	ame: I	Hancock			Townshi	p:	Hanco	ock				
Logbook No.: 1	Logi	ook Pg	.: 60		Trac	t: 20930								
Landform (hillslope, terrace,	etc.):	Slope	- mid			Local Re	elief:	7 (Concave		Convex	☐ None	Slope%.:	3
Subregion (LRR): Middl	e Atlantic			Lat	42.53	38628		L	_ong:	-73.32	7313		Datum: NA	D83
Soil Map Unit Name: La	nesboro-Du	ımmerst	on ass	ociation,	steep, v	ery stony					NWI CI	assification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	ne site ty	pical fo	or this tim	e of yea	ır?: ⊽	1 Yes		No (If n	o, exp	lain in Rem	arks.)		
Are Vegetation Soil	☐ or H	ydrology	,	significa	ntly dist	urbed?	- ☑ No	 A	re "Norm	al" Cir	cumstance	s present?	✓ Yes	☐ No
Are Vegetation Soil		ydrology		naturally	•		□ No							
		, 9,	_	,	p									
SUMMARY OF FINDI	NGS - At	tach	site n	nap sho	wing	samplin	ng poin	t lo	cations	s, tra	nsects,	importan	t features	, etc.
Hydrophytic Vegetation Pres	ent?	$\overline{\checkmark}$	Yes	☐ No)				tha Cau					
Hydric Soil Present?		\checkmark	Yes	☐ No)				the Sar ithin a V			☑ Yes [□ No	
Wetland Hydrology Present?		$\overline{\checkmark}$	Yes	☐ No)									
Field Wetland Classification:	PFO													
Remarks:														
HYDROLOGY														
Wetland Hydrology Indicate	ors:									5	Secondary	Indicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one req	uired; cl	heck al	ll that app	ly)					[Surfac	e Soil Crack	s (B6)	
☐ Surface Water (A1)				☐ Water	-Staine	d Leaves (E	B9)			E	✓ Draina	ge Patterns	(B10)	
✓ High Water Table (A2)				☐ Aquat	ic Faun	a (B13)					Moss	Γrim Lines (Ε	316)	
✓ Saturation (A3)				☐ Marl [Deposits	s (B15)					☐ Dry-Se	ason Water	Table (C2)	
				Hydro	gen Su	lfide Odor ((C1)				Crayfis	h Burrows (C8)	
☐ Sediment Deposits (B2)				Oxidiz	ed Rhiz	zospheres a	along Livir	ng R	oots (C3)	, [☐ Satura	tion Visible o	on Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of F	Reduced Iro	on (C4)				Stunte	d or Stresse	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recei	nt Iron F	Reduction ir	n Tilled Sc	oils (0	C6)		Geom	orphic Position	on (D2)	
☐ Iron Deposits (B5)				Thin I	∕luck Su	urface (C7)					Shallo	w Aquitard (I	D3)	
☐ Inundation Visible on A	erial Image	ry (B7)		Other	(Explai	n in Remar	ks)				Microto	opographic F	Relief (D4)	
☐ Sparsely Vegetated Con	ncave Surfa	ace (B8)								[☐ FAC-N	eutral Test (D5)	
Field Observations:														
Surface Water Present?	☐ Yes	☑ 1	No [Depth (inc	hes):									
Water Table Present?	√ Yes	□ 1	No [Depth (inc	hes):	5			Wetlar	nd Hyd	drology Pr	esent?		
Saturation Present? (includes capillary fringe)	✓ Yes	□ 1	No [Depth (inc	hes):	0						✓	∫ Yes □	No
Remarks (Describe Recorded	I Data (stre	am gag	e, mon	itoring we	II, aerial	l photos, pr	evious ins	spect	tions), if a	availab	le):			
VEGETATION														
Tree Stratum														
Plot Size: 30														
Scientific Name									% C	over	D	ominant	Indicat	or Status
Acer saccharum Acer rubrum						т	otal Cove	r.	30 30 6	0		YES YES		ACU AC
						'	olai Gove		O	J				



1 10VIde1166, 1(1 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Lonicera morrowii Rhamnus cathartica Spiraea latifolia		5 15 1 2	YES YES NO NA	FACU FAC FACW NA
Carya sp	Total Cover:	23	INA	NA
	10101 00101.			
Herb Stratum				
Plot Size: 5		ı	ı	1
Scientific Name		% Cover	Dominant	Indicator Status
Onoclea sensibilis		85	YES	FACW
	Total Cover:	85		
Woody Vine Stratum				
Plot Size: 30		ı	ı	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	s: <u>86</u>	x 2 = <u>172</u>	
Spesies / iologo / iii Guatai	FAC Species:	<u>45</u>	x 3 = <u>135</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)	FACU Species	: <u>35</u>	x 4 = <u>140</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	: <u>166 (A)</u>	<u>447 (B)</u>	
		Prevalence Index =	= B/A = 2.69	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic	Vegetation Presen	nt? ☑ Yes [□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



SOIL	OIL												
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the absen	ce of indicators.)					
Depth	Matrix		Re	dox Fe	atures				6 .				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ure	Remarks				
0-10	2.5YR3/1	100					LOA	M					
10-20	2.5Y4/1	95	5YR4/6	5	С	М	SILT L	OAM					
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix				
Hydric Soil Inc	licators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:				
Histosol (•			Polyvalı /ILRA 1		Surface (S	8) (LRR R,		A10) (LRR K, L, MLRA 149B)				
_	pedon (A2)				,			_	Redox (A16) (LRR K, L, R)				
☐ Black Hist			п т	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)				
	Sulfide (A4)		_	-	=		(LRR K, L)	_	e (S7) (LRR K, L, M)				
	Layers (A5)		· 	-	Gleyed Ma			☐ Polyvalue Be	elow Surface (S8) (LRR K, L)				
□ Depleted	Below Dark Surfa	ace (A1	11) 🗹 🗆	Peplete	d Matrix (F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)				
☐ Thick Dar	k Surface (A12)			Redox [Dark Surfa	ace (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)				
	ıcky Mineral (S1)			Peplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)				
	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)				
☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)				
☐ Stripped I	Matrix (S6)							☐ Very Shallow	Dark Surface (TF12)				
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)				
3Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	lematic.					
Remarks:		_	Yes ☑ No	_				Hydric Soil Prese	nt? ☑ Yes ☐ No				
Description of Wetland Qualit			Aquatic Diversity	or Ge	neral Con	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown				
General Comm	ents:												





WEST



WE	TLAND	DET	ERMII	NATI	ON FORM -	Northce	entral an	d No	ortheast	Region		
☑ Centerline ☐ Re-R	oute	Acces	s Road		Ancillary Facility		Transmissior	n Line	☐ Othe	er		
Project/Site: NED			Mil	epost:	4114.2	County:	Berks	hire		Date:	06/13/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	oling Point:	HA-N-W	001-UPL	
Investigators: N	(Quad Na	me: Ha	ncock		Township	: Hanco	ock				
Logbook No.: 1	Logb	ook Pg.	: 61		Tract: 20930							
Landform (hillslope, terrace,	etc.):	Slope -	mid	· ·	Local F	Relief:	Concave	V	Convex	None	Slope%.:	5
Subregion (LRR): Middl	e Atlantic			Lat	: 42.538605		Long:	-73.32	7066		Datum: NA	D83
Soil Map Unit Name: La	nesboro-Du	mmersto	on assoc	iation,	steep, very stony				NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site ty	pical for	this tim	e of year?:	√ Yes	☐ No (If n	no, expl	lain in Rema	rks.)		
Are Vegetation Soil	or Hy	drology	☐ s	ignifica	ntly disturbed?	√ No	Are "Norm	nal" Circ	cumstances	present?	✓ Yes	☐ No
Are Vegetation	or Hy	/drology	□ n	aturally	problematic?	☑ No						
SUMMARY OF FINDI	NGS - At	tach s	ite ma	p sho	owing sampli	ng point	locations	s, tra	nsects, iı	mportant	features	, etc.
Hydrophytic Vegetation Pres	ent?		Yes	√ No)							
Hydric Soil Present?		\checkmark	Yes	☐ No)		Is the Sar	mpied Netlar	nd? □	Yes ⊻	∐ No	
Wetland Hydrology Present?			Yes	√ No)							
Field Wetland Classification:	UPL	AND PLO	TC									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicate	ors:							5	Secondary In	ndicators (2	or more requ	uired)
Primary Indicators (minimum	of one req	uired; ch	eck all t	hat app	<u>ly)</u>				Surface	Soil Cracks	(B6)	
☐ Surface Water (A1)				Water	r-Stained Leaves	(B9)			Drainag	e Patterns (B10)	
☐ High Water Table (A2)				Aquat	tic Fauna (B13)				Moss Tr	im Lines (B	16)	
☐ Saturation (A3)				Marl [Deposits (B15)				☐ Dry-Sea	son Water	Table (C2)	
☐ Water Marks (B1)				Hydro	ogen Sulfide Odor	(C1)			☐ Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizospheres	along Livin	g Roots (C3)) [Saturation	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				Prese	ence of Reduced I	ron (C4)			Stunted	or Stressec	l Plants (D1)	
☐ Algal Mat or Crust (B4)				Recei	nt Iron Reduction	in Tilled Soi	ils (C6)		Geomor	phic Positio	n (D2)	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7)				Aquitard (D	-	
☐ Inundation Visible on A	rial Imager	y (B7)		Other	(Explain in Rema	arks)			_ `	ographic R		
Sparsely Vegetated Con	ncave Surfa	ice (B8)						[FAC-Ne	utral Test ([D5)	
Field Observations:	_		_									
Surface Water Present?	Yes	☑ N		pth (inc	-							
Water Table Present?	Yes	☑ N		pth (inc	-		Wetlai	nd Hyd	Irology Pres		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	⊘ N	lo De	pth (inc	hes): 0					_	.00	
Remarks (Describe Recorded	Data (strea	am gage	, monito	ring we	ell, aerial photos, p	previous insp	pections), if a	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Do	minant	Indicate	or Status
Betula papyrifera Acer saccharum								5 60		NO 'ES		VCN
						Total Cover	1	35	Ι .		.,	



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer saccharum		15	YES	FACU
Prunus serotina Acer pensylvanicum		10 5	YES NO	FACU FACU
	Total Cover:	30	ı	1
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Polygonatum biflorum		10	YES	FACU
Carya spp		1	NA	NONE
Prunus serotina Acer saccharum		5 10	NO YES	FACU FACU
	Total Cover:	26	•	
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	:: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species	<u>140</u>	x 4 = <u>560</u>	
That Ale OBE, Thow, of the	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	140 (A)	<u>560 (B)</u>	
		Prevalence Index	$= B/A = \underline{4.00}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Prese	nt? 🔲 Yes [√ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	I			



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures				5
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ure	Remarks
0-4	10YR3/2	100					LOA	AM	
4-10	10YR5/4	100					SILT L	.OAM	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	=Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils ³ :
☐ Histosol (A	1 1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		IV	ILINA	430)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ⊺	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
	_ayers (A5)		_	oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	d Matrix (I	•			urface (S9) (LRR K, L)
	k Surface (A12)		_		Dark Surfa				nese Masses (F12) (LRR K, L, R)
=	icky Mineral (S1)					ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)
: _	eyed Matrix (S4)		☐ F	Redox I	Depressio	ns (F8)		_ :	c (TA6) (MLRA 144A, 145, 149B)
Sandy Re									Material (F21)
	Matrix (S6)								v Dark Surface (TF12)
	ace (S7) (LRR R		·						in in Remarks)
Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pre	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	er Present?		Yes 🗹 No	<u></u> п	Inknown			Hydric Soil Prese	ent? ☑ Yes ☐ No
Remarks:							I		
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	iments:			
Wetland Qualit	y: High	<u> </u>	Moderate	Low			Isolated Wetland?	Yes 🗹	No Unknown
General Comm	ents:								





EAST



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 43825.9	County: Berkshire Date: 06/04/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: CS-M-W002-PEM
Investigators: CM Quad Name: Cheshire	Township: Cheshire
Logbook No.: 3 Logbook Pg.: 24 Tract: 20856	
Landform (hillslope, terrace, etc.): Slope - mid Local R	elief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.519637	Long: -73.184651 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	☑ No Are "Normal" Circumstances present? ☑ Yes □ No
Are Vegetation Soil or Hydrology naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	
Hydric Soil Present? ☑ Yes ☐ No	ls the Sampled Area ☑ Yes ☐ No within a Wetland?
Wetland Hydrology Present?	main a rronana
Field Wetland Classification: PEM	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☑ Yes ☐ No
Saturation Present? ☑ Yes ☐ No Depth (inches): 11 (includes capillary fringe)	v res □ no
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	evious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
т	otal Cover:



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Spiraea tomentosa Acer rubrum		10 5	YES YES	FACW FAC
Ace Tablati	Total Cover:	15	123	170
		-		
Herb Stratum				
Plot Size: 5	I		l 5 · .	1
Scientific Name		% Cover	Dominant	Indicator Status
Acorus calamus Onoclea sensibilis		10 80	NO YES	OBL FACW
Solidago rugosa	Tatal Causes	10	NO	FAC
W 1 V 20 1	Total Cover:	100		
Woody Vine Stratum Plot Size: 30				
	1	0/ 0	l 5	1 1 1 2 4
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
	<u> </u>			
Dominance Test Worksheet:	Prevalence Ind		A.A. Ist. I.	
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of		Multiply by:	
Total Number of Dominant	OBL Species:	<u>10</u>	x 1 = 10	
Species Across All Strata: 3 (B)	FACW Species:		x 2 = 180 x 3 = 45	
Percent of Dominant Species	FAC Species: FACU Species:	<u>15</u> 0	x 3 = 45 x 4 = 0	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	0	x = 0 $x = 0$	
	Column Totals:	<u>u</u> 115 (A)	235 (B)	
		Prevalence Index =	, ,	
H. Land, G. Warrett, J. Parker		- revalence index =	= B/A = <u>2.04</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0 A Marshalorical Adoptational (Dravide supporting)	Usalrombutio V	anatatian Drasan	42	7 No
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic v	egetation Presen	it? ☑ Yes [☐ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
1Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures				6
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-4	10YR 3/1	100					CLAY I	_OAM	
4-14	10YR 4/2	30	10YR 6/1 10YR 4/6	60 10	υс	M M	CLAY I	LOAM	
1Type: C-Cond	contration D_D	plotion	PM-Poducod	Matrix	CS-C0V	orod Sand	or Coated Grains.	2l ocation: DI -	Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	•	to all LRR's, unle				or Coated Grains.		roblematic Hydric Soils3:
		cable t					8) (LRR R,		A10) (LRR K, L, MLRA 149B)
_ `	pedon (A2)			ILRA 1		ounace (o	o) (LIKICIC,		e Redox (A16) (LRR K, L, R)
☐ Black Hist			пτ	hin Da	rk Surface	- (S9) (LR	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_				(LRR K, L)		e (S7) (LRR K, L, M)
	_ayers (A5)		_	-	Gleyed Ma		(LIXIX IX, L)		elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	=	-	d Matrix (I				urface (S9) (LRR K, L)
	Surface (A12)	200 (71)	_	-	Dark Surfa	•			ese Masses (F12) (LRR K, L, R)
	cky Mineral (S1)		_			ice (i o) irface (F7)		_ `	, , , , , , , , , , , , , , , , , , , ,
	eyed Matrix (S4)		_	-					podplain Soils (F19) (MLRA 149B)
			☐ F	Keuox I	Depressio	115 (F0)			c (TA6) (MLRA 144A, 145, 149B)
									Material (F21)
Stripped N		MI D	\ 440D\						/ Dark Surface (TF12)
_	ace (S7) (LRR R		·						in in Remarks)
					-	esent, unit	ess disturbed or prob	nemanc.	
Restrictive Lay	er Fresent?	<u> </u>	Yes √ No	<u> </u>	nknown			Hydric Soil Prese	nt? ☑ Yes ☐ No
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High	_ r	Moderate 🗹	Low			Isolated Wetland?	✓ Yes □	No Unknown
General Comm	ents:								





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WETLAND DETERMINATION FORM - Nor	thcentral and Northeast Region
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 43857.4 Cou	inty: Berkshire Date: 06/04/2015
Applicant/Owner: Kinder Morgan Star	te: MA Sampling Point: CS-M-W002-UPL
Investigators: CM Quad Name: Cheshire Tow	rnship: Cheshire
Logbook No.: 3 Logbook Pg.: 25 Tract: 20856	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.519684	Long: -73.184509 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	es 🔲 No (If no, explain in Remarks.)
Are Vegetation ✓ Soil ☐ or Hydrology ☐ significantly disturbed? ☐	No Are "Normal" Circumstances present? ☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No
SUMMARY OF FINDINGS - Attach site map showing sampling p	oint locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area ☐ Yes ☑ No within a Wetland?
Wetland Hydrology Present? ☐ Yes ☑ No	
Field Wetland Classification: UPLAND PLOT	
Remarks: MOWED LAWN. DISTURBED	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	ed Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? Yes V No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	is inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Total (Cover:



1 1001001000, 101 02004				1 6 1 2 1 1 1 1 1
Sapling/Shrub Stratum				
Plot Size: 15	11	,	,	
Scientific Name		% Cover	Dominant	Indicator Status
Taxus canadensis		15	YES	FACU
	Total Cover:	15		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Poa sp		40	NA	NONE
Duchesnea indica		60	YES	FACU
	Total Cover:	100		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		'	,
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species		x 2 = <u>0</u>	
Species Across All Strata: 2 (B)	FAC Species:	<u> </u>	x 3 = <u>0</u>	
Percent of Dominant Species	FACU Species:		x 4 = 300	
That Are OBL, FACW, or FAC: 0 (A/B)	UPL Species:	<u>0</u>	$x \cdot 5 = 0$	
	Column Totals:		300 (B)	
				
		Prevalence Index =	= B/A = 4.00	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	it? ☐ Yes ☑	∐ No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



Color (moist) % Color (moist) % Type ¹ Loc ²	
Depth (inches) Matrix Redox Features Color (moist) % Color (moist) % Type¹ Loc²	
(inches) Color (moist) % Color (moist) % Type¹ Loc²	ence of indicators.)
Color (moist) % Color (moist) % Type ¹ Loc ²	
0.6 10VP4/4 50 10VP3/2 50 C M SUT	exture Remarks
0-6 10YR4/4 50 10YR3/2 50 C M SILT	LOAM
6-18 10YR4/6 100 SILT	LOAM
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.	2Location: PL=Pore Lining, M=Matrix
lydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.)	Indicators for Problematic Hydric Soils³:
☐ Histosol (A1) ☐ Polyvalue Below Surface (S8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epipedon (A2)	Coast Prairie Redox (A16) (LRR K, L, R)
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (LRR K, L)	☐ Dark Surface (S7) (LRR K, L, M)
☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2)	Polyvalue Below Surface (S8) (LRR K, L)
☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3)	☐ Thin Dark Surface (S9) (LRR K, L)
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6)	☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7)	☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)	☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Redox (S5)	Red Parent Material (F21)
Stripped Matrix (S6)	☐ Very Shallow Dark Surface (TF12)
□ Dark Surface (S7) (LRR R, MLRA 149B)	Other (Explain in Remarks)
— ₃Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or pro	
Remarks:	
Description of Habitat Characteristics, Aquatic Diversity or General Comments:	
Description of Habitat Characteristics, Aquatic Diversity or General Comments:	
Description of Habitat Characteristics, Aquatic Diversity or General Comments: Netland Quality: High Moderate Low Isolated Wetland	d? ☐ Yes ☐ No ☐ Unknown
	d?
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d?
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	ਰ? □ Yes □ No □ Unknown
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d?
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d?
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d?
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d? ☐ Yes ☐ No ☐ Unknown
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d?
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d?
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d? ☐ Yes ☐ No ☐ Unknown
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d? Yes No Unknown
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d? Yes No Unknown
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d? Yes No Unknown
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d? Yes No Unknown
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d? Yes No Unknown
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d? Yes No Unknown
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland	d? Yes No Unknown





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WETLAND DETERMINATION FORM - No	orthcant	tral and No	ertheast Region	
WETEARD DETERMINATION FORM - NO	or tillocill	iiai ailu i t o	ittieast Kegion	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Tran	nsmission Line	☐ Other	
Project/Site: NED Milepost: 71511.1 Co	ounty:	Berkshire	Date:	06/01/2015
Applicant/Owner: Kinder Morgan St	tate: MA	Samp	oling Point: HN-M-W0	01-PFO
Investigators: CM Quad Name: Peru To	ownship:	Hinsdale		
Logbook No.: 2 Logbook Pg.: 128 Tract: 20963				
Landform (hillslope, terrace, etc.): Depression Local Relie	ef: 🗹 C	Concave	Convex None	Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.473571	L	Long: -73.110	0322	Datum: NAD83
Soil Map Unit Name: Pillsbury loam, 0 to 8 percent slopes, extremely stony			NWI Classification:	PFO4E
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes	No (If no, expla	ain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No A	re "Normal" Circ	cumstances present?	☑ Yes ☐ No
Are Vegetation ☑ Soil ☐ or Hydrology ☐ naturally problematic? ☐	No			
			_	_
SUMMARY OF FINDINGS - Attach site map showing sampling	point lo	cations, trar	nsects, important	features, etc.
Hydrophytic Vegetation Present?	lo	the Sampled	Aron	
Hydric Soil Present? ☑ Yes ☐ No		ithin a Wetlan	I/I VAC I I	No
Wetland Hydrology Present? ✓ Yes No				
Field Wetland Classification: PFO				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		<u>S</u>	Secondary Indicators (2 o	or more required)
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9))	V	Drainage Patterns (B)	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines (B1	6)
☑ Saturation (A3) ☐ Marl Deposits (B15)			Dry-Season Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C	3)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres alor	ng Living Ro	toots (C3)	Saturation Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron ((C4)		☐ Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Ti	illed Soils (0	C6)	Geomorphic Position	(D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)			Shallow Aquitard (D3	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks))			lief (D4)
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D	5)
Field Observations:				
Surface Water Present? ☐ Yes ☑ No Depth (inches):				
Water Table Present? ☑ Yes ☐ No Depth (inches): 2		Wetland Hyd	rology Present?	
Saturation Present?			☑	Yes No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previ	ious inspect	tions), if available	e):	
	·		,	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Betula alleghaniensis		10	NO VES	FAC
Picea mariana Hamamelis virginiana		50 40	YES YES	FACW FACU
Tota	al Cover:	100	,	



T TOVIGETICE, THE O2304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Lindera benzoin		10 10	YES YES	FACW FACU
Hamamelis virginiana	Total Cover:	20	152	FACU
	Total Cover.			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Carex stricta Toxicodendron radicans		50 20	YES YES	OBL FAC
Onoclea sensibilis		10	NO	FACW
Carex crinita	Total Cover:	10 90	NO	OBL
W 1 V 2 1	Total Cover:	90		
Woody Vine Stratum Plot Size: 30				
	I	04.0	l 5	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Corre			
	Total Cover:			
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover of	of:	Multiply by:	
	OBL Species:	<u>60</u>	x 1 = <u>60</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species	: <u>70</u>	x 2 = <u>140</u>	
•	FAC Species:	<u>30</u>	x 3 = <u>90</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)	FACU Species:	<u>50</u>	x 4 = <u>200</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>210 (A)</u>	<u>490 (B)</u>	
	F	Prevalence Index =	$= B/A = \underline{2.33}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	nt? ☑ Yes [] No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, T	(1 02304								The second of the second
SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to d	docum	ent the ir	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
0-4	10YR 2/1	100					ORG/	ANIC	
4-14	10G 5/2	70	N2.5	30	С	М	LOAMY VERY	/ FINE SAND	MICA FLAKES
7 17	100 3/2	10	142.5	00		""	EO/WIT VERT	THE OTHER	MIONTERICO
1T 0.0		1.0	DM D 1					31 DI	
							l or Coated Grains.		Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess ot	herwise n	oted.)		Indicators for Pro	oblematic Hydric Soils³:
Histosol (A1)			olyval ILRA		Surface (S	8) (LRR R,	2 cm Muck (A	A10) (LRR K, L, MLRA 149B)
☐ Histic Epi	pedon (A2)		IV	ILIXA	1490)			☐ Coast Prairie	Redox (A16) (LRR K, L, R)
■ Black Hist	tic (A3)		□т	hin Da	ark Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky I	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mi	neral (F1)	(LRR K, L)	□ Dark Surface	(S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	low Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	 11)	eplete	ed Matrix (F3)		☐ Thin Dark Su	rface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		R	Redox	Dark Surfa	ace (F6)		☐ Iron-Mangane	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))	_			urface (F7)			odplain Soils (F19) (MLRA 149B)
✓ Sandy Gl	eyed Matrix (S4)			Redox	Depressio	ns (F8)			(TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re			_		•	,		☐ Red Parent N	
	Matrix (S6)								Dark Surface (TF12)
	ace (S7) (LRR R	MID	\ 140P\						n in Remarks)
			·				Park I all a const		ii iii Keinaiks)
andicators of r	nyaropnytic vege	tation a	and wetland nydro	ology r	nust be pr	esent, uni	ess disturbed or prob	Diematic.	
Remarks:								Hydric Soil Preser	nt? ☑ Yes □ No
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: 🗹 High		Moderate	Low			Isolated Wetland?	Yes 🔽	No 🔲 Unknown
General Comm	ents:								





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WETLAND DETERMINATION FORM - No	orthcer	ntral and No	ortheast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Tr	ransmission Line	Other	
Project/Site: NED Milepost: 71594.1 C	County:	Berkshire	Date:	06/01/2015
Applicant/Owner: Kinder Morgan S	State: M	//A Samp	oling Point: HN-M-W0	01-UPL
Investigators: CM Quad Name: Peru T	ownship:	Hinsdale		 -
Logbook No.: 2 Logbook Pg.: 130 Tract: 20963				
Landform (hillslope, terrace, etc.): Slope - mid Local Relie	ef:	Concave 🗹	Convex None	Slope%.: 7
Subregion (LRR): Middle Atlantic Lat: 42.473431		Long: -73.11	0078	Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony			NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes [No (If no, exp	lain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No -	Are "Normal" Cir	cumstances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑				
SUMMARY OF FINDINGS - Attach site map showing sampling	point l	ocations, tra	nsects, important	features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	P	,		
Hydric Soil Present? ☐ Yes ☑ No	ı	Is the Sampled	I Area □ Yes ☑	Í No
Wetland Hydrology Present? ☐ Yes ☑ No	'	within a Wetlar	nd?	NO
Field Wetland Classification: UPLAND PLOT				
Remarks:				
Remarks.				
HYDROLOGY				
Wetland Hydrology Indicators:		<u> </u>	Secondary Indicators (2 o	or more required)
Primary Indicators (minimum of one required; check all that apply)		Γ	☐ Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9))		☐ Drainage Patterns (E	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines (B1	6)
Saturation (A3) Marl Deposits (B15)			☐ Dry-Season Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1	1)		Crayfish Burrows (C	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres alo	ng Living	Roots (C3)		Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	(C4)		Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in T	illed Soils	s (C6)	Geomorphic Position	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		_	Shallow Aquitard (D3	•
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks))	_	Microtopographic Re	
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D	15)
Field Observations:				
Surface Water Present?				
Water Table Present? ☐ Yes ☑ No Depth (inches):		Wetland Hyd	drology Present?	Vac 🗹 Na
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)			Ц	Yes ✓ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, prev	ious inspe	ections), if availab	le):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Acer saccharum		5	NO VES	FACU
Tsuga canadensis	al Cover:	95	YES	FACU
l Ole	ai 00v61.	100		

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Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Tsuga canadensis		15	YES	FACU
	Total Cover:	15	·	
Herb Stratum				
Plot Size: 5				
Scientific Name	1	% Cover	Dominant	Indicator Status
- Scientific Name		70 COVE	Dominant	indicator Status
	Total Cover:			
Waadii Vina Ctratiim	Total Cover.			
Woody Vine Stratum Plot Size: 30				
	1	0/ 0		l
Scientific Name		% Cover	Dominant	Indicator Status
	T			
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)	Total % Cover of		Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species:	: <u>0</u>	x 2 = <u>0</u>	
	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>115</u>	x 4 = <u>460</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>115 (A)</u>	<u>460 (B)</u>	
	F	Prevalence Index =	= B/A = 4.00	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydronhytic V	egetation Presen	it? ☐ Yes ⊡	7 No
data in Remarks or on a separate sheet)	. iya. opiiyao t	ogotation i rocci	🔟 les 🖪	_ NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



T TOVIGOTICO, I	(1 0200+										100				
SOIL															
Profile Descrip	otion: (Describe	e the d	epth needed to	docum	ent the in	dicator o	r confirm the	e absenc	e of indicators.)						
Depth	Matrix		Re	dox Fe	atures										
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Textu	re		Remarks				
0-3	10YR 2/2	100													
3-5	10YR 3/3	70	10YR 4/1	30	С	М	SANDY LOAM								
5-16	7.5YR 4/5	100					L	LOAMY S	SAND						
16-22	7.5YR 3/6	100					1	LOAMY S	SAND						
10 22	7.51100	100					_	LO/ (IVI)	,,,,,,						
1Tunas C. Can	nontration D D	onlation	DM Dadwaad	Matrix	CC Co.	arad Cand	or Cooted C		21 apptions DI	Dara Lining A	A Motrix				
			n, RM=Reduced				or Coaled G		²Location: PL=						
		cable t	o all LRR's, unl			•			Indicators for Pr	-					
Histosol (/	•			Polyvalı ИLRA 1		Surface (S	8) (LRR R,			A10) (LRR K, L					
Histic Epip	pedon (A2)				,				☐ Coast Prairie	Redox (A16)	(LRR K, L,	R)			
☐ Black Hist	tic (A3)			Γhin Da	rk Surface	e (S9) (LRI	R R, MLRA 14	149B)	5 cm Mucky	Peat or Peat (S	33) (LRR k	(, L, R)			
☐ Hydrogen	Sulfide (A4)		_ ı	_oamy l	Mucky Mir	neral (F1) ((LRR K, L)		□ Dark Surface	e (S7) (LRR K,	L, M)				
☐ Stratified I	Layers (A5)		□ ı	oamy (Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surface (S	38) (LRR K	ί, L)			
☐ Depleted	Below Dark Surf	ace (A1	1) 🔲 [Deplete	d Matrix (I	F3)			☐ Thin Dark Su	ırface (S9) (LR	.R K, L)				
☐ Thick Dar	k Surface (A12)		□ F	Redox [Dark Surfa	ace (F6)			☐ Iron-Mangan	ese Masses (F	12) (LRR	K, L, R)			
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B)											RA 149B)				
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)											5, 149B)				
☐ Sandy Re	edox (S5)								☐ Red Parent I	Material (F21)					
☐ Stripped N	Matrix (S6)								─ Very Shallow	Dark Surface	(TF12)				
	ace (S7) (LRR R	. MLR	A 149B)							in in Remarks)					
	` , `		and wetland hydr	ology n	nust he nr	esent unle	see dieturhed			,					
					-	eserii, uriie	sss disturbed	or proble	anano.						
Restrictive Lay	er Present?	☑ ′	Yes ☐ No		nknown					_	_				
ROCK								Н	lydric Soil Prese	nt? Ye	es ☑ □	No			
22															
Remarks:															
Description of	Habitat Characte	eristics,	Aquatic Diversity	y or Ge	neral Com	nments:									
Wetland Qualit	ty: High		Moderate	Low			Isolated We	Vetland?	☐ Yes 🗹	No 🔲 L	Jnknown				
General Comm	ients:														





NW



WETLAND DETERMINATION FORM - Nort	thcentral	and Nor	theast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmis	ssion Line	☐ Other	
Project/Site: NED Milepost: 71855.7 Cou	inty: B	Berkshire	Date:	06/03/2015
Applicant/Owner: Kinder Morgan Stat	e: MA	Samplin	ng Point: HN-M-W0	002-PFO
Investigators: CM Quad Name: Peru Tow	nship: H	linsdale		
Logbook No.: 2 Logbook Pg.: 139 Tract: 20963				
Landform (hillslope, terrace, etc.): Stream fringe Local Relief:	☑ Conc	cave 🔲 Co	onvex None	Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.473107	Long	g: -73.1092	208	Datum: NAD83
Soil Map Unit Name: Pillsbury loam, 0 to 8 percent slopes, extremely stony			NWI Classification:	PEM1E
Are climatic / hydrologic conditions on the site typical for this time of year?:	es	(If no, explain	n in Remarks.)	
	No Are "N	Normal" Circur	mstances present?	✓ Yes □ No
	No		•	
Are vegetation V 3011 Or Trydrology I Hattirally problematic:	140			
SUMMARY OF FINDINGS - Attach site map showing sampling po	oint locati	ions, trans	sects, important	features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No				
Hydric Soil Present? ☑ Yes ☐ No	Is the	e Sampled A n a Wetland	^{krea} ☑ Yes □] No
Wetland Hydrology Present?	Within	i a Welland	•	
Field Wetland Classification: PFO				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		Sec	condary Indicators (2	or more required)
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)			Drainage Patterns (I	B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines (B1	16)
✓ Saturation (A3) ☐ Marl Deposits (B15)			Dry-Season Water T	Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			Crayfish Burrows (C	(8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	Living Roots	(C3) □	Saturation Visible or	n Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	4)		Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	ed Soils (C6)		Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)			Shallow Aquitard (D	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			Microtopographic Re	elief (D4)
Sparsely Vegetated Concave Surface (B8)		☑	FAC-Neutral Test (D	95)
Field Observations:				
Surface Water Present?				
Water Table Present? ☑ Yes ☐ No Depth (inches): 2	W	etland Hydro	ology Present?	
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)			\square	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previou	s inspections	s), if available)	:	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Abies balsamea Tsuga canadensis		40 20	YES YES	FAC FACU
Betula alleghaniensis Total C	Cover.	10 70	NO	FAC
Total				



Trovidence, IXI 02304							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Tsuga canadensis Betula alleghaniensis Abies balsamea		10 10 10	YES YES YES	FACU FAC FAC			
Ables balsalilea	Total Cover:	30	120	TAG			
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
Carex crinita		5	YES	OBL			
	Total Cover:	5					
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:					
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover of	of:	Multiply by:				
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>5</u>	x 1 = <u>5</u>				
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species:	: <u>0</u>	x 2 = <u>0</u>				
Species Across All Strata: 6 (B)	FAC Species:	<u>70</u>	x 3 = <u>210</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)	FACU Species:	<u>30</u>	x 4 = <u>120</u>				
That rice OBE, I NOW, OI THO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	105 (A)	335 (B)				
	F	Prevalence Index	= B/A = 3.19				
Hydrophytic Vegetation Indicators:							
☐ 1 - Rapid Test for Hydrophytic Vegetation							
✓ 2 - Dominance Test is > 50%							
☐ 3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Vegetation Present? ✓ Yes ☐ No						
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹Indicators of hydric soil and wetland hydrology must be							
present, unless disturbed or problematic.							
Remarks:							



SOIL									
rofile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture	Remarks
0-4	10YR 2/1	100					ORG	ANIC	
4-14	GLEY2 5/10G	70	GLEY1 2.5N	30	С	М	LOAMY FI	NE SAND	
Type: C=Conc	centration, D=De	pletion	, RM=Reduced	Matrix,	CS=Cov	ered Sand	I or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
**	· · · · · · · · · · · · · · · · · · ·	·	o all LRR's, unle						oblematic Hydric Soils³:
☐ Histosol (A			•			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	•			ILRA 1		ounaco (C	(2) (2) (1)	_	Redox (A16) (LRR K, L, R)
☐ Black Histi			пτ	hin Da	ırk Surface	(S9) (LR	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)		e (S7) (LRR K, L, M)
	_ayers (A5)		· —	-	Gleyed Ma		(LKK K, L)	_	elow Surface (S8) (LRR K, L)
_	-ayers (A3) Below Dark Surfa	ace (Δ1	_	-	d Matrix (f				urface (S9) (LRR K, L)
	k Surface (A12)	.55 (7.1	· –		Dark Surfa				ese Masses (F12) (LRR K, L, R)
_	cky Mineral (S1)		_		d Dark Sulla				oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_		Depression	. ,			
✓ Sandy Gle ✓ Sandy Real			Ц ,	COUX I	pehie9910	110 (1 0)			C (TA6) (MLRA 144A, 145, 149B)
								_	Material (F21) Dark Surface (TF12)
		MIDA	140D)					_ ′	, ,
<u> </u>	ace (S7) (LRR R		•				ess disturbed or prob		in in Remarks)
estrictive Lay	er Present?	□ \	∕es 🗹 No	□ ∪	Inknown			Hydric Soil Prese	nt? ☑ Yes ☐ No
	er Present?		∕es ☑ No	-	Inknown			Hydric Soil Prese	nt? ☑ Yes ☐ No
Remarks:		_	∕es ☑ No Aquatic Diversity			nments:		Hydric Soil Prese	nt? ☑ Yes □ No
Remarks: Description of H	Habitat Characte	ristics,	Aquatic Diversity			nments:	Isolated Wetland?		nt?
Remarks: Description of H	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Remarks: Description of H	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of F	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
emarks: Description of F	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Remarks: Description of F	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of F	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of F	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Remarks: Description of F	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Remarks: Description of F	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of F	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of F	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Remarks: Description of h	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Remarks: Description of h	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks:	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of h	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of H	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Remarks: Description of h	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland's		

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PHOTOS	



WE	TLAND	DET	ERN	IINAT	ION I	FORM -	Northc	ent	ral and	d No	ortheast I	Region	
✓ Centerline ☐ Re-R	oute \square	Acces	ss Roa	ıd 🗀	Ancil	lary Facility		Tran	nsmission	Line	☐ Other	r	
Project/Site: NED			ı	Milepost	718	64.6	County:		Berksh	nire		Date:	06/03/2015
Applicant/Owner: Kinder Mo	organ						State:	MA	:	Samp	oling Point:	HN-M-W0	002-PSS
Investigators: CM	(Quad Na	ame:	Peru			Townshi	p:	Hinsda				
Logbook No.: 2	Logt	ook Pg	.: 138		Tra	act: 20963	1						
Landform (hillslope, terrace,	etc.):	Depres	ssion	ı		Local F	Relief:	7 (Concave		Convex [None	Slope%.: 0
Subregion (LRR): Middl	e Atlantic			La	t: 42.4	472944		L	_ong: -	-73.10	9307		Datum: NAD83
Soil Map Unit Name: Pil	sbury loam	, 0 to 8	percen	nt slopes	extrem	nely stony					NWI Clas	sification:	PEM1E
Are climatic / hydrologic cond	litions on th	e site ty	pical f	or this tir	ne of ye	ear?:	√ Yes	П	No (If no	o, expl	lain in Remar	ks.)	
Are Vegetation Soil	□ or H\	/drology	/ П	sianific	antly dis	sturbed?	— ☑ No	_ A	re "Norma	al" Circ	cumstances p	resent?	✓ Yes □ No
Are Vegetation Soil	_ `	/drology		Ū	•	ematic?	✓ No						
Are vegetation Soil	_ Or riy	raiology		Haturai	у ргооп	emano:	V NO						
SUMMARY OF FINDI	NGS - At	tach s	site n	nap sh	owing	g sampli	ng poin	t lo	cations	, trai	nsects, in	nportant	features, etc.
Hydrophytic Vegetation Pres	ent?	\checkmark	Yes		lo								
Hydric Soil Present?		$\overline{\checkmark}$	Yes		lo			ls wi	the Sam thin a W	npled Jetlar	l Area □	Yes □] No
Wetland Hydrology Present?		\checkmark	Yes		lo			•••		· Ctiai			
Field Wetland Classification:	PSS												
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicate	ors:									<u>S</u>	Secondary Inc	dicators (2	or more required)
Primary Indicators (minimum	of one req	uired; cl	heck a	ll that ap	ply)						Surface S	Soil Cracks	(B6)
Surface Water (A1)				☐ Wat	er-Stain	ed Leaves	(B9)				Drainage	Patterns (I	B10)
☐ High Water Table (A2)				☐ Aqu	atic Fau	ına (B13)					Moss Trir	m Lines (B1	16)
☐ Saturation (A3)				☐ Marl	Depos	its (B15)					☐ Dry-Seas	on Water T	Table (C2)
☐ Water Marks (B1)				Hyd	ogen S	Sulfide Odor	(C1)				Crayfish	Burrows (C	(8)
☐ Sediment Deposits (B2)				Oxio	ized Rh	nizospheres	along Livi	ng Ro	oots (C3)		Saturatio	n Visible or	n Aerial imagery (C9)
☐ Drift Deposits (B3)				Pres	ence of	f Reduced I	ron (C4)				Stunted of	or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4)				Rec	ent Iron	Reduction	in Tilled Sc	oils (C	26)		Geomorp	hic Position	n (D2)
☐ Iron Deposits (B5)				Thin	Muck S	Surface (C7)				Shallow A	Aquitard (D	3)
☐ Inundation Visible on A	rial Imager	y (B7)		Othe	er (Expl	ain in Rema	arks)				Microtopo	ographic Re	elief (D4)
☐ Sparsely Vegetated Co	ncave Surfa	ice (B8)	١							5	☑ FAC-Neu	ıtral Test (D	05)
Field Observations:													
Surface Water Present?	✓ Yes	□ N	l ol	Depth (in	ches):	1							
Water Table Present?	✓ Yes		l ok	Depth (in	ches):	0			Wetlan	d Hyd	Irology Pres		_
Saturation Present? (includes capillary fringe)	✓ Yes	□ ¹	No [Depth (in	ches):	0						✓	Yes □ No
Remarks (Describe Recorded	Data (strea	am gag	e, mon	itoring w	ell, aeri	ial photos, p	revious ins	spect	tions), if av	vailabl	le):		
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name									% Co	ver	Don	ninant	Indicator Status
Abies balsamea									10			ES	FAC
Acer rubrum							Total Cove	r:	10 20		YE	ES	FAC



% Cover Dominant Indicator S 20
% Cover Dominant Indicator S
% Cover Dominant Indicator \$\frac{1}{2} \\ 10
% Cover Dominant Indicator S
10
10
10
30
30
10
% Cover Dominant Indicator S
Index Worksheet: ver of: Multiply by: s: 45
Index Worksheet: ver of: Multiply by: s: 45
Index Worksheet: ver of: Multiply by: s: 45
Index Worksheet: ver of: Multiply by: s: 45
Index Worksheet: ver of: Multiply by: s: 45
Index Worksheet: ver of: Multiply by: s: 45
rer of: Multiply by: s: 45
45 $x = 45$ $x = 45$ $x = 210$ $x = 20$ $x = 60$ $x = 20$
cies: 105 $x 2 = 210$ $x 3 = 60$ $x 4 = 0$
s: 20 $x 3 = 60$ ies: 0 $x 4 = 0$
ies: $\underline{0}$ $\times 4 = \underline{0}$
S. \underline{U} $XS = \underline{U}$
olo: 470 (A) 245 (D)
als: <u>170 (A)</u> <u>315 (B)</u>
Prevalence Index = B/A = 1.85
ic Vegetation Present? 🗹 Yes 🗌 No
ic Vegetation



TOVIGOTICO, I	11 02307								
SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture	Remarks
0-4	10YR 2/1	100					ORG	ANIC	
4-14	10G 2.5/2	70	N2.5	30	С	М	LOAMY FI	NE SAND	
Type: C=Cond	L centration. D=De	 epletion	l	Matrix.	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	 =Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·		o all LRR's, unle						roblematic Hydric Soils³:
<u>-</u>		cable t	•			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
	pedon (A2)			/ILRA 1		ounace (o	o) (ERR R,	_	e Redox (A16) (LRR K, L, R)
				hin Da	rk Surface	o (90) (I DI	R R, MLRA 149B)	_	
☐ Black Hist							•		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4) Layers (A5)		-	-	-	neral (F1) (LKK K, L)		e (S7) (LRR K, L, M)
	• • •	200 (A1	<u> </u>	-	Gleyed Ma				elow Surface (S8) (LRR K, L)
_ :	Below Dark Surfa	ace (Al		•	d Matrix (I	•			urface (S9) (LRR K, L)
	k Surface (A12)		_		Dark Surfa				nese Masses (F12) (LRR K, L, R)
	icky Mineral (S1)			•		ırface (F7)			oodplain Soils (F19) (MLRA 149B)
: _	eyed Matrix (S4)		☐ F	keuox I	Depressio	115 (F8)		_	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re									Material (F21)
	Matrix (S6)							_ ′	v Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	iin in Remarks)
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: 🗹 High	<u></u> п	Moderate	Low			Isolated Wetland?	? ☐ Yes ☑	No 🔲 Unknown
General Comm	ents:								





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WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 72223.7	County: Berkshire Date: 06/03/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: HN-M-W002-UPL
Investigators: CM Quad Name: Peru	Township: Hinsdale
Logbook No.: 2/3 Logbook Pg.: 136 Tract: 20963	
Landform (hillslope, terrace, etc.): Depression Local R	elief: ☑ Concave ☐ Convex ☐ None Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.472298	Long: -73.108284 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	7 Yes ☐ No (If no, explain in Remarks.)
	□ No Are "Normal" Circumstances present? ☑ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	Is the Sampled Area
Hydric Soil Present?	within a Wetland?
Wetland Hydrology Present? Yes V No	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	Coturation Visible on Aerial imagery (CO)
☐ Drift Deposits (B3) ☐ Presence of Reduced In	Chimted or Chronold Dignts (D4)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction is	— 0 — 1: B ::: (D0)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remai	ks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	Westernal Hydrology Pro
Water Table Present? ☐ Yes ☑ No Depth (inches): 0	Wetland Hydrology Present? ☐ Yes ☑ No
Saturation Present? ☐ Yes ☑ No Depth (inches): 0 (includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	revious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
	otal Cover:



0 11 (0) 1 0: (1				
Sapling/Shrub Stratum				
Plot Size: 15	1		ı	ı
Scientific Name		% Cover	Dominant	Indicator Status
Rhododendron roseum		10	YES	FAC
	Total Cover:	10		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Rubus allegheniensis		40	YES	FACU
Dennstaedtia punctilobula		30	YES	UPL
	Total Cover:	70	•	•
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		I	I
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)				
Total Number of Dominant	OBL Species:	<u>0</u>	-	
Species Across All Strata: 3 (B)	FACW Species		x 2 = <u>60</u>	
Percent of Dominant Species	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
That Are OBL, FACW, or FAC: 33 (A/B)	FACU Species:		x 4 = <u>160</u>	
	UPL Species:	<u>30</u>	x 5 = <u>150</u>	
	Column Totals:	<u>110 (A)</u>	<u>400 (B)</u>	
	i	Prevalence Index	$= B/A = \underline{3.64}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydronbytic V	egetation Preser	nt? □ Voc □	7 No.
data in Remarks or on a separate sheet)	riyaropiiyac v	egetation Fresei	nt? ☐ Yes ⊡	∆ NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
_ , , , , , ,				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the in	dicator o	confirm t	he absen	ce of indicators.)			
Depth (inches)	Matrix		Red	lox Fe	atures			Textu	Iro		Remarks	•
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texic	ile		Remarks	•
0-4	10YR 2/1	90	10YR 6/1	10	С	М		SANDY	LOAM			
4-8	7.5YR 4/5	100						SANDY	LOAM			
8-15	7.5YR 4/5	90	7.5YR 5/6	10	С	M		SANDY	LOAM			
¹Type: C=Cond	centration, D=De	pletion	, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining	, M=Matrix	
Hydric Soil Inc	licators: (Applic	cable t	o all LRR's, unle	ss oth	erwise n	oted.)			Indicators for Pr	oblematic	Hydric Soils	5 ³ :
Histosol (A1)											K, L, R) K, L, R) K, L, R) K, L, R) RA 149B) 15, 149B)	
Remarks:												
·	y: High		Aquatic Diversity		neral Com	nments:	Isolated \	Wetland?	☐ Yes ☐	No 🔲	Unknown	





S



WETLAND DETERMINATION FORM - North	ncer	ntral an	d Nor	theast R	egion		
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	☐ Tra	ansmission	Line	☐ Other			
Project/Site: NED Milepost: 73509.9 Count	ty:	Berksh	nire		Date:	06/04/2015	
Applicant/Owner: Kinder Morgan State:	: M	Α	Sampli	ing Point: F	IN-M-WO	04-PSS	
Investigators: CM Quad Name: Peru Towns	ship:	Hinsda	ale				
Logbook No.: 3 Logbook Pg.: 30 Tract: 20963							
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	$\overline{\mathbf{A}}$	Concave	□ C	onvex 🔲	None	Slope%.:	3
Subregion (LRR): Middle Atlantic Lat: 42.470371		Long:	-73.1044	466		Datum: NAD	83
Soil Map Unit Name: Lyman-Tunbridge association, steep, very stony				NWI Classif	ication:	Not map	ped
Are climatic / hydrologic conditions on the site typical for this time of year?:	· [No (If no	o, explai	in in Remarks	.)		
Are Vegetation 📝 Soil 🗹 or Hydrology 📝 significantly disturbed? 🔲 No	lo	Are "Norma	al" Circu	ımstances pre	sent?	✓ Yes	☐ No
Are Vegetation \square Soil \square or Hydrology \square naturally problematic? \checkmark No	lo						
SUMMARY OF FINDINGS - Attach site map showing sampling poi	int l	ocations	trane	sacts imr	ortant	faaturas	etc
Hydrophytic Vegetation Present? ✓ Yes ☐ No	TITL IN	ocations	, trans	sects, imp	Ortant	reatures,	
	ŀ	s the San	npled A	Area 🖂 ,	Yes □	No	
	٧	vithin a V	Vetland	i? ✓	res ⊔	No	
Wetland Hydrology Present? ✓ Yes ☐ No Field Wetland Classification: PSS							
Remarks:							
remans.							
HYDROLOGY							
Wetland Hydrology Indicators:			Se	condary Indic	ators (2 c	or more requi	red)
Primary Indicators (minimum of one required; check all that apply)				Surface So	il Cracks	(B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)				Drainage P	atterns (E	310)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)				Moss Trim	Lines (B1	6)	
✓ Saturation (A3)				Dry-Seasor	n Water T	able (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)				Crayfish Bu	rrows (C	В)	
□ Sediment Deposits (B2) □ Oxidized Rhizospheres along Li	_iving	Roots (C3)		Saturation '	Visible on	Aerial image	ery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4))			Stunted or	Stressed	Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils	(C6)		Geomorphi	c Position	n (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)				Shallow Aq	uitard (D3	3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)				Microtopog	raphic Re	elief (D4)	
☐ Sparsely Vegetated Concave Surface (B8)				FAC-Neutra	al Test (D	5)	
F-110							
Field Observations:							
Surface Water Present?		W-41	1 1 1	-l D	40		
Water Table Present? ✓ Yes ☐ No Depth (inches): 14 Saturation Present? ✓ Yes ☐ No Depth (inches): 0		wetian	ia Hyarc	ology Presen	_	Yes □	No
Saturation Present? ✓ Yes ☐ No Depth (inches): 0 (includes capillary fringe)					_	_	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	inspe	ctions), if a	vailable)):			
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name		% Co	over	Domir	ant	Indicator	Status
Acer rubrum		10)	YES	;	FA	С
Total Co	over:	10	0			'	



1 Tovidence, IXI 02004				1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Lindera benzoin Spiraea alba		30 30	YES YES	FACW FACW
Spirada diba	Total Cover:	60	120	17.011
Herb Stratum				
Plot Size: 5	I	24.2	1	1
Scientific Name		% Cover	Dominant	Indicator Status
Onoclea sensibilis Carex crinita		10 10	NO NO	FACW OBL
Solidago rugosa	7.10	40	YES	FAC
	Total Cover:	60		
Woody Vine Stratum				
Plot Size: 30	ı			1
Scientific Name		% Cover	Dominant	Indicator Status
	T			
	Total Cover:			
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover		Multiply by:	
	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species		x 2 = <u>140</u>	
Percent of Dominant Species	FAC Species:	<u>50</u>	x 3 = <u>150</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = <u>0</u>	
	UPL Species:	0	x 5 = 0	
	Column Totals:	, ,	<u>300 (B)</u>	
	I	Prevalence Index	= B/A = <u>2.31</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☑ Yes [□ No
uata ili Kelilaiks oli oli a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, F	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	nce of indicators.)	
Depth	Matrix		-	dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	ture	Remarks
0.7	, ,		` ′				CUTI	OAM	
0-7	10YR 3/2	90	10 YR 4/1	10	С	PL	SILT I	LOAM	
7-16	10YR 5/2	30	10 YR 6/1 10YR 5/6	60 10	D C	M M	SANDY	LOAM	
			101K 5/6	10		IVI			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hvdric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
Histosol (/	,		·			•	88) (LRR R,		A10) (LRR K, L, MLRA 149B)
=	•			ILRA 1		Odridoc (C	O) (ERREIK,		
= ' '	pedon (A2)			'-:- D-		- (CO) (LD	D D MI DA 440D)	_	Redox (A16) (LRR K, L, R)
☐ Black Hist							R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			oamy l	Mucky Mii	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	l1) 🗹 🖸	eplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		☐ F	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangar	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1)			eplete	d Dark Su	urface (F7)		☐ Piedmont Fl	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallov	v Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	in in Remarks)
_			·	ology n	ouat ha ar	occut unl	ess disturbed or prol		,
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: High	☑ 1	Moderate	Low			Isolated Wetland?	?	No Unknown
General Comm	ents.								







WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 73400.7	County: Berkshire Date: 06/04/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: HN-M-W004-UPL
Investigators: CM Quad Name: Peru	Township: Hinsdale
Logbook No.: 3 Logbook Pg.: 31 Tract: 20963	
Landform (hillslope, terrace, etc.): Slope - mid Local R	elief: ☐ Concave ☑ Convex ☐ None Slope%.: 15
Subregion (LRR): Middle Atlantic Lat: 42.470556	Long: -73.104609 Datum: NAD83
Soil Map Unit Name: Lyman-Tunbridge association, steep, very stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation Soil or Hydrology significantly disturbed?	No Are "Normal" Circumstances present? ✓ Yes ☐ No
	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No within a Wetland?
Wetland Hydrology Present? ☐ Yes ☑ No	
Field Wetland Classification: UPLAND PLOT	
Remarks: VEG DISTURBED POSSIBLE MANAGEMENT PLAN IN EFFEC	OT
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
· -·	Surface Soil Cracks (B6)
Primary Indicators (minimum of one required; check all that apply)	□ Drainage Pattorns (R10)
Surface Water (A1) Water-Stained Leaves (I	Moss Trim Lines (B16)
High Water Table (A2) Aquatic Fauna (B13)	☐ Dry-Season Water Table (C2)
☐ Saturation (A3) ☐ Marl Deposits (B15)	Crowfish Burrows (C9)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (Coturation Visible on Agricul imagery (CO)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	Churched or Chronood Plants (D1)
□ Drift Deposits (B3) □ Presence of Reduced In	D 0 1: P :: (P0)
Algal Mat or Crust (B4) Recent Iron Reduction in	Shallow Aguitard (D3)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	— II B E (/D4)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remar	FAC-Neutral Test (D5)
Sparsely Vegetated Concave Surface (B8)	E I vo-regular rest (DD)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ✓ No
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	evious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Т	otal Cover:



Providence, Ri 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rubus allegheniensis		40	YES	FACU
	Total Cover:	40	'	
Herb Stratum				
Plot Size: 5				
	1	0/ Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	
Solidago rugosa Carex sp		20 15	YES NA	FAC NONE
Phalaris arundinacea		15	YES	FACW
	Total Cover:	50		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	f:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species:	<u>15</u>	x 2 = <u>30</u>	
Species Across All Strata: 3 (B)	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species	FACU Species:	<u>40</u>	x 4 = <u>160</u>	
That Are OBL, FACW, or FAC: 67 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	75 (A)	250 (B)	
	p	revalence Index :		
Hudrank, tie Venstelien Indicators	<u> </u>	Tovalonioo indox -	- <u>5.00</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				_
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	No
data in Normanio di Gri a deparate dilecty				
				
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
present, unless disturbed of problematic.				
Remarks:				



T TOVIGETICE, I	02304											
SOIL												
Profile Descrip	otion: (Describe	the d	epth needed to o	locum	ent the in	dicator o	r confirm th	ne absen	ce of indicators.)			
Depth (inches)	Matrix		Red	dox Fe	atures			Text	ıro		Po	marks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		1680	uie		1101	Haiks
0-3	5YR 3/3	100						ORGA	NIC			
3-7	5YR 4/4	90	5YR 5/6	10	С	М		SANDY	LOAM			
7-16	7.5YR 5/6	100						LOAMY	SAND			
¹Type: C=Cond	L centration D=De	enletion	l n, RM=Reduced I	Matrix	CS=Cov	L ered Sand	or Coated	Grains	² Location: PL=	Pore Linin	a M=M	
		<u> </u>	o all LRR's, unle						Indicators for Pr			
		cable t					(A) (I DD D				-	
Histosol (/	•			oiyvait ILRA 1		Suпасе (S	88) (LRR R,		2 cm Muck (•
	pedon (A2)					(00) (10)			Coast Prairie			•
☐ Black Hist	` ,		_			. , .	R R, MLRA	149B)			. ,	(LRR K, L, R)
	Sulfide (A4)			-	-		(LRR K, L)		☐ Dark Surface			
	Layers (A5)		· 	-	Gleyed Ma				Polyvalue Be		. , ,	,
	Below Dark Surfa	ace (A1	_	•	d Matrix (I	,			Thin Dark Su			•
_	k Surface (A12)				Dark Surfa				_			(LRR K, L, R)
_	ıcky Mineral (S1)			-		ırface (F7)			☐ Piedmont Flo	oodplain So	oils (F19) (MLRA 149B)
	eyed Matrix (S4)			edox I	Depressio	ns (F8)			☐ Mesic Spodi	c (TA6) (M	_RA 144	4A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F	21)	
☐ Stripped N	Matrix (S6)								□ Very Shallov	v Dark Surf	ace (TF	12)
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	.rks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	d or prob	lematic.			
Restrictive Lay	er Present?		res ☑ No	□ U	Inknown							
									Hydric Soil Prese	nt?	Yes	✓ No
										_		_
Remarks:												
Description of		! - 4!	Ai Diit	0-								
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	nerai Corr	iments:						
W (I 10 I'							1111	A/ // 10				
wetland Qualit	y: 📙 Hign	ш	Moderate	Low			Isolated \	vetland?	☐ Yes ☐	No L	Unkn	own
General Comm	ents:											





NW



WE	TLAND) DET	ERN	IINATI	ON F	ORM -	Northo	entra	al and	Nor	rtheas	t Regio	on		
☑ Centerline ☐ Re-R	oute	Acces	ss Roa	ıd 🔲	Ancill	ary Facility		Transr	mission Li	ine	☐ Otl	her			
Project/Site: NED			ı	Milepost:	8173	33.5	County:		Berkshire	е		Da	ate: C	06/11/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA	Sa	ampli	ing Poin	t: HN-N	-W005-	-PFO	
Investigators: CM	(Quad Na	ame:	Peru			Townsh	ip:	Hinsdale)					
Logbook No.: 1	Logi	oook Pg	.: 39		Tra	ct: 20984									
Landform (hillslope, terrace,	etc.):	Floodp	lain te	rrace		Local F	Relief:	Co	ncave	√ C	Convex	☐ No	ne Sl	ope%.:	1
Subregion (LRR): Middl	e Atlantic			Lat	: 42.4	72253		Lo	ng: -7:	3.076	413		Da	atum: NAD	083
Soil Map Unit Name: Be	rkshire-Mai	rlow ass	ociatio	n, 15 to 4	5 perce	ent slopes,	steep, ext	remely	stony		NWI C	assification	on:	Not ma	pped
Are climatic / hydrologic cond	litions on th	ne site ty	pical f	or this tim	ne of ye	ar?:	 ✓ Yes	— 1	No (If no,	explai	in in Rem	narks.)			
Are Vegetation Soil	or H	ydrology	, _□	significa	intly dis	turbed?	☑ No	Are	"Normal"	Circu	umstance	s present	?	√ Yes	☐ No
Are Vegetation Soil	or H	ydrology	[']	naturally	y proble	ematic?	☑ No								
SUMMARY OF FINDI	NGS - At	tach	site n	nap sh	owing	g sampli	ng poin	t loca	ations,	tran	sects,	import	ant fe	eatures,	etc.
Hydrophytic Vegetation Prese	ent?	V	Yes	□ N	0										
Hydric Soil Present?		\checkmark	Yes	☐ N	0				he Samp nin a We			☑ Yes		No	
Wetland Hydrology Present?		V	Yes	□ N	0										
Field Wetland Classification:	PFO														
Remarks:															
HYDROLOGY															
Wetland Hydrology Indicate	ors:									Se	econdary	Indicators	s (2 or r	more requ	ired)
Primary Indicators (minimum	of one req	uired; cl	heck a	ll that app	oly)						Surfac	e Soil Cra	acks (B	6)	
☐ Surface Water (A1)				☐ Wate	r-Stain	ed Leaves	(B9)			\checkmark	Draina	ge Patter	ns (B10	0)	
✓ High Water Table (A2)				☐ Aqua	tic Fau	na (B13)					Moss 7	Trim Lines	s (B16)		
☐ Saturation (A3)				Marl	Deposi	ts (B15)					Dry-Se	eason Wa	ter Tab	ole (C2)	
☐ Water Marks (B1)				Hydro	ogen Si	ulfide Odor	(C1)				Crayfis	sh Burrow	rs (C8)		
☐ Sediment Deposits (B2)				Oxidi	zed Rh	izospheres	along Livi	ing Roo	ots (C3)		Satura	tion Visibl	le on A	erial imag	ery (C9)
☐ Drift Deposits (B3)			5	✓ Prese	ence of	Reduced I	ron (C4)				Stunte	d or Stres	ssed Pla	ants (D1)	
☐ Algal Mat or Crust (B4)				Rece	nt Iron	Reduction	in Tilled S	oils (C6	5)	\checkmark	Geom	orphic Pos	sition ([D2)	
☐ Iron Deposits (B5)				Thin	Muck S	surface (C7)				Shallo	w Aquitar	d (D3)		
☐ Inundation Visible on A	erial Image	ry (B7)		Othe	r (Expla	in in Rema	ırks)				Microto	opographi	ic Relie	ef (D4)	
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)	1					_			FAC-N	leutral Te	st (D5)		
Field Observations:															
Surface Water Present?	☐ Yes	√ 1	l o/	Depth (ind	ches):										
Water Table Present?	✓ Yes	_		Depth (ind	-	8			Wetland	Hydro	ology Pr	esent?	∨	∕es □	No
Saturation Present? (includes capillary fringe)	✓ Yes	<u> </u>	No [Depth (ind	ches):	5								ies 🗀	110
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring we	ell, aeria	al photos, p	revious in	spectio	ons), if ava	ilable):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Cove	er		ominant		Indicato	r Status
Betula alleghaniensis Tsuga canadensis Acer saccharum									20 10 70			YES NO YES		FA	CU CU
						-	Total Cove	er:	100		1		ı		



T TOVIDENCE, TRI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fagus grandifolia Acer rubrum		10 15	YES YES	FACU FAC
Acer rubrum	Total Cover:	25	152	FAC
	Total Cover.			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Dennstaedtia punctilobula Phegopteris connectilis		20 2	YES NO	UPL FACU
Parathelypteris novaboracensis		40	YES	FACW
Dryopteris intermedia	T-1-1 C	15 77	NO	FAC
	Total Cover:	77		
Woody Vine Stratum				
Plot Size: 30	1		l <u>-</u>	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, I ACW, OF I AC.	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species	: <u>40</u>	x 2 = <u>80</u>	
- Charles Marchael	FAC Species:	<u>50</u>	x 3 = <u>150</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species:	<u>92</u>	x 4 = <u>368</u>	
	UPL Species:	<u>20</u>	x 5 = <u>100</u>	
	Column Totals:	202 (A)	<u>698 (B)</u>	
	F	Prevalence Index =	$= B/A = \underline{3.46}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)				
☑ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:	1			



SOIL									
Profile Descri	otion: (Describe	the d	epth needed to	docum	ent the in	ndicator o	confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures		_		6 .
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
0-10	7.5YR 2.5/1	100					FINE SAN	DY LOAM	
10-20	7.5YR 3/1	93	7.5YR 4/6 10YR 3/1	7 30	C C	M M	FINE SAN	DY LOAM	
¹Type: C=Con	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil In	dicators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epi	pedon (A2)		N	ILRA 1	49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black His	tic (A3)		□т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydroger	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	11) 🔲 🗅	eplete	d Matrix (I	F3)		☐ Thin Dark Su	ırface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		 R	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy M	ucky Mineral (S1))		eplete	d Dark Su	urface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy GI	eyed Matrix (S4)		☐ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped	Matrix (S6)							□ Very Shallow	Dark Surface (TF12)
☐ Dark Sur	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Quali	ty: High	☑ 1	Moderate	Low			Isolated Wetland?	Yes 🗹	No Unknown
General Comn	nents:								





Ν



WE	TLAND	DET	ERM	IINATIO	ON F	ORM - I	Northc	ent	ral an	d No	ortheas	t Regi	on		
☑ Centerline ☐ Re-R	oute	Acces	ss Roa	d \square	Ancilla	ary Facility		Tran	smission	Line	□ Of	her			
Project/Site: NED			N	//ilepost:	8156	4.8	County:		Berksh	hire		Da	ate:	06/11/201	5
Applicant/Owner: Kinder Mo	organ						State:	MA		Sam	oling Poir	nt: HN-N	I-W00	5-PSS	
Investigators: CM	(Quad Na	ame: F	Peru			Townshi	ip:	Hinsda	ale					
Logbook No.: 3	Logb	ook Pg.	.: 38		Trac	t: 20984									
Landform (hillslope, terrace, e	etc.):	Floodp	lain ter	race		Local R	elief:	d c	oncave		Convex	☐ No	ne s	Slope%.:	3
Subregion (LRR): Middl	e Atlantic			Lat:	42.47	71839		L	ong:	-73.07	76850		[Datum: NAI	083
Soil Map Unit Name: Be	rkshire-Mar	low ass	ociatio	n, 15 to 45	perce	nt slopes, s	steep, extr	remel	y stony		NWI C	lassification	on:	Not ma	pped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	or this time	e of year	ar?: ▽	1 Yes		No (If no	o, exp	lain in Rer	narks.)			
Are Vegetation	☐ or Hy	/drology	П	significar	ntly dist	urbed?	_ No	Ar	e "Norma	al" Cir	cumstance	es present	: ?	√ Yes	☐ No
Are Vegetation Soil		/drology	_	naturally	problei		— □ No								
			_				_					_		_	
SUMMARY OF FINDIN	NGS - At	tach s	site m	nap sho	wing	samplir	ng poin	t loc	ations	s, tra	nsects,	import	ant f	features	, etc.
Hydrophytic Vegetation Prese	ent?	\checkmark	Yes	☐ No				le f	the San	nnled	l Δroa				
Hydric Soil Present?		\checkmark	Yes	☐ No					thin a V			✓ Yes		No	
Wetland Hydrology Present?		<u> </u>	Yes	☐ No											
Field Wetland Classification:	PSS														
Remarks:															
HYDROLOGY															
Wetland Hydrology Indicato	ors:									<u> </u>	Secondary	Indicator	s (2 o	r more requ	iired)
Primary Indicators (minimum	of one req	uired; ch	neck al	l that appl	y)					[Surfac	ce Soil Cra	acks (B6)	
☐ Surface Water (A1)] Water	-Staine	d Leaves (I	B9)			[☐ Draina	age Patter	ns (B	10)	
☐ High Water Table (A2)] Aquati	ic Faun	a (B13)				[Moss	Trim Line:	s (B16	6)	
☐ Saturation (A3)] Marl D	eposit	s (B15)				[☐ Dry-S	eason Wa	iter Ta	able (C2)	
☐ Water Marks (B1)] Hydro	gen Su	lfide Odor ((C1)			[Crayfi	sh Burrow	/s (C8	3)	
☐ Sediment Deposits (B2)			v	Oxidiz	ed Rhi	zospheres	along Livi	ng Ro	oots (C3)	. [Satura	ation Visib	le on	Aerial imag	ery (C9)
☐ Drift Deposits (B3)				Prese	nce of I	Reduced Ire	on (C4)			[Stunte	ed or Stres	ssed F	Plants (D1)	
☐ Algal Mat or Crust (B4)				Recen	it Iron F	Reduction in	n Tilled So	oils (C	(6)	[√ Geom	orphic Po	sition	(D2)	
☐ Iron Deposits (B5)				Thin M	luck Su	urface (C7)				[Shallo	w Aquitar	d (D3)	
☐ Inundation Visible on A	erial Imager	y (B7)		Other	(Explai	in in Remar	ks)			[☐ Microt	opograph	ic Rel	lief (D4)	
□ Sparsely Vegetated Cor	ncave Surfa	ace (B8)								[✓ FAC-1	Neutral Te	st (D5	5)	
Field Observations:								Τ							
Surface Water Present?	☐ Yes	V V	No E	Depth (incl	nes):										
Water Table Present?	✓ Yes	_		epth (incl	,	12			Wetlan	nd Hyd	drology P	resent?			
Saturation Present? (includes capillary fringe)	_ ✓ Yes	_ \	No E	Depth (incl	nes):	12				-			V	Yes 🗆	No
Remarks (Describe Recorded	l Data (stre	am gage	e, moni	torina wel	I, aeria	l photos, pr	evious ins	specti	ons), if a	vailah	le):				
	(2.2.2	3.3	,	J	,	1			//		-,				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Co	over		Dominant		Indicato	or Status
						Т	otal Cove	er:							



Providence, RI 02904				7460///
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Salix spp		20	NA	NA 510111
Spiraea latifolia Rhamnus cathartica		35 15	YES YES	FACW FAC
	Total Cover:	70	ı	
Herb Stratum				
Plot Size: 5				
		% Cover	Dominant	Indicator Status
Scientific Name		% Cover	NO	Indicator Status FACW
Equisetum pratense Carex crinita		10	NO	OBL
Solidago rugosa Veratrum viride		40 10	YES NO	FAC FACW
	Total Cover:	80	ı	I
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		I	I
Dominance Test Worksheet:	Prevalence In	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	10	x 1 = 10	
Total Number of Dominant	FACW Species		$x 2 = \frac{10}{130}$	
Species Across All Strata: 3 (B)	FAC Species:	. <u>55</u>	$x = \frac{165}{165}$	
Percent of Dominant Species	FACU Species		x 4 = 0	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	. <u>v</u> <u>0</u>	x 5 = 0	
	Column Totals		305 (B)	
		Prevalence Index		
Hadasahada Vasatalian Indiantana		1 Tevalence index	- D/A - <u>2.55</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic	egetation Prese	nt? ☑ Yes l	□ No
, ,				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
_				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				

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1 TOVIGETICE, IV	0200+								The second of the second
SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the ir	ndicator o	r confirm the abse	ence of indicators.)	
Depth	Matrix		Red	dox Fe	atures		_		ъ.
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Tex	xture	Remarks
0-12	10YR3/1	93	5Y4/4	7	С	М	FINE SAN	NDY LOAM	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced I	Matrix,	CS=Cov	rered Sand	I or Coated Grains.	²Location: PL:	=Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils ³ :
Histosol (A	A1)		□Р	olyvalı	ue Below	Surface (S	8) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILŔA 1		,			e Redox (A16) (LRR K, L, R)
☐ Black Hist			Пт	hin Da	ırk Surfacı	e (S9) (LR	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_				(LRR K, L)		e (S7) (LRR K, L, M)
☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2) ☐ Polyvalue Below Surface (S8) (LRR K, L)									
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L)									
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R									
☐ Sandy Mu	cky Mineral (S1)					urface (F7)		=	oodplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)				Depressio			_	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)		_					_ :	Material (F21)
☐ Stripped N	Matrix (S6)							_	w Dark Surface (TF12)
	ace (S7) (LRR R	, MLRA	A 149B)					_	ain in Remarks)
_	vdrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent unle	ess disturbed or pro	_	,
Restrictive Lay					Inknown				
ROCK REFUS AL - STONY								Hydric Soil Prese	ent? ☑ Yes ☐ No
Remarks:									
itemarks.									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	y: High	_ r	Moderate 🗹	Low			Isolated Wetland	l? ☐ Yes ☑	No 🔲 Unknown
General Comm	ents:								





EAST



WE	TLAND	DET	ERM	INATI	ON FORM -	Northce	entral an	d No	rtheast	Region		
☑ Centerline ☐ Re-R	oute	Acces	ss Road	d 🗆	Ancillary Facility	пτ	ransmission	Line	☐ Othe	r		
Project/Site: NED			N	/lilepost:	81779.2	County:	Berksl	hire		Date:	06/11/201	5
Applicant/Owner: Kinder Mo	rgan					State: I	MA	Samp	oling Point:	HN-N-W0	05-UPL	
Investigators: CM	(Quad Na	ame: F	Peru		Township	: Hinsda	ale				
Logbook No.: 1	Logb	ook Pg.	: 40		Tract: 20984							
Landform (hillslope, terrace,	etc.):	Slope -	mid		Local F	Relief:	Concave	V	Convex [None	Slope%.:	10
Subregion (LRR): Middl	e Atlantic			Lat	: 42.472399		Long:	-73.07	6260		Datum: NAI	D83
Soil Map Unit Name: Be	kshire-Mar	low ass	ociatior	n, 15 to 4	5 percent slopes,	steep, extre	mely stony		NWI Clas	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	r this tim	e of year?:	√ Yes [☐ No (If n	o, expl	ain in Remai	rks.)		
Are Vegetation Soil	or Hy	/drology		significa	ntly disturbed?	√ No	Are "Norm	al" Circ	cumstances	present?	✓ Yes	☐ No
Are Vegetation	or Hy	/drology		naturally	problematic?	☑ No						
SUMMARY OF FINDI	NGS - At	tach s	site m	ap sho	owing sampli	ng point	locations	s, traı	nsects, in	nportant	features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☑ No)							
Hydric Soil Present?			Yes	☑ No)		Is the Sar within a V	npied Vetlan	area nd? □	Yes ✓] No	
Wetland Hydrology Present?			Yes	☑ No)							
Field Wetland Classification:	UPL	AND PL	ОТ									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicate	ors:							<u>s</u>	Secondary In	dicators (2	or more requ	uired)
Primary Indicators (minimum	of one req	uired; cl	neck all	that app	<u>ly)</u>				Surface	Soil Cracks	(B6)	
☐ Surface Water (A1)] Water	r-Stained Leaves	(B9)			☐ Drainage	Patterns (B10)	
☐ High Water Table (A2)] Aquat	tic Fauna (B13)		☐ Moss Trim Lines (B16)					
☐ Saturation (A3)] Marl [Deposits (B15)		Dry-Season Water Table (C2)					
☐ Water Marks (B1)] Hydro	ogen Sulfide Odor							
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizospheres	along Living	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)					
☐ Drift Deposits (B3)				Prese	ence of Reduced I	<u> </u>						
☐ Algal Mat or Crust (B4)				Recei	nt Iron Reduction	in Tilled Soil	ls (C6)		☐ Geomor	ohic Positio	n (D2)	
☐ Iron Deposits (B5)				Thin I	Muck Surface (C7))				Aquitard (D	•	
☐ Inundation Visible on A	rial Imager	y (B7)] Other	(Explain in Rema	arks)						
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)							☐ FAC-Net	utral Test (E	D5) 	
Field Observations:	_	_										
Surface Water Present?	☐ Yes	<u> </u>		epth (inc	•							
Water Table Present?	Yes	_		epth (inc	-		Wetlar	nd Hyd	Irology Pres		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ N	lo D	epth (inc	:hes):						100	
Remarks (Describe Recorded	Data (strea	am gage	e, moni	toring we	ell, aerial photos, p	orevious insp	pections), if a	availabl	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% Co	over	Dor	minant	Indicate	or Status
Acer saccharum Fagus grandifolia							30			ES ES		CU CU
					•	Total Cover:	6	5				



Trovidence, Nr 02304							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Fagus grandifolia		20	YES	FACU			
Acer saccharum Tsuga canadensis		5 5	NO NO	FACU FACU			
Acer pensylvanicum		10	YES	FACU			
	Total Cover:	40					
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
Parathelypteris noveboracensis		10	YES	FAC			
	Total Cover:	10	•				
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:					
Number of Dominant Species	Total % Cover	of:	Multiply by:				
That Are OBL, FACW, or FAC: 1(A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	s: <u>10</u>	x 2 = <u>20</u>				
Species Across All Strata: 5 (B)	FAC Species:	<u>10</u>	x 3 = <u>30</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)	FACU Species	: <u>105</u>	x 4 = <u>420</u>				
	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	125 (A)	<u>470 (B)</u>				
		Prevalence Index =	$= B/A = \underline{3.76}$				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
2 - Dominance Test is > 50%							
☐ 3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☐ Yes ☑ No						
data in Remarks or on a separate sheet)							
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
Remarks:	1						



Providence, R	RI 02904											
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	confirm the abse	ence of indicators.)				
Depth	Matrix		•	edox Features					, 			
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc²				Tex	ture	Rem	arks		
0-2	7.5YR 2.5/1	100					FINE SAN	IDY LOAM				
2-4	7.5YR 5/2	100					FINE SAN	IDY LOAM				
2-0	ORGANIC											
4-20	7.5YR 5/6	100					FINE SAN	IDY LOAM				
1T 0. 0	tti D. D.		DM Dadward	Mandadi .	00.0	0	O4 Oi	21	Dana Linina M. Ma			
		•					or Coated Grains.		Pore Lining, M=Ma			
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric S	oils³:		
☐ Histosol (A	41)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLF	RA 149B)		
☐ Histic Epip	pedon (A2)		IV	ILIXA	1490)			☐ Coast Prairie	e Redox (A16) (LRR	K, L, R)		
■ Black Hist	ic (A3)		_ T	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (L	RR K, L, R)		
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)			
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (L	RR K, L)		
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔲 🖸	eplete	ed Matrix (I	F3)		☐ Thin Dark Surface (S9) (LRR K, L)				
☐ Thick Darl	k Surface (A12)		☐ F	ledox l	Dark Surfa	ace (F6)		☐ Iron-Manganese Masses (F12) (LRR K, L, R)				
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Floodplain Soils (F19) (MLRA 149B)				
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
☐ Sandy Re	dox (S5)							Red Parent Material (F21)				
☐ Stripped N	Matrix (S6)							☐ Very Shallow Dark Surface (TF12)				
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	(149B)					Other (Expla	in in Remarks)			
3Indicators of h	nydrophytic vege	tation a	nd wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.				
Restrictive Lay	ver Present?	П	′es 📝 No	пυ	Inknown							
								Hydric Soil Prese	ent?	☑ No		
Remarks:												
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland	?	No 🔲 Unkno	wn		
General Comm	ents:											





NE



WETLAND DETERMINATION FORM - North	centra	I and No	rtheast Regio	n		
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transm	nission Line	Other			
Project/Site: NED Milepost: 74119.6 Count	y: E	Berkshire	Dat	e: 06/03/2015		
Applicant/Owner: Kinder Morgan State:	MA	Samp	oling Point: HN-M-	W005-PFO		
Investigators: CM Quad Name: Peru Towns	hip: I	Hinsdale				
Logbook No.: 3 Logbook Pg.: 12 Tract: 20963						
Landform (hillslope, terrace, etc.): Depression Local Relief:	☑ Con	ncave 🔲	Convex Non	e Slope%.: 2		
Subregion (LRR): Middle Atlantic Lat: 42.469726	Lon	g: -73.10	2166	Datum: NAD83		
Soil Map Unit Name: Lyman-Tunbridge association, steep, very stony			NWI Classification	n: Not mapped		
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes		o (If no, expl	ain in Remarks.)			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No Are "Normal" Circumstances present? ☑ Yes ☐ N						
Are Vegetation ✓ Soil □ or Hydrology □ naturally problematic? □ No						
SLIMMARY OF FINDINGS - Attach cite man showing campling noi	nt locat	tions trai	neacte imparta	nt foatures, etc		
SUMMARY OF FINDINGS - Attach site map showing sampling pointly Hydrophytic Vegetation Present?	iii iocai	tions, trai	nisects, importa			
	Is the	e Sampled	Area 🖂 🗸	□ No		
Hydric Soil Present? ✓ Yes ☐ No Wetland Hydrology Present? ✓ Yes ☐ No	withi	in a Wetlan	nd? ✓ Yes	□ No		
Field Wetland Classification: PFO						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:		<u>s</u>	Secondary Indicators	(2 or more required)		
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Crac	ks (B6)		
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)			Drainage Pattern	s (B10)		
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines	(B16)		
☐ Saturation (A3) ☐ Marl Deposits (B15)			_			
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			Crayfish Burrows			
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Li	ving Roots	· · ·		on Aerial imagery (C9)		
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Coomernhia Desition (D2)					
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled	Soils (C6)	L				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		L	Shallow Aquitard	•		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	<u> </u>					
Sparsely Vegetated Concave Surface (B8)		<u> </u>	FAC-Neutral Tes	t (D5)		
Field Observations:						
Surface Water Present?						
Water Table Present?	v	Wetland Hyd	Irology Present?			
Saturation Present?			l	⊻ Yes □ No		
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	nspection	s), if availabl	le):			
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
Betula alleghaniensis Betula papyrifera		45 40	YES YES	FAC FACU		
Fagus grandifolia		5	NO	FACU		
Total Co	ver:	90				



	% Cover	Dominant	Indicator Status
	15 20 25	YES YES YES	FAC FACU FAC
Total Cover:	60	l.	I
	% Cover	Dominant	Indicator Status
	30	YES	FAC
Total Cover:		YES	FAC
Total Cover.	00		
1	9/ Cover	Dominant	Indicator Status
	% Cover	Dominant	indicator Status
Total Cover:			
Prevalence Ind	ex Worksheet:		
Total % Cover of	of:	Multiply by:	
OBL Species:	<u>0</u>	x 1 = <u>0</u>	
FACW Species:	<u>0</u>	x 2 = <u>0</u>	
FAC Species:	<u>145</u>	x 3 = <u>435</u>	
	<u>65</u>	x 4 = <u>260</u>	
-	<u>0</u>	x 5 = <u>0</u>	
Column Totals:	<u>210 (A)</u>	<u>695 (B)</u>	
F	Prevalence Index	= B/A = <u>3.31</u>	
Hydrophytic V	egetation Preser	nt? ☑ Yes [□ No
	Total Cover: Prevalence Ind Total % Cover of OBL Species: FACW Species: FACU Species: UPL Species: Column Totals:	15 20 25 Total Cover: 60	15



Providence, F	RI 02904											
SOIL												
Profile Descrip	otion: (Describe	the de	epth need	ed to	docum	ent the ir	ndicator o	r confirm t	he abser	nce of indicators.)		
Depth	Matrix				dox Fe					,		
(inches)	Color (moist)	%	Color (m		%	Type ¹	Loc ²		Text	ure	Rema	rks
0-3	10YR 2/1	100							ORGA	ANIC		
3-7	10YR 3/1	95	10YR	3/6	5	С	PL		SANDY	LOAM		
7-14	10YR 4/3	35	10YR		60	D	M		SANDY	LOAM		
	40VD 5/0	50	10YR		5	С	PL		CANDY	1000		
14-20	10YR 5/2	50	10YR	O/ I	50	D	M		SANDY	LOAIVI		
¹Type: C=Cond	centration, D=De	epletion	ı, RM=Re	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining, M=Matr	x
Hydric Soil Inc	dicators: (Appli	cable t	o all LRR'	s. unl	ess oth	nerwise n	oted.)			Indicators for Pi	oblematic Hydric Sc	- ils³:
Histosol (/	`			•			,	8) (LRR R,			A10) (LRR K, L, MLR	
-	,				MLRA 1		Junace (J	O) (LIXIX IX,				•
—	pedon (A2)						(00) (1 0)				Redox (A16) (LRR K	•
☐ Black Hist				י ם	Thin Da	irk Surface	e (S9) (LRI	R R, MLRA	(149B)	5 cm Mucky	Peat or Peat (S3) (LR	R K, L, R)
☐ Hydrogen	Sulfide (A4)				_oamy l	Mucky Mi	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRR K, L, M)	
Stratified I	Layers (A5)			□ r	oamy (Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surface (S8) (LR	R K, L)
☐ Depleted	Below Dark Surfa	ace (A1	1)	V	Deplete	d Matrix (F3)			☐ Thin Dark St	urface (S9) (LRR K, L)	
☐ Thick Darl	k Surface (A12)			□ F	Redox [Dark Surfa	ace (F6)			☐ Iron-Mangar	ese Masses (F12) (LF	RR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))			Deplete	d Dark Su	urface (F7)			☐ Piedmont Flo	oodplain Soils (F19) (N	/ILRA 149B)
☐ Sandy Gle	eyed Matrix (S4)				Redox I	Depressio	ns (F8)			☐ Mesic Spodi	c (TA6) (MLRA 144A,	145, 149B)
☐ Sandy Re	dox (S5)			_							Material (F21)	, ,
	Matrix (S6)										v Dark Surface (TF12)	
— ''	, ,	MIDA	\ 440D\									
	ace (S7) (LRR R		•								in in Remarks)	
³ Indicators of h	nydrophytic vege	tation a	and wetlan	d hydr	ology n	nust be pr	esent, unle	ess disturbe	ed or prob	olematic.		
Restrictive Lay	er Present?	✓	Yes □	No		Inknown						
ROCK										Hydric Soil Prese	nt? ☑ Yes 🗆] No
20												
Remarks:												
Description of	Habitat Characte	eristics,	Aquatic D	iversity	y or Ge	neral Con	nments:					
Wetland Qualit	ty: 🗹 High		Moderate		Low			Isolated	Wetland?	' ☐ Yes ☑	No 🔲 Unknow	n
General Comm	ients:											





NE



WETLAND DETERMINATION FORM - Northce	entral and N	ortheast Regio	n
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ T	Fransmission Line	Other	
Project/Site: NED Milepost: 74126.4 County:	Berkshire	Date	e: 06/03/2015
Applicant/Owner: Kinder Morgan State: I	MA Sam	pling Point: HN-M-N	W005-PSS
Investigators: CM Quad Name: Peru Township	: Hinsdale		
Logbook No.: 3 Logbook Pg.: 13 Tract: 20963			
Landform (hillslope, terrace, etc.): Depression Local Relief: ☑	Concave	Convex None	e Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.469619	Long: -73.1	02227	Datum: NAD83
Soil Map Unit Name: Lyman-Tunbridge association, steep, very stony		NWI Classification	: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, exp	olain in Remarks.)	
Are Vegetation 🗹 Soil 🗹 or Hydrology 🗹 significantly disturbed? 🔲 No	Are "Normal" Ci	rcumstances present?	✓ Yes □ No
Are Vegetation Soil or Hydrology naturally problematic? No			
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations tra	nsects importa	nt features etc
Hydrophytic Vegetation Present? ✓ Yes ☐ No	iocations, tre	msects, importa	Tit Teatures, etc.
Hydric Soil Present? ✓ Yes □ No	Is the Sample		□ No
Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetla	nd?	
Field Wetland Classification: PSS			
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators	(2 or more required)
Primary Indicators (minimum of one required; check all that apply)		☐ Surface Soil Crac	ks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		□ Drainage Patterns	s (B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines	(B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)		□ Dry-Season Wate	r Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows	(C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	g Roots (C3)	Saturation Visible	on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		☐ Stunted or Stress	ed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soil	ls (C6)	☐ Geomorphic Posi	tion (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		☐ Shallow Aquitard	(D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)		✓ FAC-Neutral Test	(D5)
Field Observations			
Field Observations: Surface Water Present? ☐ Yes ☑ No Depth (inches):			
	Wetland Hy	drology Present?	
Water Table Present?	welland ny	-	☑ Yes 🗆 No
(includes capillary fringe)			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	pections), if availab	ole):	
VECETATION			
VEGETATION Tree Stretum			
Tree Stratum Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Acer rubrum	% Cover	YES	FAC
Total Cover:		113	I AC
rotal cover.	. 13		



T TOVIGETICE, TRI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Salix discolor Spiraea alba		20 50	YES YES	FACW FACW
Spiraea aiba	Total Cover:	70	TES	FACW
	Total Cover.			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Osmunda claytoniana Onoclea sensibilis		10 10	YES YES	FAC FACW
Solidago rugosa		30	YES	FAC
Carex spp	T-t-I C	15	NA	NONE
	Total Cover:	65		
Woody Vine Stratum				
Plot Size: 30	1		I	I
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 6 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species	: <u>80</u>	x 2 = <u>160</u>	
oposios / totogo / til oliuta.	FAC Species:	<u>55</u>	x 3 = <u>165</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>65</u>	x 4 = <u>260</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	200 (A)	<u>585 (B)</u>	
	F	Prevalence Index =	= B/A = <u>2.92</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	nt? ☑ Yes [∃ No
data in Remarks or on a separate sheet)	, , , , ,	3		
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



Providence, R	(1 02904										
SOIL											
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the ir	ndicator o	confirm the	absen	ce of indicators.)		
Depth	Matrix		-	dox Fe					ĺ		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		Textu	re	Rei	marks
0-3	10YR 2/1	100					S	SANDY L	OAM		
3-7	10YR 3/1	95	10YR 3/6	5	С	PL	S	SANDY L	.OAM		
7-14	10YR 4/3	35	10YR 6/1 10YR 5/8	60 5	D C	M PL	S	SANDY L	.OAM		
14-20	10YR 5/2	50	10YR 6/1	50	D	M	S	SANDY L	LOAM		
Tunai C. Cana	antrotion D Do	nlation	DM Dadward	Matrix	CC C	arad Cand	or Cooted C	roino	21 apptions DI	Doro Lining M M	otris.
	· · · · · · · · · · · · · · · · · · ·	•	, RM=Reduced				or Coated G	rains.		Pore Lining, M=M	
Histosol (A	A1)	cable t			ue Below	,	8) (LRR R,		2 cm Muck (A10) (LRR K, L, MI	_RA 149B)
	pedon (A2)									Redox (A16) (LRF	
☐ Black Hist			_				R R, MLRA 1	49B)	_	Peat or Peat (S3) (
	Sulfide (A4)		· —	-	-	neral (F1) (LRR K, L)			e (S7) (LRR K, L, M	
	_ayers (A5)	(14	=	-	Gleyed Ma				_ ′	elow Surface (S8) (' '
	Below Dark Surfa k Surface (A12)	ace (A i	_	•	d Matrix (•			_	ırface (S9) (LRR K	,
	icky Mineral (S1)		_		Dark Surfa					ese Masses (F12)	
	eyed Matrix (S4)		_	•		urface (F7)				oodplain Soils (F19	
: _			□ F	redox i	Depressio	ris (Fo)				c (TA6) (MLRA 144	A, 145, 149B)
☐ Sandy Re										Material (F21)	>
	Matrix (S6)								_	Dark Surface (TF	12)
_	ace (S7) (LRR R		•							in in Remarks)	
³ Indicators of h	nydrophytic vege	tation a	ind wetland hydro	ology m	nust be pr	esent, unle	ess disturbed	or probl	ematic.		
Restrictive Lay	er Present?	☑ /	res ☐ No	□ ∪	nknown						
ROCK								ŀ	lydric Soil Prese	nt? ☑ Yes	□ No
20											
Remarks:											
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:					
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated We	etland?	☐ Yes 🗹	No 🔲 Unkn	own
General Comm	ents:										





SE



WETLAND DETERMINATION FORM - North	ncen	tral an	d Nor	theast Re	gion		
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐] Tra	ansmission	Line	☐ Other			
Project/Site: NED Milepost: 74035.2 Count	ty:	Berksh	nire		Date:	06/03/2015	
Applicant/Owner: Kinder Morgan State:	: MA	A	Sampli	ing Point: H	N-M-W00	05-UPL	
Investigators: CM Quad Name: Peru Towns	ship:	Hinsda	ale				
Logbook No.: 3 Logbook Pg.: 14 Tract: 20963							
Landform (hillslope, terrace, etc.): Floodplain terrace Local Relief:		Concave	☑ C	onvex	None	Slope%.:	2
Subregion (LRR): Middle Atlantic Lat: 42.469832		Long:	-73.102	446		Datum: NAD	33
Soil Map Unit Name: Pillsbury loam, 0 to 8 percent slopes, extremely stony				NWI Classifi	cation:	Not map	ped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	· 🗆	No (If no	o, explai	in in Remarks.	.)		
Are Vegetation Soil or Hydrology significantly disturbed? No	o A	Are "Norma	al" Circu	ımstances pre	sent?	✓ Yes	☐ No
Are Vegetation $\ \square$ Soil $\ \square$ or Hydrology $\ \square$ naturally problematic? $\ \square$ No	0						
SUMMARY OF FINDINGS - Attach site map showing sampling poi	int lc	ocations	s. trans	sects. imn	ortant	features.	etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No			-,				
Hydric Soil Present? ☐ Yes ☑ No		the San			∕es ☑	No	
Wetland Hydrology Present? ☐ Yes ☑ No	W	ithin a V	vetiano	1? —			
Field Wetland Classification: UPLAND PLOT							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:			<u>Se</u>	condary Indic		•	red)
Primary Indicators (minimum of one required; check all that apply)							
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)				Drainage Pa	-	•	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)				Moss Trim I		·	
☐ Saturation (A3) ☐ Marl Deposits (B15)				Dry-Season	Water Ta	able (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)				Crayfish Bu	rrows (C8	3)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Li	iving F	Roots (C3)		Saturation \	/isible on	Aerial image	ry (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)				Stunted or S	Stressed	Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils	(C6)		Geomorphic	Position	(D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)				Shallow Aqu	uitard (D3	3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)				Microtopogr	aphic Re	lief (D4)	
☐ Sparsely Vegetated Concave Surface (B8)				FAC-Neutra	l Test (D	5)	
Field Observations:	\top						
Surface Water Present?							
Water Table Present? ☐ Yes ✓ No Depth (inches):		Wetlan	nd Hydro	ology Presen	t?		
Saturation Present?			-			Yes ☑	No
(includes capillary fringe)	\perp						
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	inspec	ctions), if a	vailable):			
VECETATION							
VEGETATION Tree Stretum							
Tree Stratum Plot Size: 30							
Scientific Name		% Cd	over	Domin	ant	Indicator	Status
Betula papyrifera		50		YES		FAC	
Betula alleghaniensis Betula populifolia		10	0	NO YES		FAC FAC	0
Total Co	ver:	80		1	ı		



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				_
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Fagus grandifolia Prunus serotina		5 20 25	NO YES YES	FAC FACU FACU
	Total Cover:	50		1
Herb Stratum				
Plot Size: 5				
Scientific Name	1	% Cover	Dominant	Indicator Status
Maianthemum canadense		30	YES	FACU
Thelyopteris noveboracensis		40	YES	FAC
	Total Cover:	70		
Woody Vine Stratum				
Plot Size: 30	1		1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 2 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species:	: <u>0</u>	x 2 = <u>0</u>	
oposico / icrosco / iii ottata.	FAC Species:	<u>75</u>	x 3 = <u>225</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)	FACU Species:	<u>125</u>	x 4 = <u>500</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	200 (A)	<u>725 (B)</u>	
	F	Prevalence Index :	= B/A = 3.63	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Preser	nt? Yes	☑ No
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



2011												
SOIL												
-		the de	-			dicator o	r confirm t	he absen	ce of indicators.)			
Depth (inches)	Matrix				atures			Text	ure		Re	marks
(1101103)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		TOAL	u. u			
0-2	10YR 2/1	100						ORGA	ANIC			
2-12	10YR 3/4	100						SANDY	LOAM			
12-18	10YR 4/6	100						LOAMY	SAND			
¹Tvpe: C=Cond	L centration. D=De	epletion	, RM=Reduced I	Matrix.	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	L -Pore Linin	a. M=M	 latrix
		<u> </u>	o all LRR's, unle						Indicators for Pr			
		ouble t					0) /I DD D				•	
Histosol (A	•			LRA 1		Surface (S	8) (LRR R,		2 cm Muck (•
	pedon (A2)					(00) (1.0)		4.40D)	Coast Prairie			·
☐ Black Hist			_			. , .	R R, MLRA	149B)			, ,	(LRR K, L, R)
	Sulfide (A4)			-	=		(LRR K, L)		☐ Dark Surface			
	Layers (A5)	/* :		•	Gleyed Ma	` '			Polyvalue Be			
	Below Dark Surfa	ace (A1	_		d Matrix (I	•			Thin Dark Su		•	•
_	k Surface (A12)				Dark Surfa				_			(LRR K, L, R)
_	icky Mineral (S1)					ırface (F7)			☐ Piedmont Flo	oodplain S	oils (F19	9) (MLRA 149B)
	eyed Matrix (S4)			edox	Depressio	ns (F8)			☐ Mesic Spodi	c (TA6) (M	LRA 144	4A, 145, 149B)
☐ Sandy Re									☐ Red Parent I	Material (F	21)	
☐ Stripped N	Matrix (S6)								□ Very Shallov	v Dark Surf	ace (TF	12)
□ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	ırks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	logy n	nust be pr	esent, unle	ess disturbe	ed or prob	lematic.			
Restrictive Lay	er Present?	V	∕es □ No	J	Inknown							
ROCK									Hydric Soil Prese	nt?	Yes	✓ No
18												_
Remarks:												
D			A .: D: ::									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:						
Wetland Qualit	y: 📙 High	Ш	Moderate	_OW			Isolated	Wetland?	☐ Yes ☐	No L	Unkn	iown
General Comm	ents:											





NW



WETLAND DETERMINATION FORM -	Northcer	ntral and No	rtheast Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Tra	ansmission Line	Other	
Project/Site: NED Milepost: 77600.6	County:	Berkshire	Date:	06/09/2015
Applicant/Owner: Kinder Morgan	State: M	1A Samp	ling Point: HN-M-W0	07-PEM
Investigators: CM Quad Name: Peru	Township:	Hinsdale		
Logbook No.: 3 Logbook Pg.: 54 Tract: 20984	ı			
Landform (hillslope, terrace, etc.): Depression Local F	Relief: 🗹	Concave 🔲 0	Convex None	Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.469593		Long: -73.091	125	Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony			NWI Classification:	PFO1E
Are climatic / hydrologic conditions on the site typical for this time of year?:	7 Yes □	No (If no, expla	ain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	_ No	- Are "Normal" Circ	umstances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No			
SUMMARY OF FINDINGS - Attach site map showing sampli	na point le	ocations, tran	sects, important	features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	9	ocanono, nan	iooto, important	
Hydric Soil Present?	l	s the Sampled	Area ☑ Yes □	No
Wetland Hydrology Present? ✓ Yes ☐ No	V	within a Wetlan	d? 🗹 les 🗅	NO
Field Wetland Classification: PEM				
Remarks:				
Remarks.				
HYDROLOGY				
Wetland Hydrology Indicators:		<u>S</u>	econdary Indicators (2 c	or more required)
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves	(B9)		Drainage Patterns (E	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines (B1	6)
☑ Saturation (A3) ☐ Marl Deposits (B15)			-	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1)		=	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living	Roots (C3)	_	
☐ Drift Deposits (B3) ☐ Presence of Reduced I	ron (C4)			, ,
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	in Tilled Soils	(C6) <u>✓</u>	-	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	L	Shallow Aquitard (D3	•
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	ırks)			
Sparsely Vegetated Concave Surface (B8)		<u> </u>	FAC-Neutral Test (D	5)
Field Observations:				
Surface Water Present?				
Water Table Present? ☑ Yes ☐ No Depth (inches): 4		Wetland Hydr	rology Present?	Voc. □ No
Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe)			V	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspe	ections), if available	e):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum		10	YES	FAC
Betula alleghaniensis	Total Cover:	10 20	YES	FAC
	. J.a. 00VEI.	20		



1 TOVIGETICE, TRI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Acer spicatum		10 5	YES YES	FAC FACU
Acei spicatum	Total Cover:	15	123	1 700
11.1.0		-		
Herb Stratum				
Plot Size: 5	I	24.2	1	1
Scientific Name		% Cover	Dominant	Indicator Status
Onoclea sensibilis Dryopteris intermedia		5 10	NO NO	FACW FAC
Thalictrum pubescens Solidago erecta		35 25	YES YES	FACW UPL
Impatiens capensis		20	YES	FACW
	Total Cover:	95		
Woody Vine Stratum				
Plot Size: 30	1		1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)	Total % Cover		Multiply by:	
Total Number of Dominant	OBL Species: FACW Species	<u>0</u> : <u>60</u>	x 1 = 0 x 2 = 120	
Species Across All Strata: 7 (B)	FAC Species:	. <u>00</u> <u>40</u>	$x = \frac{120}{120}$ $x = \frac{120}{120}$	
Percent of Dominant Species	FACU Species:		$x = \frac{120}{120}$ x = 4 = 20	
That Are OBL, FACW, or FAC: 71 (A/B)	UPL Species:	<u>-</u> 25	x 5 = <u>125</u>	
	Column Totals:	130 (A)	385 (B)	
	ı	Prevalence Index :	= B/A = <u>2.96</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
☐ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☑ Yes [¬ No
data in Remarks or on a separate sheet)	, . ,	J		_
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



Duefile Decemb									
Profile Descrip	tion: (Describe	the d	epth needed to d	docum	ent the in	dicator o	r confirm the abser	ce of indicators.)	
Depth	Matrix		Red	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ure	Remarks
0-12	10YR 2/1	100					FINE SANI	DY LOAM	
12-16	2.5Y 3/1	40	2.5Y 7/1 10YR 4/6	55 5	DΟ	M M	SANDY	LOAM	
47. 0.0									D
		•	*				or Coated Grains.		Pore Lining, M=Matrix
		cable t	o all LRR's, unle						oblematic Hydric Soils ³ :
Histosol (/	•			'olyvalı /ILRA 1		Surface (S	88) (LRR R,		A10) (LRR K, L, MLRA 149B)
=	pedon (A2)					(00) (10	D D 141 D1 (10D)	_	Redox (A16) (LRR K, L, R)
☐ Black Hist							R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_	-	-		(LRR K, L)	_	e (S7) (LRR K, L, M)
_	₋ayers (A5) Below Dark Surfa	(A1		-	Gleyed Ma			_	elow Surface (S8) (LRR K, L)
_ ·	k Surface (A12)	ace (A	· —	-	d Matrix (I	•		_	urface (S9) (LRR K, L)
	icky Mineral (S1)		_		Dark Surfa	ice (F6) irface (F7)		_ `	ese Masses (F12) (LRR K, L, R)
	eyed Matrix (S4)		_	-	o Dark So Depressio			_	oodplain Soils (F19) (MLRA 149B) c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re			.	(COOX I	эсргозою	113 (1 0)			Material (F21)
_	Matrix (S6)								vaterial (121) v Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	\ 149B)						in in Remarks)
			·	ology n	nust he nr	esent unla	ess disturbed or prob		
Restrictive Lay					nknown				
		_							
				_				Hvdric Soil Prese	nt? ☑ Yes ☐ No
				_				Hydric Soil Prese	nt? ☑ Yes 🗆 No
Remarks:				_				Hydric Soil Prese	nt? ☑ Yes ☐ No
Remarks:				_				Hydric Soil Prese	nt? ☑ Yes ☐ No
	Habitat Characte	ristics.	Aquatic Diversity	or Ge	neral Com	nments:		Hydric Soil Prese	nt? ☑ Yes ☐ No
	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:		Hydric Soil Prese	nt? ☑ Yes ☐ No
Description of			_	or Ge	neral Com	nments:	Isolated Wetland?		nt? ☑ Yes ☐ No No ☐ Unknown
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nnments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			
Description of Wetland Qualit	y: 🔲 High	_	_		neral Com	nments:			





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WE	TLAND) DET	ERN	IINAT	ION F	FORM -	Northc	entral	and No	ortheast	Region	ı	
☑ Centerline ☐ Re-R	oute [] Acce	ss Roa	ıd 🔲	Ancill	lary Facility		Transmis	ssion Line	☐ Oth	er		
Project/Site: NED			ı	Milepost:	7776	69.7	County:	В	erkshire		Date:	06/09/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA	Sam	pling Point	HN-M-W	006-PSS	
Investigators: CM		Quad N	ame:	Peru			Townshi	р: Н	insdale				
Logbook No.: 3	Log	book Pg	.: 50		Tra	ct: 20984	•						
Landform (hillslope, terrace,	etc.):	Depres	ssion	'		Local R	elief:	Conc	ave 🔲	Convex	None	Slope%.:	2
Subregion (LRR): Middl	e Atlantic			La	t: 42.4	169177		Long	: -73.09	90555		Datum: NA	D83
Soil Map Unit Name: Pe	ru-Marlow	associat	ion, ro	lling, extr	emely s	stony				NWI Cla	ssification:	PSS4E	.
Are climatic / hydrologic cond	litions on th	ne site ty	pical f	or this tin	ne of ye	ear?:	7 Yes	□ No	(If no, exp	olain in Rema	arks.)		
Are Vegetation Soil	or H	ydrology	/ □	significa	antly dis	sturbed?	☑ No	Are "N	Normal" Cir	rcumstances	present?	✓ Yes	☐ No
Are Vegetation Soil	or H	ydrology	∕ □	naturall	y proble	ematic?	☑ No						
SUMMARY OF FINDI	NGS - A	ttach	site n	nap sh	owing	g samplii	ng poin	t locati	ions, tra	ınsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?	$\overline{\checkmark}$	Yes	□ N	0								
Hydric Soil Present?			Yes	□ N	0				Sampled a Wetla		Yes [□ No	
Wetland Hydrology Present?		$\overline{\mathbf{A}}$	Yes	□ N	0								
Field Wetland Classification:	PSS	i											
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicate	ors:									Secondary I	ndicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one rec	uired; c	heck a	ll that app	oly)				I	☐ Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)				☐ Wate	r-Stain	ed Leaves ((B9)		I	✓ Drainag	je Patterns ((B10)	
☐ High Water Table (A2)				☐ Aqua	itic Fau	na (B13)			I		rim Lines (B	16)	
✓ Saturation (A3)				Marl	Deposi	ts (B15)			I	☐ Dry-Sea	ason Water	Table (C2)	
■ Water Marks (B1)				Hydr	ogen S	ulfide Odor	(C1)		I	☐ Crayfish	Burrows (C	C8)	
☐ Sediment Deposits (B2)				Oxid	ized Rh	izospheres	along Livii	ng Roots	(C3)	☐ Saturat	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				Pres	ence of	Reduced Ir	on (C4)			☐ Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Rece	nt Iron	Reduction i	n Tilled So	oils (C6)		☐ Geomo	rphic Positio	on (D2)	
☐ Iron Deposits (B5)				Thin	Muck S	Surface (C7))		I	☐ Shallow	Aquitard (C	03)	
☐ Inundation Visible on A	erial Image	ry (B7)		Othe	r (Expla	ain in Rema	rks)				pographic R	telief (D4)	
☐ Sparsely Vegetated Con	ncave Surf	ace (B8)							l	▼ FAC-Ne	eutral Test (I	D5)	
Field Observations:													
Surface Water Present?	☐ Yes	√ 1	l ol	Depth (in	ches):								
Water Table Present?	✓ Yes	□ 1	l ol	Depth (in	ches):	3		W	etland Hy	drology Pre	_	. V 🗆	NI.
Saturation Present? (includes capillary fringe)	☑ Yes	1	No [Depth (in	ches):	0					V	Yes □	NO
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring w	ell, aeria	al photos, p	revious ins	pections), if availab	ole):			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name									% Cover	Do	minant	Indicate	or Status
Prunus serotina Fraxinus pennsylvanica Acer rubrum									10 10 15	,	YES YES YES	FA	ACU ACW AC
						1	Γotal Cove	r:	35	'		1	



Providence, RI 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Prunus serotina Spiraea latifolia Acer rubrum Lindera benzoin Alnus incana		5 10 10 10 15	NO YES YES YES YES	FACU FACW FAC FACW FACW
	Total Cover:	50	'	'
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Parathelypteris noveboracensis Impatiens capensis Carex lacustris Carex lurida Onoclea sensibilis	7.110	20 10 50 15 20	YES NO YES NO YES	FACW FACW OBL OBL FACW
	Total Cover:	115		
Woody Vine Stratum				
Plot Size: 30	ı	0/ 0	Density (India-ta- Ct t
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)	Total % Cover	of:	Multiply by:	
	OBL Species:	<u>65</u>	x 1 = <u>65</u>	
Total Number of Dominant Species Across All Strata: 10 (B)	FACW Species		x 2 = <u>190</u>	
	FAC Species:	<u>25</u>	x 3 = <u>75</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 90 (A/B)	FACU Species		x 4 = <u>60</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	200 (A)	<u>390 (B)</u>	
		Prevalence Index	x = B/A = <u>1.95</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	egetation Prese	ent? ☑ Yes [□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



SOIL										
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	r confirm t	he absen	ce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures			Textu	Ire	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		ı exil		i/Gillain3
0-2	10YR 2/1	100						ORGA	NIC	
2-10	5Y 3/1	50	5Y 5/2	50	D	М	LOAMY SAND			
10.15	FV 4/0	50	EV 6/4	F0	_	N4	LOAMY SAND		CAND	
10-15	5Y 4/2	50	5Y 6/1	50	D	М		LOAMY	SAND	
¹Type: C=Cond	centration D=De	nletion	, RM=Reduced I	Matrix	CS=Cov	ered Sand	or Coated	Grains	²l ocation: Pl =	Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	<u> </u>	o all LRR's, unle				Oi Ocaloa	Oramo.		roblematic Hydric Soils³:
☐ Histosol (A						-	8) (LRR R,		_	A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILRA 1		- C	o) (=: ;			e Redox (A16) (LRR K, L, R)
☐ Black Hist			Пт	hin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						LRR K, L)	,		e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)	. ,		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1		-	d Matrix (I				_	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		R	edox [Dark Surfa	ice (F6)			☐ Iron-Mangan	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox I	Depressio	ns (F8)			☐ Mesic Spodie	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)								□ Very Shallow	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						☐ Other (Expla	iin in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	d or prob	ematic.	
Restrictive Lay	er Present?		res ☑ No	□ ∪	nknown					
_								!	Hydric Soil Prese	nt? ✓ Yes 🗆 No
Remarks:										
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	ments:				
, , , ,		,	,							
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated 1	Wetland?	☐ Yes 🗹	No Unknown
General Comm	ents:									





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WETLAND DETERMINATION FORM - Northcentral and Northeast Region									
∇ Centerline	ansmission Line								
Project/Site: NED Milepost: 77674.6 County:	Berkshire Date: 06/09/2015								
Applicant/Owner: Kinder Morgan State: M/									
Investigators: CM Quad Name: Peru Township:	Hinsdale								
Logbook No.: 3 Logbook Pg.: 51 Tract: 20984									
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave ☑ Convex ☐ None Slope%.: 3								
Subregion (LRR): Middle Atlantic Lat: 42.469292	Long: -73.090893 Datum: NAD83								
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped								
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)								
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No								
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No									
SUMMARY OF FINDINGS - Attach site map showing sampling point lo	ocations, transects, important features, etc.								
Hydrophytic Vegetation Present? ☐ Yes ☑ No									
Hydric Soil Present?	s the Sampled Area □ Yes ☑ No								
Wetland Hydrology Present? ☐ Yes ☑ No	vithin a Wetland?								
Field Wetland Classification: UPLAND PLOT									
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)								
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)								
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)								
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)									
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)								
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)								
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living R	g Living Roots (C3) Saturation Visible on Aerial imagery (C9)								
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	n (C4) Stunted or Stressed Plants (D1)								
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	Tilled Soils (C6) Geomorphic Position (D2)								
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)								
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)								
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)								
Field Observations:									
Surface Water Present? ☐ Yes ✓ No Depth (inches):									
Water Table Present? ☐ Yes ✓ No Depth (inches):	Wetland Hydrology Present?								
Saturation Present?	☐ Yes ☑ No								
(includes capillary fringe)									
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspec	ctions), if available):								
VEGETATION									
Tree Stratum									
Plot Size: 30									
Scientific Name	% Cover Dominant Indicator Status								
Prunus serotina	25 YES FACU								
Fraxinus americana Acer rubrum	10 NO FACU 10 NO FAC								
Acer rubrum Acer saccharum	40 YES FACU								
Total Cover:	85								



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus americana Acer saccharum		10 10	YES YES	FACU FACU
Acei Saccilalulii	Total Cover:	20	ILS	1 ACO
Herb Stratum				
Plot Size: 5	1		ı	I
Scientific Name		% Cover	Dominant	Indicator Status
Parathelypteris noveboracensis		30	YES	FAC
	Total Cover:	30		
Woody Vine Stratum				
Plot Size: 30	1		l	l
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	: <u>30</u>	x 2 = <u>60</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>40</u>	x 3 = <u>120</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)	FACU Species:	<u>95</u>	x 4 = <u>380</u>	
That Ale ODE, I AOW, OF AO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>165 (A)</u>	<u>560 (B)</u>	
	F	Prevalence Index =	$= B/A = \underline{3.39}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	it? ☐ Yes ☑	1 No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Totale Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Depth	COU	02504											
Depth	SOIL				• • • • • • •								
Color (moist)	-	•	tne a				idicator o	r confirm th	ne absen	ice of indicators.)) 		
10YR 3/2			%				l oc²		Text	ure		Rei	marks
3-12	0.2			Color (moist)	70	Туре	Loc	ГІ	NE CANE	DVIOAM			
12-18	0-3	101R 3/2	100					FII	NE SAINL	DY LOAM			
12-18		\								2000			
Pyer: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) 1 Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L, MLRA 149B) 1 Histosol (A2) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L, R) 2 c	3-12	7.5YR 3/4	100					FIN	NE SAND	DY LOAM			
Pyer: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) 1 Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L, MLRA 149B) 1 Histosol (A2) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L, R) 2 c													
ydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)	12-18	7.5YR 4/4	100					FIN	NE SAND	DY LOAM			
ydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)													
Histosol (A1)	¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated (Grains.	² Location: PL:	=Pore Linin	g, M=M	latrix
Histic Epipedon (A2)	Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ss otl	nerwise n	oted.)			Indicators for P	roblematic	Hydric	Soils ³ :
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S7) (LRR K, L, M) Thin Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Bedox Depressions (F8) Redox Depressions (F8) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, M) Wesic Spodic (TA6) (MLRA 144A, 145, 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sestrictive Layer Present? Yes No No Unknown Hydric Soil Present? Yes No Unknown	Histosol (A	A1)					Surface (S	8) (LRR R,		2 cm Muck	A10) (LRR	K, L, MI	LRA 149B)
Hydrogen Sulfide (A4)	☐ Histic Epip	pedon (A2)		N	ILKA	1496)				☐ Coast Prairi	e Redox (A	16) (LRF	R K, L, R)
Stratified Layers (A5)	☐ Black Hist	ic (A3)		П Т	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)	5 cm Mucky	Peat or Pe	at (S3) ((LRR K, L, R)
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Iron-Manganese Masses (F12) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Other (Explain in Remarks) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown	☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surfac	e (S7) (LRF	₹ K, L, N	1)
Thick Dark Surface (A12)	☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)			☐ Polyvalue B	elow Surfac	e (S8) (LRR K, L)
Sandy Mucky Mineral (S1)	■ Depleted	Below Dark Surfa	ace (A1	l1) 🔲 🗅	eplete	d Matrix (F3)			☐ Thin Dark S	urface (S9)	(LRR K	, L)
Sandy Gleyed Matrix (S4)	☐ Thick Dar	k Surface (A12)		□ F	edox l	Dark Surfa	ace (F6)			☐ Iron-Mangar	nese Masse	s (F12)	(LRR K, L, R)
Sandy Redox (S5)	☐ Sandy Mu	icky Mineral (S1))		eplete	d Dark Su	ırface (F7)			☐ Piedmont FI	oodplain So	oils (F19) (MLRA 149B)
Stripped Matrix (S6)	☐ Sandy Gle	eyed Matrix (S4)		☐ F	ledox l	Depressio	ns (F8)				c (TA6) (MI	LRA 144	1A, 145, 149B)
Dark Surface (S7) (LRR R, MLRA 149B)	☐ Sandy Re	dox (S5)								□ Red Parent	Material (F	21)	
Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sestrictive Layer Present?	☐ Stripped N	Matrix (S6)								□ Very Shallov	w Dark Surf	ace (TF	12)
Remarks: Yes No Unknown Hydric Soil Present? Yes No No No No No No No N	□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	ain in Rema	rks)	
Hydric Soil Present?	3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed	d or prob	olematic.			
Vetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland? ☐ Yes ☐ No ☐ Unknown	Remarks:									Hydric Soil Prese	ent?	Yes	☑ No
	Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Com	nments:						
eneral Comments:	Wetland Qualit	y: High		Moderate	Low			Isolated V	Vetland?	Yes 🗆	No 🗆] Unkn	own
	General Comm	ents:											





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WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 69415.6	County: Berkshire Date: 06/12/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: HN-N-W006-PSS
Investigators: M Quad Name: Peru	Township: Hinsdale
Logbook No.: 1 Logbook Pg.: 48 Tract: 20968	
Landform (hillslope, terrace, etc.): Slope - mid Local R	elief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.477221	Long: -73.115834 Datum: NAD83
Soil Map Unit Name: Berkshire-Marlow association, 15 to 45 percent slopes, s	teep, extremely stony NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	— ☑ No
	_
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Is the Sampled Area
Hydric Soil Present? ✓ Yes No	within a Wetland? Yes No
Wetland Hydrology Present?	
Field Wetland Classification: PSS	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
✓ Surface Water (A1) ☐ Water-Stained Leaves (Drainage Patterns (B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	ks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present?	Wetland Hydrology Present?
Saturation Present?	☑ Yes ☐ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	evious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Т	otal Cover:



Providence, Ri 02904									
Sapling/Shrub Stratum									
Plot Size: 15									
Scientific Name		% Cover	Dominant	Indicator Status					
Spiraea latifolia		45	YES	FACW					
	Total Cover:	45		I					
Herb Stratum									
Plot Size: 5									
	1	0/ 0	l 5 · .	l					
Scientific Name		% Cover	Dominant	Indicator Status					
Onoclea sensibilis Impatiens capensis		85 10	YES NO	FACW FACW					
	Total Cover:	95	ı	1					
Woody Vine Stratum									
Plot Size: 30									
Scientific Name		% Cover	Dominant	Indicator Status					
	Total Cover:		I	1					
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet							
Number of Dominant Species	Total % Cover of		Multiply by:						
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = 0						
Total Number of Dominant	FACW Species:		$x = \frac{0}{2}$ $x = \frac{280}{2}$						
Species Across All Strata: 2 (B)	FAC Species:	<u> </u>	x 3 = 0						
Percent of Dominant Species	FACU Species:		x 4 = 0						
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>o</u>	x 5 = 0						
	Column Totals:	<u>v</u> 140 (A)	280 (B)						
									
	F	Prevalence Index :	= B/A = <u>2.00</u>						
Hydrophytic Vegetation Indicators:									
1 - Rapid Test for Hydrophytic Vegetation									
☑ 2 - Dominance Test is > 50%									
☑ 3 - Prevalence Index is ≤ 3.0									
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	Hydrophytic Vegetation Present? ☑ Yes ☐ No							
data in Remarks or on a separate sheet)									
_									
Problematic Hydrophytic Vegetation¹ (Explain)									
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.									
present, unless disturbed or problematic.									
Remarks:									

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T TOVIGETICE, I	1 02004								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	r confirm the abse	nce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		-	di iro	Dd
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	lex	cture	Remarks
0-10	7.5YR2.5/1	100					FINE SAN	IDY LOAM	
10-12	7.5YR5/1	100					FINE SAN	IDY LOAM	
¹Type: C=Cond	centration D=De	epletion	RM=Reduced I	Matrix	CS=Cov	ered Sand	or Coated Grains.	²l ocation: Pl =	 =Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	<u> </u>	,				or coated craine.		roblematic Hydric Soils³:
-		cable t	o all LRR's, unle			-	0) (1 DD D		•
Histosol (A	·			oiyvai ILRA 1		Surrace (S	8) (LRR R,	_	(A10) (LRR K, L, MLRA 149B)
	pedon (A2)							=	e Redox (A16) (LRR K, L, R)
☐ Black Hist			П Т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
_	_ayers (A5)		_	oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	11) 🗹 D	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		☐ R	edox l	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	icky Mineral (S1))	□ D	eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		☐ R	edox	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							□ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	\ 149B)					Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.	
Restrictive Lay	er Present?	7	res □ No I	П	Inknown				
VERY STONY AREA 12								Hydric Soil Prese	ent? ☑ Yes ☐ No
Remarks:									
itemarks.									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate ☑ I	Low			Isolated Wetland	? □ Yes ☑	No 🔲 Unknown
General Comm	ents:								
Ochoral Comm	crito.								





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WETLAND DETERMINATION FORM - Nor	thcentra	I and Nor	theast Regi	on		
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmi	nission Line	☐ Other			
Project/Site: NED Milepost: 69448.6 Cou	unty: E	Berkshire	D	ate: 06/12/2015		
Applicant/Owner: Kinder Morgan Stat	ite: MA	Sampli	ing Point: HN-N	N-W006-UPL		
Investigators: N Quad Name: Peru Tow	wnship: F	Hinsdale				
Logbook No.: 1 Logbook Pg.: 49 Tract: 20968						
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Con	ncave 🗹 C	Convex No	one Slope%.: 3		
Subregion (LRR): Middle Atlantic Lat: 42.477163	Long	g: -73.115	611	Datum: NAD83		
Soil Map Unit Name: Berkshire-Marlow association, 15 to 45 percent slopes, steep,	, extremely st	stony	NWI Classificati	on: Not mapped		
Are climatic / hydrologic conditions on the site typical for this time of year?:	′es □ No	o (If no, explai	in in Remarks.)			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No Are "	'Normal" Circu	ımstances presen	t? ☑ Yes ☐ No		
Are Vegetation $\ \square$ Soil $\ \square$ or Hydrology $\ \square$ naturally problematic? $\ \square$	No					
SUMMARY OF FINDINGS - Attach site map showing sampling p	oint locat	tions, tran	sects, import	ant features, etc.		
Hydrophytic Vegetation Present? ☐ Yes ☑ No			,			
Hydric Soil Present? ☐ Yes ☑ No		e Sampled A		√ No		
Wetland Hydrology Present?	withi	in a Wetland	1? 🗀 163	E NO		
Field Wetland Classification: UPLAND PLOT						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:		Se	condary Indicator	s (2 or more required)		
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cr	acks (B6)		
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)			Drainage Patte	rns (B10)		
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Line	s (B16)		
☐ Saturation (A3) ☐ Marl Deposits (B15)			Dry-Season Wa	er Table (C2)		
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			Crayfish Burrov	vs (C8)		
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	Living Roots (C3) Saturation Visible on Aerial imagery (C9)					
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	Chunted or Chronood Dianto (D1)					
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	•		Geomorphic Po	osition (D2)		
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	. ,		Shallow Aquitar	rd (D3)		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		☐ Microtopographic Relief (D4)				
☐ Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Te	est (D5)		
Fill Oliver d'ave						
Field Observations:						
Surface Water Present? ☐ Yes ☑ No Depth (inches):	,,	Madan d H	-l			
Water Table Present? ☐ Yes ☑ No Depth (inches): Saturation Present? ☐ Yes ☑ No Depth (inches):	, v	vetiand Hydro	ology Present?	☐ Yes ☑ No		
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)						
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	us inspections	s), if available):			
VEGETATION						
VEGETATION						
Tree Stratum Plot Size: 00						
Plot Size: 30	I	9/ Co::	Dominent	Indicator Status		
Scientific Name Tsuga canadensis		% Cover	Dominant	Indicator Status FACU		
Betula alleghaniensis		40	YES	FAC		
Total 0	Cover:	100				

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Sapling/Shrub Stratum				1 6 1 20 7 3 10 10
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Tsuga canadensis		25	YES	FACU
rouga canadonoio	Total Cover:	25	120	17.00
	10101 00101.			
Herb Stratum				
Plot Size: 5	ı		ı	ı
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30			ı	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)	Total % Cover		Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>	
	FAC Species:	<u>40</u>	x 3 = <u>120</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)	FACU Species	: <u>85</u>	x 4 = <u>340</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	125 (A)	<u>460 (B)</u>	
		Prevalence Index =	= B/A = 3.68	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Preser	nt? 🔲 Yes 🔽	∐ No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



TOVIGOTICO, I	11 02304								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
0-2	7.5YR2.5/2	100					LOA	AM	
2-20	7.5YR4/4	100					LOA	AM	
Type: C=Con	l centration. D=D∈	epletion	l	Matrix.	L . CS=Cov	l rered Sand	or Coated Grains.	²Location: PL=	 =Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	·	to all LRR's, unle						roblematic Hydric Soils³:
☐ Histosol (•			•	8) (LRR R,		(A10) (LRR K, L, MLRA 149B)
	pedon (A2)			MLRA 1		oundo (o	o) (Ertit it,	_	e Redox (A16) (LRR K, L, R)
☐ Black His			_ T	Thin Da	ark Surface	e (S9) (I RI	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)					neral (F1) (·		e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed Ma		LICITITY, L)	_	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	ed Matrix (urface (S9) (LRR K, L)
	k Surface (A12)	200 (711	_	•	Dark Surfa	•			nese Masses (F12) (LRR K, L, R)
_	ucky Mineral (S1))	_			urface (F7)			oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	•	Depressio	, ,			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re			- .	10001	2 00.000.0	(. 0)			Material (F21)
	Matrix (S6)								w Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	A 149R)						ain in Remarks)
_			•	-1			ess disturbed or prob		an in Romano,
Remarks:							I		
Description of	Habitat Characte	ristics,	Aquatic Diversity	y or Ge	neral Com	nments:			
Wetland Quali	ty: High		Moderate	Low			Isolated Wetland?	? ☐ Yes ☑	No Unknown
General Comm	onte:								
Jeneral Comm	ienis.								





EAST



WE	TLANI	DET	ERN	IINATI	ON F	ORM -	Northc	ent	ral an	d No	ortheas	st Reg	ion		
☑ Centerline ☐ Re-R	oute [Acce	ss Roa	ıd 🔲	Ancilla	ary Facility		Tran	nsmission	Line		ther			
Project/Site: NED			ı	Milepost:	7890	08.1	County:		Berksh	hire			Date:	06/09/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA		Samp	oling Poi	nt: HN-	N-W0	01-PSS	
Investigators: CM		Quad N	ame:	Peru			Townsh	ip:	Hinsda	ale					
Logbook No.: 3	Log	book Pg	.: 56		Trac	ct: 20984	•								
Landform (hillslope, terrace,	etc.):	Depre	ssion	'		Local R	Relief:	7 (Concave		Convex	□ N	one	Slope%.:	0
Subregion (LRR): Middl	e Atlantic			Lat	42.4	70135		L	₋ong:	-73.08	6458			Datum: NA	D83
Soil Map Unit Name: Tu	nbridge-Ly	man ass	ociatio	n, rolling,	extrem	nely stony					NWI (Classificat	tion:	Not ma	apped
Are climatic / hydrologic cond	litions on t	he site ty	pical f	or this tim	e of ye	ar?:	Z Yes		No (If n	o, exp	lain in Re	marks.)			
Are Vegetation Soil	or H	ydrology	/ □	significa	ntly dis	turbed?	☑ No	Α	re "Norm	al" Cir	cumstanc	es preser	nt?	✓ Yes	☐ No
Are Vegetation Soil	or H	ydrology	∕ □	naturally	proble	ematic?	☑ No								
SUMMARY OF FINDI	NGS - A	ttach	site n	nap sho	wing	g sampli	ng poin	t lo	cations	s, tra	nsects	impor	tant	features	, etc.
Hydrophytic Vegetation Pres	ent?	$\overline{\checkmark}$	Yes	☐ No)			_							
Hydric Soil Present?			Yes	☐ No)				the San thin a V			☑ Yes	s 🗆] No	
Wetland Hydrology Present?		$\overline{\checkmark}$	Yes	☐ No)										
Field Wetland Classification:	PSS	3													
Remarks:															
HYDROLOGY															
Wetland Hydrology Indicate	ors:									\$	Secondar	/ Indicato	rs (2	or more requ	uired)
Primary Indicators (minimum	of one red	quired; c	heck a	ll that app	ly)						☐ Surfa	ce Soil C	racks	(B6)	
✓ Surface Water (A1)	☑ Surface Water (A1) ☐ Water-Stained Leaves (B9) ☐ Drainage Patterns (B10)														
☐ High Water Table (A2)				☐ Aqua	tic Faur	na (B13)					Moss	Trim Line	es (B1	16)	
✓ Saturation (A3)				Marl I	Deposit	ts (B15)					Dry-S	eason W	ater 1	Table (C2)	
■ Water Marks (B1)				Hydro	gen Su	ulfide Odor	(C1)					ish Burro		•	
☐ Sediment Deposits (B2)				Oxidi	zed Rh	izospheres	along Livi	ng R	oots (C3)	_	_			n Aerial imaç	
☐ Drift Deposits (B3)				Prese	nce of	Reduced II	ron (C4)			_				Plants (D1)	
☐ Algal Mat or Crust (B4)				Rece	nt Iron	Reduction i	in Tilled So	oils (0	C6)	L		norphic P			
☐ Iron Deposits (B5)				Thin I	Muck S	urface (C7))			L		ow Aquita	-	•	
☐ Inundation Visible on A	erial Image	ry (B7)		Other	(Expla	in in Rema	rks)			_	_	topograp			
Sparsely Vegetated Con	ncave Surf	ace (B8))							Ľ	✓ FAC-	Neutral T	est (L)5)	
Field Observations:															
Surface Water Present?	✓ Yes		l ov	Depth (inc	hes):										
Water Table Present?	✓ Yes		l ov	Depth (inc	hes):	0			Wetlan	nd Hyd	drology P	resent?	1.71	Vac 🗆	No
Saturation Present? (includes capillary fringe)	✓ Yes	<u> </u>	No [Depth (inc	hes):	0							V	Yes □	NO
Remarks (Describe Recorded	l Data (stre	eam gag	e, mon	itoring we	II, aeria	al photos, p	revious ins	spect	tions), if a	availab	le):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Co	over		Dominant	t	Indicate	or Status
Betula alleghaniensis Betula papyrifera Acer rubrum									10 10 10	0		YES YES YES		F/	AC ACU AC
						-	Total Cove	er:	30	0					



Providence, RI 02904			- 1					
Sapling/Shrub Stratum								
Plot Size: 15								
Scientific Name		% Cover	Dominant	Indicator Status				
Lindera benzoin		40	YES	FACW				
Acer spicatum		10	YES	FACU				
	Total Cover:	50						
Herb Stratum								
Plot Size: 5								
Scientific Name		% Cover	Dominant	Indicator Status				
Onoclea sensibilis		10	YES	FACW				
Maianthemum canadense Impatiens capensis		5 5	YES YES	FACU FACW				
Impaliens caperisis	Total Cover:	20	TES	FACW				
Mandy Vina Chratum	Total Cover.							
Woody Vine Stratum Plot Size: 30								
	ı							
Scientific Name		% Cover	Dominant	Indicator Status				
	Total Cover:							
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:						
Number of Dominant Species	Total % Cover		Multiply by:					
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>0</u>	x 1 = 0					
Total Number of Dominant	FACW Species		x = 0 x = 110					
Species Across All Strata: 8 (B)	FAC Species:	. <u>33</u> 20	$x = \frac{110}{60}$					
Percent of Dominant Species	•		_					
That Are OBL, FACW, or FAC: 63 (A/B)	FACU Species:		x 4 = 100					
	UPL Species:	<u>0</u>	$x 5 = \underline{0}$					
	Column Totals:		<u>270 (B)</u>					
		Prevalence Index =	= B/A = 2.70					
Hydrophytic Vegetation Indicators:								
1 - Rapid Test for Hydrophytic Vegetation								
☑ 2 - Dominance Test is > 50%								
☑ 3 - Prevalence Index is ≤ 3.0								
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ✓ Yes ☐ No							
data in Remarks or on a separate sheet)								
☐ Problematic Hydrophytic Vegetation¹ (Explain)								
¹ Indicators of hydric soil and wetland hydrology must be								
present, unless disturbed or problematic.								
Remarks:								

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SOIL																	
Profile Descrip	tion: (Describe	the d	epth need	led to	docum	ent the ir	ndicator o	r confirm	he abser	nce o	indicato	rs.)					
Depth	Matrix		Redox Features					_						_			
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Text	ture					Rem	narks	
0-20	5Y 2.5/1	100							ORGA	ANIC							
¹Type: C=Cond	centration, D=De	epletio	⊥ n, RM=Re	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2[ocation:	PL=Por	e Linino	g, M	l=Ma	trix	
Hydric Soil Inc	licators: (Appli	cable	to all LRR	's. unl	ess oth	nerwise n	oted.)				cators fo						3 <u>-</u>
Histosol (/							Surface (S	8) (I RR R		П	2 cm Mu			-			
_ `	pedon (A2)				/ILRA 1		oundoo (C	o, (E			Coast Pi	•	, ,				,
☐ Black Hist				П	hin Da	ırk Surface	e (S9) (LR	D D MIDA	1/0R)		5 cm Mu						•
				_					1400)	_		-					ν, Ε, Ιν)
									ace (S7) (LRR K, L, M) Below Surface (S8) (LRR K, L)								
	Below Dark Surf	ace (A	11)		-	d Matrix (Thin Dar						, L)
:	k Surface (A12)	300 (71	,	_	•		-			_				•		-	K I D)
_	icky Mineral (S1)					Dark Surfa	ice (F6) irface (F7)				Iron-Mar	_					· ·
_	eyed Matrix (S4)	,			•						Piedmon	-					•
_				<u></u> '	Venox I	Depressio	113 (1 0)				Mesic Sp	,	, ,		144/	٦, 14), 149B)
□ Sandy Redox (S5) □ Red Parent □ Stripped Matrix (S6) □ Very Shallov											/TE^	2)					
		MID	A 440D)								Very Sha				(111	2)	
_	ace (S7) (LRR R		•								Other (E	xpıaın ır	ı Kema	irks)			
3Indicators of h	nydrophytic vege	tation	and wetlan	d hydr	ology n	nust be pr	esent, unle	ess disturb	ed or prob	olema	tic.						
Restrictive Lay	er Present?		Yes 🗹	No	□ U	Inknown											
										Hydr	ic Soil Pı	esent?	\checkmark	Υe	s		No
Remarks:																	
Description of	Habitat Characte	ristics	Aquatic D	iversity	or Ge	neral Com	nments:										
Doddinpalon on	nabilat Onaraote	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	/ iqualio D	rvoron)	0.00	noral con	iiiioiito.										
Wetland Qualit	y: 🔲 High	V	Moderate	П	Low			Isolated	Wetland?) [7 Yes	□ м	о П		nkno	wn	
Welland Qualit	y. 🔲 111911	V	Moderate	ш	LOW			isolated	welland:		<u>/</u>] 163	⊔ ''	° ⊔	0	IIKIIC	/ VV I I	
General Comm	ents:																
DATA IN TEAM	M M LOGBOOK																





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WETLAND DETERMINATION FORM - N	orthcentral and Northeast Region						
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other						
Project/Site: NED Milepost: 78915.8	County: Berkshire Date: 06/09/2015						
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: HN-N-W001-UPL						
Investigators: CM Quad Name: Peru	Township: Hinsdale						
Logbook No.: 3 Logbook Pg.: 57 Tract: 20984							
Landform (hillslope, terrace, etc.): Depression Local Rel	ief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 0						
Subregion (LRR): Middle Atlantic Lat: 42.470231	Long: -73.086470 Datum: NAD83						
Soil Map Unit Name: Tunbridge-Lyman association, rolling, extremely stony	NWI Classification: Not mapped						
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? 🔽	No Are "Normal" Circumstances present? ✓ Yes ☐ No						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	_						
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? ☐ Yes ✓ No	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area						
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland? ☐ Yes ☑ No						
Field Wetland Classification: UPLAND PLOT							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)						
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)						
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9	Drainage Patterns (B10)						
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)						
☐ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)						
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C	Coturation Visible on Aerial imagery (CO)						
Sediment Deposits (B2) Oxidized Rhizospheres al	Chamberland on Character (D4)						
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	Coomernhia Desition (D2)						
Algal Mat or Crust (B4) Recent Iron Reduction in	Tilled Soils (C6) Shallow Aquitard (D3)						
Iron Deposits (B5) Thin Muck Surface (C7)	Microtopographic Relief (D4)						
Inundation Visible on Aerial Imagery (B7)							
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes V No Depth (inches):							
Water Table Present? Yes V No Depth (inches):	Wetland Hydrology Present? ☐ Yes ☑ No						
Saturation Present? Yes V No Depth (inches): (includes capillary fringe)	□ les ☑ No						
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pre-	vious inspections), if available):						
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name	% Cover Dominant Indicator Status						
	10 NO FACU						
Prunus serotina Abies balsamea	30 YES FACU 40 YES FAC						
	tal Cover: 80						



1 TOVIDENCE, TRI 02004				the second second					
Sapling/Shrub Stratum									
Plot Size: 15									
Scientific Name		% Cover	Dominant	Indicator Status					
Acer spicatum Abies balsamea		40 20	YES YES	FACU FAC					
Autes valsaillea	Total Cover:	60	ILS	I AC					
Herb Stratum									
Plot Size: 5	1		1	ı					
Scientific Name		% Cover	Dominant	Indicator Status					
Trientalis borealis THLYOPTERIS NOVEBORACENSIS		10 10	NO NO	FAC FACU					
DENNSTAEDTIA PUNCTLOBULA Maianthemum canadense		25 20	YES YES	FACU FACU					
Walan Johan Sanadones	Total Cover:	65	1.20	17.00					
Woody Vine Stratum									
Plot Size: 30									
Scientific Name		% Cover	Dominant	Indicator Status					
	Total Cover:		I	I					
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:							
Number of Dominant Species	Total % Cover		Multiply by:						
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>						
Total Number of Dominant	FACW Species		x 2 = 0						
Species Across All Strata: 6 (B)	FAC Species:	<u></u>	x 3 = 210						
Percent of Dominant Species	FACU Species:		x 4 = <u>540</u>						
That Are OBL, FACW, or FAC: 33 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>						
	Column Totals:	205 (A)	750 (B)						
		Prevalence Index =	= B/A = 3.66						
Hydrophytic Vegetation Indicators:									
1 - Rapid Test for Hydrophytic Vegetation									
2 - Dominance Test is > 50%									
☐ 3 - Prevalence Index is ≤ 3.0									
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☐ Yes ☑ No								
data in Remarks or on a separate sheet)	ya. opinyaa Tagataaan Taaanti 🔲 165 🖭 NO								
☐ Problematic Hydrophytic Vegetation¹ (Explain)									
¹ Indicators of hydric soil and wetland hydrology must be									
present, unless disturbed or problematic.									
Remarks:									



SOIL										
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm t	he absen	ce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures			Textu	ıro	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texic	ile.	Remarks
0-4	10YR 3/2	100						SANDY I	LOAM	
	NO 1/2		VD - //4					0411014		
4-14	7.5YR 4/6	80	7.5YR 4/4	20	D	M		SANDY I	LOAM	
¹Type: C=Cond	centration. D=De	epletion	n, RM=Reduced	Matrix.	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining, M=Matrix
		•	to all LRR's, unle				- Coulou			roblematic Hydric Soils³:
Histosol (`		•			,	88) (LRR R,			A10) (LRR K, L, MLRA 149B)
- `	pedon (A2)			ILŔA 1		(-	-/(/			e Redox (A16) (LRR K, L, R)
☐ Black Hist			ПΤ	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)	•		e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)		_	•	Gleyed Ma	, ,	. ,		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A	_	-	d Matrix (urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		R	edox I	Dark Surfa	ace (F6)			☐ Iron-Mangan	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1))	_			ırface (F7)				podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	-	Depressio					c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)		_							Material (F21)
Stripped I	Matrix (S6)									v Dark Surface (TF12)
	ace (S7) (LRR R	. MLR	A 149B)							in in Remarks)
			and wetland hydro	ology n	nust be pr	esent. unle	ess disturbe	ed or probl		,
Restrictive Lay					nknown	.,				
Restrictive Eas	or resone.	ш	103 🚺 110	υч	TIKTOWIT				Hydric Soil Prese	ent? ☐ Yes ☑ No
								!	nyunc son Frese	nt? ☐ Yes ☑ No
Remarks:										
Remarks.										
December of		!	Ati- Diit-	0 -						
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	nerai Con	nments:				
Matlend Ougli	uu 🗖 Himb		Madarata 🗖	l a			la alata d \	Matland?	П Vaa П	No
Wetland Qualit	y: 🔲 nign		Moderate	Low			isolaled	Wetland?	☐ Yes ☐	No Unknown
General Comm	ents:									





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WETLAND DETERMINATION FORM - Northce	entral and No	ortheast Region			
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ T	Fransmission Line	☐ Other			
Project/Site: NED Milepost: 79476.8 County:	Berkshire	Date:	06/10/2015		
Applicant/Owner: Kinder Morgan State: I	MA Sam	oling Point: HN-N-W	002-PFO		
Investigators: JM Quad Name: Peru Township					
Logbook No.: 1 Logbook Pg.: 20 Tract: 20984					
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave	Convex None	Slope%.: 2		
Subregion (LRR): Middle Atlantic Lat: 42.470848	Long: -73.08	34555	Datum: NAD83		
Soil Map Unit Name: Berkshire-Marlow association, 15 to 45 percent slopes, steep, extre	mely stony	NWI Classification:	Not mapped		
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, exp	lain in Remarks.)			
Are Vegetation Soil or Hydrology significantly disturbed? No	Are "Normal" Cir	cumstances present?	✓ Yes □ No		
Are Vegetation Soil or Hydrology naturally problematic? No					
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations tra	neacte important	features etc		
Hydrophytic Vegetation Present? ✓ Yes ☐ No	iocations, tra	msects, important	Teatures, etc.		
Hydric Soil Present?	Is the Sampled] No		
Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetla	nd? 🛂 les L	1 NO		
Field Wetland Classification: PFO					
Remarks:					
Tomano.					
HYDROLOGY					
Wetland Hydrology Indicators:	<u> </u>	Secondary Indicators (2	or more required)		
Primary Indicators (minimum of one required; check all that apply)	I	☐ Surface Soil Cracks	s (B6)		
✓ Surface Water (A1)	[✓ Drainage Patterns (B10)		
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	Ι	Moss Trim Lines (B	16)		
✓ Saturation (A3)	I	☐ Dry-Season Water	Table (C2)		
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	1	Crayfish Burrows (0	28)		
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	g Roots (C3)	☐ Saturation Visible o	n Aerial imagery (C9)		
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	-	Stunted or Stressed	l Plants (D1)		
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soil	ls (C6)	✓ Geomorphic Position	n (D2)		
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	· ´ ´	☐ Shallow Aquitard (□	03)		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)				
☐ Sparsely Vegetated Concave Surface (B8)	I	FAC-Neutral Test (I	O5)		
Field Observations:					
Surface Water Present? Yes No Depth (inches): 0					
Water Table Present?	Wetland Hyd	drology Present? ☑	Yes □ No		
Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe)		_			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	pections), if availab	le):			
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name	% Cover	Dominant	Indicator Status		
Betula alleghaniensis	5	NO	FAC		
Tsuga canadensis	95	YES	FACU		
Total Cover:	100				



Providence, RI 02904			- 1	A_COM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer spicatum Tsuga canadensis		1 5	NO YES	FACU FACU
r suga canaderisis	Total Cover:	6	TES	FACO
	10101 00101.			
Herb Stratum				
Plot Size: 5			1	1
Scientific Name		% Cover	Dominant	Indicator Status
Tiarella cordifolia Dryopteris marginalis		10 5	YES NO	FACU FACU
tall meadoe rue Impatiens capensis		2 10	NO YES	FACW FACW
ппринопо вароною	Total Cover:	27	120	1 NOW
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species		x 2 = <u>24</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>5</u>	x 3 = <u>15</u>	
Percent of Dominant Species That Are OBL FACW or FAC: 25 (A/B)	FACU Species	: <u>116</u>	x 4 = <u>464</u>	
That Are OBL, FACW, or FAC: 25 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	133 (A)	503 (B)	
		Prevalence Index	x = B/A = 3.78	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Prese	ent? ☑ Yes [□ No
data in Remarks or on a separate sheet)		-		_
☑ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks: Tsuga was growing on hummocks within wetland				



Cocker Matrix	TOVIGOTICO, I	11 02304										
Depth	SOIL											
Color (moist) % Color (moist) % Type* Loc² Texture Remarks Color (moist) % Color (moist) % Type* Loc² FINE SANDY LOAM	Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	confirm the abser	nce of indicators.)			
10YR 3/1 100	Depth	Matrix		Re	dox Fe	atures						
3-20	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, cS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, cS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, cS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, cS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletic Hydric Soils? Histosol (A1)	0-3	10YR 3/1	100					FINE SAN	DY LOAM			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. **Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)												
Aydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	3-20	2.5Y 3/1	100					SANDY	LOAM			
Aydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)												
Aydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	Type: C=Con	l centration, D=De	epletion	l n, RM=Reduced	Matrix,	L CS=Cov	l rered Sand	or Coated Grains.	² Location: PL=	l =Pore Lining, M=Matrix		
Histosol (A1)	**	· · · · · · · · · · · · · · · · · · ·		•		-						
Histic Epipedon (A2) Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Andicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown	<u> </u>			•			•	8) (I RR R		-		
Black Histic (A3)	:	·					oundo (o	o) (Ertit it,	_			
Hydrogen Sulfide (A4)	_			п.	Thin Da	ark Surface	e (S9) (I RI	R R MIRA 149B)	_			
Stratified Layers (A5)				_				·				
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Other (Explain in Remarks) □ Present? □ Yes □ No □ Unknown □ Hydric Soil Present? □ Yes □ No □ No □ Remarks: □ Description of Habitat Characteristics, Aquatic Diversity or General Comments: □ Wetland Quality: □ High □ Moderate □ Low □ Isolated Wetland? □ Yes □ No □ Unknown				_	-	-		LICITITY, L)				
Thick Dark Surface (A12)			ace (A1	<u> </u>	-	-						
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes ☑ No □ Unknown	<u> </u>		(111		•	•	•					
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) **Restrictive Layer Present? □ Yes ☑ No □ Unknown **Hydric Soil Present? ☑ Yes □ No **Remarks: **Description of Habitat Characteristics, Aquatic Diversity or General Comments: **Wetland Quality: ☑ High □ Moderate □ Low Isolated Wetland? □ Yes ☑ No □ Unknown		, ,		_								
Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? Yes No Unknown Hydric Soil Present? Yes No Pescription of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No				_					_			
Stripped Matrix (S6)	: _				10001	2 00.000.0	(. 0)					
Dark Surface (S7) (LRR R, MLRA 149B)									_			
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?			MIRA	A 149R)					_ ′	, ,		
Restrictive Layer Present?				•	-1					an in resmand)		
Wetland Quality: ☑ High ☐ Moderate ☐ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown	Remarks:							I				
	Description of	Habitat Characte	ristics,	Aquatic Diversit	y or Ge	neral Con	nments:					
General Comments:	Wetland Quali	ty: 🗹 High		Moderate	Low			Isolated Wetland?	Yes 🔽	No Unknown		
Serielal Comments.	Canaral Camm	antai										
	seneral Comm	ients:										





ΝE



WETLAND DETERMINATION FORM - Northce	ntral and Northeast Region
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Tr	ransmission Line
Project/Site: NED Milepost: 79465.3 County:	Berkshire Date: 06/10/2015
Applicant/Owner: Kinder Morgan State: M	1A Sampling Point: HN-N-W002-UPL
Investigators: JM Quad Name: Peru Township:	Hinsdale
Logbook No.: 1 Logbook Pg.: 21 Tract: 20984	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief: □	Concave 🗹 Convex 🔲 None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.470687	Long: -73.084528 Datum: NAD83
Soil Map Unit Name: Berkshire-Marlow association, 15 to 45 percent slopes, steep, extrem	nely stony NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes ✓ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point I	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	
Hydric Soil Present?	ls the Sampled Area within a Wetland? □ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	□ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	□ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches): 0	
Water Table Present? ☐ Yes ☑ No Depth (inches): 0	Wetland Hydrology Present?
Saturation Present? ☐ Yes ☑ No Depth (inches): 0 (includes capillary fringe)	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspe	ections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Tsuga canadensis	95 YES FACU
Total Cover:	95



1 Tovidence, IXI 02004				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Tsuga canadensis Fagus grandifolia		10 1	NO YES	FACU FACU
r agas grandirolia	Total Cover:	11	120	17.00
Hards Charleson				
Herb Stratum Plot Size: 5				
	ı	0/ 0	Daminant	
Scientific Name		% Cover	Dominant YES	Indicator Status FAC
Parathelypteris noveboracensis	Total Cover:	10	TES	FAC
Woody Vine Stratum	Total Cover.	10		
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
Scientific (Name		70 COVEI	Dominant	maicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)	Total % Cover	of:	Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)	FACU Species:		x 4 = <u>424</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>116 (A)</u>	<u>454 (B)</u>	
	l	Prevalence Index	= B/A = <u>3.91</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	∐ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, R	(1 02904								10.00			
SOIL												
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	confirm the ab	sence of indicators.))			
Depth	Matrix		•	dox Fe								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	7	Гexture	Rema	arks		
0-3	7.5YR 2.5/1	100					I	LOAM				
1-0	7.5YR 2.5/1	100					ORGANIC					
3-12	7.5YR 5/4	100					l	LOAM				
12-20	2.5Y 5/3	100					FINE S	ANDY LOAM				
1Typo: C-Cond	centration, D=De	nlotion	PM-Poducod	Matrix	CS-C0V	orod Sand	or Coated Grain	os 21 ocation: DL-	-Poro Lining M-Mat	riv		
	· · · · · · · · · · · · · · · · · · ·	<u> </u>					or Coaled Grain		=Pore Lining, M=Mat			
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unic	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric S	oils³:		
☐ Histosol (A	A1)			Polyvalı /ILRA 1		Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLR	A 149B)		
☐ Histic Epip	pedon (A2)		IV.	/ILIXA I	430)			☐ Coast Prairie	e Redox (A16) (LRR I	(, L, R)		
■ Black Hist	ic (A3)		п т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B	3)	Peat or Peat (S3) (LF	RR K, L, R)		
☐ Hydrogen	Sulfide (A4)			.oamy l	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)			
☐ Stratified I	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LF	RR K, L)		
□ Depleted I	Below Dark Surfa	ace (A1	1) 🗹 🖸	Peplete	d Matrix (I	F3)		☐ Thin Dark S	urface (S9) (LRR K, L)		
☐ Thick Dark	k Surface (A12)		☐ F	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (L	RR K, L, R)		
☐ Sandy Mu	icky Mineral (S1)			Peplete	d Dark Su	ırface (F7)		☐ Piedmont Fl	oodplain Soils (F19) (MLRA 149B)		
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A	, 145, 149B)		
☐ Sandy Re	dox (S5)							□ Red Parent	Material (F21)			
☐ Stripped N	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)		
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	(149B)					Other (Expla	ain in Remarks)			
3Indicators of h	nydrophytic vege	tation a	nd wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or p	problematic.				
Restrictive Lay	er Present?	П	′es 📝 No	пυ	nknown							
,								Hydric Soil Prese	ent? ☑ Yes [] No		
Remarks:												
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: High		Moderate	Low			Isolated Wetla	ınd? ☐ Yes ☐	No 🔲 Unknov	vn		
General Comm	ents:											





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WE	TLAND	DET	ERN	IINATI	ON F	FORM -	Northc	entr	al and	d No	rthe	ast F	Regio	on	
☑ Centerline ☐ Re-R	oute _	Acces	ss Roa	ıd 🗖	Ancill	lary Facility		Trans	mission	Line		Other			
Project/Site: NED			ı	Milepost:	8029	99.1	County:		Berksh	nire			Da	te:	06/11/2015
Applicant/Owner: Kinder Mo	rgan						State:	MA	,	Samp	oling P	oint:	HN-M	-W00	8-PFO
Investigators: CM	(Quad Na	ame: I	Peru			Townshi	p:	Hinsda	ale					
Logbook No.: 3	Logk	ook Pg	.: 68		Tra	ct: 20984									
Landform (hillslope, terrace, e	etc.):	Flat		<u>'</u>		Local F	Relief:	Co	oncave		Conve	x 🔽	7 Nor	ne S	Slope%.:
Subregion (LRR): Middl	e Atlantic			Lat	: 42.4	171103		Lo	ng: -	-73.08	1460				Datum: NAD83
Soil Map Unit Name: Pill	sbury loam	, 0 to 8	percen	nt slopes,	extrem	ely stony					NW	'I Class	sificatio	n:	Not mapped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	or this tim	ne of ye	ear?:	✓ Yes		No (If no	o, expl	ain in F	Remark	(s.)		
Are Vegetation	or Hy	drology	, \Box	significa	intly dis	sturbed?	☑ No	Are	e "Norma	al" Circ	cumsta	nces p	resent?	?	✓ Yes 🗖
Are Vegetation Soil		/drology		naturally	, proble	ematic?	_ No								
_					•										
SUMMARY OF FINDIN	NGS - At	tach s	site n	nap sh	owing	g sampli	ng poin	t loc	ations	, tra	nsect	s, im	porta	ant f	eatures, etc.
Hydrophytic Vegetation Prese	ent?	\checkmark	Yes	☐ N	0			lo ti	ha Can	anlad	Aron				
Hydric Soil Present?		$\overline{\checkmark}$	Yes	☐ N	0			with	he San hin a W	npied Vetlar	Area id?	$\overline{\checkmark}$	Yes		No
Wetland Hydrology Present?		$\overline{\checkmark}$	Yes	□ N	0										
Field Wetland Classification:	PFO														
Remarks:															
HYDROLOGY															
Wetland Hydrology Indicato	ors:									<u>S</u>	Second	ary Ind	licators	(2 or	more required)
Primary Indicators (minimum	of one req	uired; cl	heck al	ll that app	oly)						Sui	rface S	oil Cra	cks (I	B6)
☐ Surface Water (A1)				☐ Wate	r-Stain	ed Leaves	(B9)				_ Dra	ainage	Patterr	ns (B	10)
✓ High Water Table (A2)				☐ Aqua	tic Fau	na (B13)] Mo	ss Trin	n Lines	(B16	5)
☑ Saturation (A3)				Marl	Deposi	ts (B15)					☐ Dry	-Seas	on Wat	er Ta	ible (C2)
□ Water Marks (B1)				Hydro	ogen Si	ulfide Odor	(C1)				Cra	ayfish E	Burrows	s (C8)
☐ Sediment Deposits (B2)				Oxidi	zed Rh	izospheres	along Livi	ng Roo	ots (C3)		Sat	turation	n Visibl	e on a	Aerial imagery (C9
☐ Drift Deposits (B3)				Prese	ence of	Reduced I	ron (C4)				Stu	inted o	r Stres	sed F	Plants (D1)
☐ Algal Mat or Crust (B4)				Rece	nt Iron	Reduction	in Tilled So	oils (Ce	6)] Ge	omorp	hic Pos	ition	(D2)
☐ Iron Deposits (B5)				Thin	Muck S	Surface (C7)] Sha	allow A	quitarc	i (D3))
☐ Inundation Visible on A	erial Imagei	y (B7)		Othe	r (Expla	ain in Rema	ırks)			5	⊿ Mic	rotopo	graphi	c Reli	ief (D4)
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)] FA	C-Neu	tral Tes	st (D5	i)
Field Observations:															
Surface Water Present?	☐ Yes	✓ N	lo [Depth (ind	ches):										
Water Table Present?	✓ Yes	□ N	lo [Depth (ind	ches):	6			Wetlan	d Hyd	lrology	Prese			Vac 🗖 Na
Saturation Present? (includes capillary fringe)	✓ Yes	<u> </u>	No [Depth (ind	ches):	2								V	Yes □ No
Remarks (Describe Recorded	Data (stre	am gage	e, mon	itoring we	ell, aeria	al photos, p	revious ins	spectio	ons), if a	vailabl	le):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Co	over		Dom	inant		Indicator Statu
Acer rubrum Fraxinus americana Acer saccharum									60 25 10	5		YE YE N	S		FAC FACU FACU
, isor sucondium						-	Total Cove	r:	95		I	141	~		17.00



Providence, RI 02904				7460///
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum		80	YES	FAC
Fagus grandifolia Betula alleghaniensis		10 10	NO NO	FACU FAC
-	Total Cover:	100	ı	
Herb Stratum				
Plot Size: 5				
		0/ 0	Damin and	la diamena Otatoa
Scientific Name		% Cover	Dominant	Indicator Status
Osmunda claytoniana Onoclea sensibilis		5 70	NO YES	FAC FACW
Tiarella cordifolia Dryopteris intermedia		10 5	NO NO	FACU FAC
-,,-,	Total Cover:	90	1	1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2 c.milan	
	Total Cover:		I	I
Dominanas Tast Warkshoot		dov Morkoboot		
Dominance Test Worksheet:		dex Worksheet:	Maritain Ira hara	
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover		Multiply by:	
Total Number of Dominant	OBL Species:	<u>0</u>	x 1 = 0 x 2 = 140	
Species Across All Strata: 4 (B)	FACW Species FAC Species:			
Percent of Dominant Species		<u>160</u>	x 3 = 480 x 4 = 220	
That Are OBL, FACW, or FAC: 75 (A/B)	FACU Species UPL Species:	: <u>55</u> <u>0</u>	$x = \frac{220}{}$ $x = \frac{0}{}$	
	Column Totals:		840 (B)	
		Prevalence Index	= B/A = <u>2.95</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	egetation Prese	nt? ☑ Yes I	□ No
data in Nomano di dii a doparato dilodi,				
5 5 11 2 11 1 2 12 12 12 12 12 12 12 12 12				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
process, among actualists of processing to				
Remarks:				



T TOVIGETICE, I	(1 02004								100000000000000000000000000000000000000
SOIL									
•		the d				dicator o	r confirm the abse	nce of indicators.)	1
Depth (inches)	Matrix			dox Fe			Tex	ture	Remarks
(11101103)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	107		remand
0-4	10YR 2/1	100					ORG	ANIC	
4-10	2.5Y 4/1	80	5Y 5/1	20	D	М	FINE SAN	IDY LOAM	
10-16	2.5Y 5/2	30	2.5Y 6/1	70	D	М	LOAM	Y SAND	
¹Tvpe: C=Cond	L centration. D=De	epletion	I n. RM=Reduced	Matrix.	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	I =Pore Lining, M=Matrix
		<u> </u>	o all LRR's, unle						roblematic Hydric Soils³:
Histosol (/							8) (LRR R,		(A10) (LRR K, L, MLRA 149B)
_ `	pedon (A2)			1LRA 1		Surface (S	o) (LKK K,		e Redox (A16) (LRR K, L, R)
				hin Do	rk Surface	, (SO) (LDI	D D MI DA 140D)	_	
☐ Black Hist			_			. , .	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M)
	Sulfide (A4)			•	•	` '	(LRR K, L)	_	
	Layers (A5)	200 (44		-	Gleyed Ma				elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A	_	•	d Matrix (I	•		_	urface (S9) (LRR K, L)
_	k Surface (A12)				Dark Surfa	. ,		_	nese Masses (F12) (LRR K, L, R)
_	icky Mineral (S1)			•		ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		□ F	kedox I	Depressio	ns (F8)		_	ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re								_	Material (F21)
	Matrix (S6)								w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
³ Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown				
								Hydric Soil Prese	ent? ☑ Yes 🗆 No
Remarks:							'		
Description of	Habitat Characte	ristics	Aquatic Diversity	or Ge	neral Com	ments:			
2 cccinption of		,	7 iqualio 2110.0ily	0. 00					
Wetland Qualit	v· 🗖 High	IJ I	Moderate	l ow			Isolated Wetland	? □ Yes □7	No Unknown
Welland Qualit	y. 🔲 iligii	, IA	vioderate	LOW			isolated Wetland	103 🚱	140 Gillalowii
General Comm	ents:								





NW



WETLAND DETERMINATION FORM - Northo	entral	and No	rtheast Reg	gion		
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmis	ssion Line	☐ Other			
Project/Site: NED Milepost: 80602.3 County:	: Ве	erkshire		Date: 06/	11/2015	
Applicant/Owner: Kinder Morgan State:	MA	Sampl	ing Point: HN	-M-W008-P	SS	
Investigators: CM Quad Name: Peru Townsh	nip: Hi	insdale				
Logbook No.: 3 Logbook Pg.: 69 Tract: 20984						
Landform (hillslope, terrace, etc.): Flat Local Relief:	✓ Conc	ave 🔲 0	Convex 1	None Slop	e%.: 1	
Subregion (LRR): Middle Atlantic Lat: 42.471407	Long:	: -73.080	412	Datu	m: NAD83	
Soil Map Unit Name: Pillsbury loam, 0 to 8 percent slopes, extremely stony			NWI Classifica	ation:	Not mapped	
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	□ No	(If no, expla	in in Remarks.)			
Are Vegetation $\ \ \square$ Soil $\ \ \square$ or Hydrology $\ \ \square$ significantly disturbed? $\ \ \square$ No	Are "N	Normal" Circ	umstances prese	ent? 🗹	Yes No	
Are Vegetation $\ \ \square$ Soil $\ \ \square$ or Hydrology $\ \ \square$ naturally problematic? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$						
SUMMARY OF FINDINGS - Attach site map showing sampling poin	nt location	ions, tran	sects. impo	rtant feat	tures, etc.	
Hydrophytic Vegetation Present?	it ioodti	ono, tran	ocoto, iiipo	riani roa		
Hydric Soil Present? ✓ Yes ☐ No		Sampled		es □ No	0	
Wetland Hydrology Present? ✓ Yes ☐ No	within	a Wetlan	d? 🖭 '	,3 <u> </u>	3	
Field Wetland Classification: PSS						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:		S	econdary Indicat	ors (2 or mo	re required)	
Primary Indicators (minimum of one required; check all that apply)			Surface Soil (Cracks (B6)		
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)			Drainage Pati	terns (B10)		
✓ High Water Table (A2)			Moss Trim Lir	nes (B16)		
☐ Saturation (A3) ☐ Marl Deposits (B15)			Dry-Season V	Vater Table	(C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			Crayfish Burro	Crayfish Burrows (C8)		
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livi	ing Roots	(C3)	Saturation Vis	sible on Aeri	al imagery (C9)	
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	on (C4) Stunted or Stressed Plants (D1)					
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	oils (C6)		Geomorphic F	Geomorphic Position (D2)		
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)			Shallow Aquit	tard (D3)		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)					
☐ Sparsely Vegetated Concave Surface (B8)		V	FAC-Neutral	Test (D5)		
Field Observations:						
Surface Water Present? ☐ Yes ☑ No Depth (inches):	147		D			
Water Table Present? ✓ Yes ☐ No Depth (inches): 10	VVE	etiana Hyar	ology Present?		s 🗆 No	
Saturation Present? ☑ Yes ☐ No Depth (inches): 8 (includes capillary fringe)				_	_	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections)), if available	e):			
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominar	nt I	ndicator Status	
		5	YES		FACU	
Total Cove	er:	5	1	ı		



Trovidence, IXI 02004				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Lindera benzoin Rubus allegheniensis Spirea latifolia	Total Cover:	10 10 20 10	YES YES YES YES	FAC FACW FACU FACW
	Total Cover:	50		
Herb Stratum				
Plot Size: 5	,		1	1
Scientific Name		% Cover	Dominant	Indicator Status
Solidago rugosa Carex crinita Iris versicolor		20 10 5	YES YES YES	FAC OBL OBL
	Total Cover:	35		
Woody Vine Stratum				
Plot Size: 30	ı		1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cavari			
	Total Cover:			
Dominance Test Worksheet:		dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)	Total % Cover		Multiply by:	
Total Number of Deminent	OBL Species:	<u>15</u>	x 1 = 15	
Total Number of Dominant Species Across All Strata: 8 (B)	FACW Species		x 2 = 40	
Percent of Dominant Species	FACUS pecies:	<u>30</u>	x 3 = 90	
That Are OBL, FACW, or FAC: 75 (A/B)	FACU Species: UPL Species:	: <u>25</u> <u>0</u>	x 4 = 100 x 5 = 0	
	Column Totals:		245 (B)	
		Prevalence Index	= B/A = <u>2.72</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				-
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	egetation Preser	nt? ☐ Yes [」 No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, F	RI 02904											~~.
SOIL												
Profile Descrip	otion: (Describe	the de	epth need	ed to	docum	ent the ir	ndicator o	r confirm tl	he absen	ce of indicators.)		
Depth	Matrix				dox Fe							
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc²		Text	ure	Remarks	
0-4	10YR 2/1	100							ORGA	ANIC		
4-8	10YR 4/1	40	10YR :	5/2	60	D	М	FI	NE SANI	DY LOAM		
8-12	10YR 6/1	60	10YR :		10 30	C	M M	LOAMY SAND				
12-16	5YR 6/1	70	10YR :	3/1	30	С	М		SAN	ND		
¹Type: C=Cond	centration, D=De	epletion	L n.RM=Re∈	duced	Matrix.	CS=Cov	rered Sand	l or Coated	Grains.	² Location: PL=	Pore Lining, M=Matrix	
	dicators: (Appli											
	`	cable t	O all LKK	•			,				oblematic Hydric Soils ³ :	
Histosol (/	A1)				Polyvalı ИLRA 1		Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR K, L, MLRA 149	∌B)
☐ Histic Epip	pedon (A2)					.02)				☐ Coast Prairie	Redox (A16) (LRR K, L, F	₹)
☐ Black Hist	tic (A3)				Thin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)	5 cm Mucky	Peat or Peat (S3) (LRR K,	L, R)
☐ Hydrogen	Sulfide (A4)				_oamy l	Mucky Mi	neral (F1)	(LRR K, L)		□ Dark Surface	e (S7) (LRR K, L, M)	
☐ Stratified I	Layers (A5)				oamy (Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surface (S8) (LRR K,	L)
☐ Depleted	Below Dark Surfa	ace (A1	11)	7	Deplete	d Matrix (F3)			☐ Thin Dark Su	ırface (S9) (LRR K, L)	
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R)									, L, R)			
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)										A 149B)		
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)										·		
☐ Sandy Re				_		.,	- (-)				Material (F21)	02)
Stripped Matrix (S6)												
Dark Surf	ace (S7) (LRR R	, MLRA	\ 149B)							☐ Other (Expla	in in Remarks)	
³ Indicators of h	nydrophytic vege	tation a	and wetland	d hydr	ology n	nust be pr	esent, unle	ess disturbe	d or prob	lematic.		
Restrictive Lay	er Present?	 ✓ `	Yes 🔲	No	□ U	nknown						
ROCK										Hydric Soil Prese	nt? ☑ Yes 🗆 N	lo
16												
Remarks:												
, remaine.												
Description of	Habitat Characte	ristics,	Aquatic Di	iversity	y or Ge	neral Con	nments:					
Wetland Qualit	ty: 🔽 High		Moderate		Low			Isolated \	Wetland?	☐ Yes 🗹	No 🔲 Unknown	
												
General Comm	ents:											





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WE	TLAND	DET	ERM	IINATI	ON FORM -	· Northce	entral a	nd No	ortheast	Region		
☑ Centerline ☐ Re-R	oute _	Acces	ss Roa	d 🗖	Ancillary Facility	у 🗖 -	Transmissi	on Line	☐ Oth	er		
Project/Site: NED			N	Milepost:	80399.8	County:	Ber	kshire		Date:	06/11/201	15
Applicant/Owner: Kinder Mo	rgan					State:	MA	Sam	pling Point	HN-M-W	008-UPL	
Investigators: CM	(Quad Na	ame: F	Peru		Township	o: Hin:	sdale				
Logbook No.: 3	Logb	ook Pg	.: 70		Tract: 20984							
Landform (hillslope, terrace, e	etc.):	Slope -	- mid		Local	Relief:	Concav	re √	Convex	None	Slope%.:	3
Subregion (LRR): Middl	e Atlantic			Lat	t: 42.471254		Long:	-73.08	81135		Datum: NA	D83
Soil Map Unit Name: Pill	sbury loam	, 0 to 8	percen	t slopes,	extremely stony				NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	or this tim	ne of year?:	✓ Yes	☐ No (I	f no, exp	olain in Rema	arks.)		
Are Vegetation	or Hy	/drology	,	significa	antly disturbed?	☑ No	Are "No	rmal" Cir	rcumstances	present?	✓ Yes	☐ No
Are Vegetation	or Hy	/drology	, <u> </u>	naturally	y problematic?	✓ No						
SUMMARY OF FINDIN	NGS - At	tach s	site m	nap sho	owing sampl	ing point	locatio	ns, tra	nsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	✓ No	0		1- 41 0					
Hydric Soil Present?			Yes	☑ No	0		Is the S within a	ampied Wetla	d Area Ind? □	Yes ☑	∐ No	
Wetland Hydrology Present?			Yes	☑ No	0							
Field Wetland Classification:	UPL	AND PL	ОТ									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	ors:								Secondary I	ndicators (2	or more requ	uired)
Primary Indicators (minimum	of one req	uired; cl	heck al	I that app	oly)				☐ Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)] Wate	r-Stained Leaves	(B9)			□ Drainag	e Patterns (B10)	
☐ High Water Table (A2)] Aqua	tic Fauna (B13)				☐ Moss Ti	rim Lines (B	16)	
☐ Saturation (A3)				Marl I	Deposits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
☐ Water Marks (B1)				Hydro	ogen Sulfide Odo	r (C1)	•					
☐ Sediment Deposits (B2)				Oxidi	zed Rhizosphere	s along Livin	ong Living Roots (C3) Saturation Visible on Aerial imagery (C9)					
☐ Drift Deposits (B3)				Prese	ence of Reduced	Iron (C4)	<u> </u>					
☐ Algal Mat or Crust (B4)				Rece	ent Iron Reduction	in Tilled Soi	_					
☐ Iron Deposits (B5)				_ Thin I	Muck Surface (C7	7)	Shallow Aquitard (D3)					
☐ Inundation Visible on A	_			Other	r (Explain in Rema	arks)	·					
Sparsely Vegetated Cor	ncave Surfa	ace (B8)							☐ FAC-Ne	eutral Test (I	J5)	
Field Observations:												
Surface Water Present?	☐ Yes	√ 1	No [Depth (inc	ches):							
Water Table Present?	☐ Yes	☑ 1	No E	Depth (inc	ches):		Wet	land Hy	drology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	Yes	√ 1	No [Depth (inc	ches):					Ц	ies 🗹	NO
Remarks (Describe Recorded	Data (stre	am gage	e, moni	itoring we	ell, aerial photos,	previous ins	pections),	if availab	ole):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							%	Cover	Do	minant	Indicate	or Status
Acer saccharum Fraxinus americana								60 20		YES YES		ACU ACU
						Total Cover	:	80				



T TOVIDENCE, TRI 02304							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Rubus allegheniensis		30	YES	FACU			
Acer pensylvanicum Fagus grandifolia		10 15	NO YES	FACU FACU			
Betula populifolia		15	YES	FAC			
	Total Cover:	70					
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
Solidago rugosa		5	YES	FAC			
Onoclea sensibilis		5	YES	FACW			
	Total Cover:	10					
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:		ı	ļ			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:					
Number of Dominant Species	Total % Cover		Multiply by:				
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant	FACW Species		x = 0 x = 0				
Species Across All Strata: 7 (B)	FAC Species:	<u>u</u> 20	$x = \frac{10}{10}$				
Percent of Dominant Species	FACU Species:		$x 4 = \frac{540}{}$				
That Are OBL, FACW, or FAC: 43 (A/B)	UPL Species:						
	_	<u>0</u>	-				
	Column Totals:	, ,	<u>610 (B)</u>				
		Prevalence Index =	= B/A = <u>3.81</u>				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
2 - Dominance Test is > 50%							
3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	Hydrophytic Vegetation Present? ☐ Yes ☑ No					
data in Remarks or on a separate sheet)							
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹ Indicators of hydric soil and wetland hydrology must be							
present, unless disturbed or problematic.							
Remarks:	,						



	1 02304										1111	
SOIL												
Profile Descrip	otion: (Describe	the d	epth needed to o	locum	ent the ir	ndicator o	r confirm t	he absen	ce of indicators.)			
Depth (inches)	Matrix		Red	dox Fe	atures			Text	uro		Rem	arke
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		1680	uie		Nem	aiks
0-7	10YR 3/3	100						SANDY	LOAM			
7-10	10YR 4/6	50	7.5YR 4/6	50	С	М		COARSE	SAND	-	DISTURE	BED FILL
10-18	10YR 5/4	100						LOAMY	SAND			
¹Type: C=Con	entration D-De	nletion	l n, RM=Reduced l	Matrix		ered Sand	or Coated	Graine	² Location: PL=	-Pore Lining		triv
		•	o all LRR's, unle				or Coalca	Oranio.	Indicators for Pr			
		cable t				•					•	
Histosol (/	•			olyvalı ILRA 1		Surface (S	88) (LRR R,		2 cm Muck (-
	pedon (A2)								Coast Prairie			•
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)												
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (LRR K, L) ☐ Dark Surface (S7) (LRR K, L, M)												
_	Layers (A5)			-	Gleyed Ma				☐ Polyvalue Be		. , .	•
	Below Dark Surfa	ace (A1	l1) 🔲 D	eplete	d Matrix (F3)			☐ Thin Dark Su	ırface (S9)	(LRR K, I	∟)
☐ Thick Dar	k Surface (A12)		□ R	edox l	Dark Surfa	ace (F6)			☐ Iron-Mangan	ese Masse	s (F12) (l	_RR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain So	ils (F19)	(MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox l	Depressio	ns (F8)				c (TA6) (ML	-RA 144 <i>A</i>	A, 145, 149B)
☐ Sandy Redox (S5) ☐ Red Parent Material (F21)												
☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12)										2)		
□ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks)												
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	d or prob	lematic.			
Restrictive Lay	er Present?		Yes √ No	Пυ	Inknown							
		_		_ `					Hydric Soil Prese	nt?	Yes [☑ No
									,	Ц	163	<u>. 140</u>
Remarks:												
Nemains.												
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: High		Moderate	Low			Isolated \	Netland?	☐ Yes ☐	No 🔲	Unkno	wn
General Comm	ents:											
Conoral Comm	iorito.											







WETLAND DETERMINATION FORM - Northo	entral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 82282.2 County:	Berkshire Date: 06/11/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: HN-M-W009-PFO
Investigators: CM Quad Name: Peru Townsh	ip: Hinsdale
Logbook No.: 3 Logbook Pg.: 74 Tract: 20984	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	✓ Concave ☐ Convex ☐ None Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.472976	Long: -73.074554 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal Normal N
Are Vegetation □ Soil □ or Hydrology □ naturally problematic? ☑ No	· – –
Nie vegetation oon orrhydrology naturally problematic: no	
SUMMARY OF FINDINGS - Attach site map showing sampling poin	t locations, transects, important features, etc.
Hydrophytic Vegetation Present?	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area within a Wetland? ✓ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No	within a vectaria:
Field Wetland Classification: PFO	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
Saturation (A3) Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres along Liv	ing Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	oils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
	1
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☑ Yes ☐ No Depth (inches): 10	Wetland Hydrology Present? ☑ Yes □ No
Saturation Present? ☑ Yes ☐ No Depth (inches): 4 (includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Fraxinus pennsylvanica	20 YES FACW
Total Cove	er: 20



	% Cover	Dominant	Indicator Status
	10	NO	FACU
	10 30	NO YES	FAC FAC
	15	YES	FACU
Total Cover:	65		
1	% Cover	Dominant	Indicator Status
			OBL
	10	NO	FACW
	30 15		FAC FACW
	25	YES	FACU
Total Cover:	90		
	% Cover	Dominant	Indicator Status
Total Cover:		I	I
Provalence Inc	day Warkshoot		
		Multiply by	
•			
•			
•		· 	
-	: <u>50</u>	x 4 = <u>200</u>	
UPL Species:	<u>0</u>	$x 5 = \underline{0}$	
Column Totals:	<u>175 (A)</u>	<u>510 (B)</u>	
I	Prevalence Index	= B/A = <u>2.91</u>	
Hydronbytic \	logototion Bross	n+2	7 No.
nydropnytic v	regetation Fresei	itr <u>v</u> fes L	_ NO
	Total Cover: Prevalence Inc Total % Cover OBL Species: FACW Species: FACU Species: UPL Species: Column Totals:	% Cover	% Cover Dominant 10

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



Providence, R	1 02904									
SOIL										
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm th	e absen	ice of indicators.)	
Depth	Matrix		Re	dox Fe	atures				•	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure	Remarks
0-12	2.5Y4/1	80	10YR6/1 10YR5/8	12 8	D C	M M	FII	NE SAND	DY LOAM	
¹Type: C=Cond	entration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	rered Sand	l or Coated	Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	icators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A						•	88) (LRR R,			A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	,			ILRA 1			(=: :: : : : ;		_ `	e Redox (A16) (LRR K, L, R)
☐ Black Histi			Пт	hin Da	rk Surfac	e (S9) (I R	R R, MLRA	149R)	_	Peat or Peat (S3) (LRR K, L, R)
			_					02,		e (S7) (LRR K, L, M)
										elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	=		d Matrix (_ ′	urface (S9) (LRR K, L)
_	Surface (A12)	(•	Dark Surfa	•			_	ese Masses (F12) (LRR K, L, R)
_	cky Mineral (S1)	,				urface (F7)			_	podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	•	Depressio				_	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re			ш,	COOX I	Эсргозою	/13 (1 0)				Material (F21)
☐ Stripped N	, ,								_	v Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	\ 149B)						_	in in Remarks)
_			and wetland hydro	ology p	auat ha nr	occut unle	ana diaturba	d or prob	_	iii iii rediiidiie)
					•	eserit, uriic	233 disturbe	a or prob	merriane.	
Restrictive Lay	er Present?	☑ \	Yes ☐ No	□ U	nknown					
ROCK									Hydric Soil Prese	nt? ☑ Yes ☐ No
12										
Remarks:										
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:				
Wetland Quality	y: High	V I	Moderate	Low			Isolated V	Vetland?	✓ Yes	No Unknown
Canaral Camm	anta.									
General Comm	ents:									





W



WETLAND DETERMINATION FORM - No	orthcer	ntral and No	ortheast Region			
	☐ Tra	ansmission Line	Other			
Project/Site: NED Milepost: 82358.3	County:	Berkshire	Date:	06/11/2015		
Applicant/Owner: Kinder Morgan S	State: M	IA Samp	oling Point: HN-M-W0	09-UPL		
Investigators: CM Quad Name: Peru T	Γownship:	Hinsdale				
Logbook No.: 3 Logbook Pg.: 75 Tract: 20984						
Landform (hillslope, terrace, etc.): Slope - mid Local Relic	ef: 🗹	Concave	Convex None	Slope%.: 3		
Subregion (LRR): Middle Atlantic Lat: 42.473015		Long: -73.07	4274	Datum: NAD83		
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony			NWI Classification:	Not mapped		
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes	No (If no, exp	lain in Remarks.)			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑		Are "Normal" Circ	cumstances present?	✓ Yes □ No		
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	_					
SUMMARY OF FINDINGS - Attach site map showing sampling	noint l	ocations tra	nsacts important	features etc		
Hydrophytic Vegetation Present?	, point it	ooutiono, tru	nocoto, important			
Hydric Soil Present? ☐ Yes ☑ No	l:	s the Sampled	I Area □ Yes ☑	Í No		
Wetland Hydrology Present? ☐ Yes ☑ No	V	within a Wetlar	nd? ☐ res 🗹	NO		
Field Wetland Classification: UPLAND PLOT						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:		<u> </u>	Secondary Indicators (2	or more required)		
Primary Indicators (minimum of one required; check all that apply)		[☐ Surface Soil Cracks	(B6)		
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9	9)		☐ Drainage Patterns (310)		
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		[Moss Trim Lines (B1	6)		
☐ Saturation (A3) ☐ Marl Deposits (B15)			☐ Dry-Season Water T	able (C2)		
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C	1)		Crayfish Burrows (C	8)		
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres alc	ong Living	Roots (C3)	Saturation Visible or	Aerial imagery (C9)		
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	(C4) Stunted or Stressed Plants (D1)					
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in T	Filled Soils	_				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3)				
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks	s)	☐ Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)		[FAC-Neutral Test (D	(5)		
Field Observations:						
Surface Water Present? ☐ Yes ☑ No Depth (inches):						
Water Table Present? ☐ Yes ☑ No Depth (inches):		Wetland Hyd	drology Present?	Vaa 🗹 Na		
Saturation Present? Yes V No Depth (inches): (includes capillary fringe)			Ц	Yes ☑ No		
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, prev	ious inspe	ections), if availab	le):			
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
Acer saccharum		80	YES	FACU		
Fagus grandifolia	al Cover:	100	YES	FACU		
I Ou	ai Cuvei.	100				



1 TOVIGETICE, THE 02004				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer saccharum Prunus serotina Fagus grandifolia		10 10 5	YES YES YES	FACU FACU FACU
ragus granunona	Total Cover:	25	TES	FACO
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Dennstaedtia punctilobula		30	YES	UPL
	Total Cover:	30	1	I
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	ıf:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species:	<u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 6 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>125</u>	x 4 = <u>500</u>	
That Ale ODE, I AGW, OF I AG.	UPL Species:	<u>30</u>	x 5 = <u>150</u>	
	Column Totals:	<u>155 (A)</u>	650 (B)	
	F	revalence Index	= B/A = <u>4.19</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
☐ 2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
☐ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presei	nt? ☐ Yes ☐] No
data in Remarks or on a separate sheet)	,	•		
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



OC!									110000000000000000000000000000000000000
SOIL									
Profile Descrip		the de				ndicator o	r confirm the abs	ence of indicators.)	
Depth (inches)	Matrix				atures		Te	exture	Remarks
(11101103)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			remand
0-3	10YR3/3	100					FINE SA	NDY LOAM	
3-7	5YR4/6	100					FINE SA	NDY LOAM	
7-16	7.5YR5/4	100					FINE SA	NDY LOAM	
¹Tvpe: C=Cond	L centration. D=De	epletion	l n. RM=Reduced	Matrix.	CS=Cov	ered Sand	or Coated Grains	Location: PL=	L =Pore Lining, M=Matrix
		<u> </u>	o all LRR's, unle						roblematic Hydric Soils³:
		ouble t					o) /I DD D		•
Histosol (/	•		□ P M	8) (LRR R,		(A10) (LRR K, L, MLRA 149B)			
	pedon (A2)			D D MI DA 440D)	_	e Redox (A16) (LRR K, L, R)			
☐ Black Hist			_			. , .	R R, MLRA 149B)	= '	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			-	-		(LRR K, L)	_	e (S7) (LRR K, L, M)
	Layers (A5)	/* :	_	-	Gleyed Ma			_ ′	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	•	d Matrix (I	•		_	urface (S9) (LRR K, L)
_	k Surface (A12)		_		Dark Surfa	` '		=	nese Masses (F12) (LRR K, L, R)
_	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B									c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Redox (S5) ☐ Red Parent Material (F21)									Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	logy n	nust be pr	esent, unle	ess disturbed or pr	oblematic.	
Restrictive Lay	er Present?		Yes ☑ No	<u> </u>	Inknown				
								Hydric Soil Prese	ent? ☐ Yes ☑ No
Remarks:									
D			A D:						
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
			<u> </u>						
Wetland Qualit	y: High		Moderate	_ow			Isolated Wetlan	d?	No Unknown
General Comm	ents:								





NE



WETLAND DETERMINATION FORM - Northce	entral and No	ortheast Regi	on						
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ T	Fransmission Line	☐ Other							
Project/Site: NED Milepost: 82513.3 County:	Berkshire	Da	ate: 06/11/2015						
Applicant/Owner: Kinder Morgan State:	MA Sam	pling Point: HN-N	I-W011-PFO						
Investigators: CM Quad Name: Peru Township	: Hinsdale								
Logbook No.: 3 Logbook Pg.: 82 Tract: 20984									
Landform (hillslope, terrace, etc.): Slope - toe Local Relief: ☑	Concave	Convex No	ne Slope%.: 2						
Subregion (LRR): Middle Atlantic Lat: 42.473253	Long: -73.07	73775	Datum: NAD83						
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony		NWI Classification	on: Not mapped						
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, exp	lain in Remarks.)							
Are Vegetation Soil or Hydrology significantly disturbed? No	Are "Normal" Cir	cumstances present	? Yes No						
Are Vegetation 🗹 Soil 🔲 or Hydrology 🔲 naturally problematic? 🔲 No									
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present? ✓ Yes ☐ No	1000110110, 110	mocoto, import							
Hydric Soil Present? ✓ Yes ☐ No	Is the Sample		□ No						
Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetla	nd? 🖭 100							
Field Wetland Classification: PFO									
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:		Secondary Indicators	s (2 or more required)						
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cra	acks (B6)						
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	l	✓ Drainage Patter	ns (B10)						
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Line	s (B16)						
✓ Saturation (A3)		□ Dry-Season Wa	ter Table (C2)						
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish Burrow	rs (C8)						
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	g Roots (C3)	Saturation Visib	le on Aerial imagery (C9)						
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)								
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soil	ls (C6)	✓ Geomorphic Po	sition (D2)						
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		☐ Shallow Aquitar	d (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)								
☐ Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Te	st (D5)						
Field Observations									
Field Observations: Surface Water Present? □ Yes ☑ No Depth (inches):									
	Wetlend H.	dralami Dragant?							
Water Table Present?	wettand ny	drology Present?	✓ Yes □ No						
Saturation Present?									
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	pections), if availab	ole):							
VEGETATION									
Tree Stratum									
Plot Size: 30									
Scientific Name	% Cover	Dominant	Indicator Status						
Betula alleghaniensis	45	YES	FAC						
Acer saccharum	30	YES	FACU						
Total Cover:	75								



1 Tovidence, IXI 02004				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer saccharum		10 10	YES YES	FACU FACU
Fagus grandifolia	Total Cover:	20	163	FACU
	10101 00101.			
Herb Stratum				
Plot Size: 5	1		i.	1
Scientific Name		% Cover	Dominant	Indicator Status
Onoclea sensibilis Thlyopteris novaboracensis		15 20	YES YES	FACW FAC
Dryopteris intermedia		5	NO	FAC
Impatiens capensis Veratrum viride		5 15	NO YES	FACW FACW
	Total Cover:	60	ı	1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	1
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species		x 2 = 70	
Species Across All Strata: 7 (B)	FAC Species:	<u>70</u>	x 3 = 210	
Percent of Dominant Species	FACU Species:		x 4 = 200	
That Are OBL, FACW, or FAC: 57 (A/B)	UPL Species:	<u>o</u>	x 5 = <u>0</u>	
	Column Totals:	155 (A)	480 (B)	
	ſ	Prevalence Index	= B/A = 3.10	
Hydrophytic Vegetation Indicators:	•	Totalonio maox	<u> </u>	
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0	11 1 2 2 2 2 3		=	-
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydropnytic v	egetation Preser	nt? ☑ Yes [」 No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
Nemaro.				



SOIL											
Profile Descrip	otion: (Describe	the d	epth needed to d	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)			
Depth	Matrix		Red	dox Fe	atures		_				
(inches) Color (moist)			Color (moist)	%	Type ¹	Loc²	Text	ure	Remarks		
0-6	2.5Y 3/1	100					FINE SANI	DY LOAM			
6-14	2.5Y 4/1	40	2.5Y 6/1	60	D	М	LOAMY	SAND			
		•	<u> </u>				or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix		
Hydric Soil Inc	licators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:		
Histosol (A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)		
_	pedon (A2)				,				Redox (A16) (LRR K, L, R)		
☐ Black Hist			Τ	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)		
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M)											
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L)									elow Surface (S8) (LRR K, L)		
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L)									urface (S9) (LRR K, L)		
☐ Thick Dar	k Surface (A12)			ledox [Dark Surfa	ace (F6)		✓ Iron-Mangan	ese Masses (F12) (LRR K, L, R)		
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	urface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)		
☐ Sandy Gl	eyed Matrix (S4)		□ R	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)		
☐ Sandy Re	edox (S5)							☐ Red Parent I	Material (F21)		
☐ Stripped I	Matrix (S6)							□ Very Shallow	Dark Surface (TF12)		
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)		
3Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.			
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No		
Description of Wetland Quali			Aquatic Diversity Moderate	or Ge	neral Com	nments:	Isolated Wetland?	' □ Yes ☑	No ☐ Unknown		
General Comm											





Ε



WE	TLAND) DET	ERN	IINAT	ION I	FORM -	Northc	ent	ral an	d No	ortheas	t Regior	1	
☑ Centerline ☐ Re-R	oute] Acces	ss Roa	nd [] Ancil	lary Facility		Trans	smission	Line	Ot	her		
Project/Site: NED				Milepost	: 825	72.9	County:		Berksh	nire		Date	: 06/11/201	15
Applicant/Owner: Kinder Mo	rgan						State:	MA		Samp	oling Poin	t: HN-M-W	/010-PSS	
Investigators: CM	(Quad Na	ame:	Peru			Townshi	p:	Hinsda	ale				
Logbook No.: 3	Logi	oook Pg	.: 78		Tra	ct: 20984	•							
Landform (hillslope, terrace,	etc.):	Slope	- mid	'		Local R	telief:	7 C	oncave		Convex	☐ None	Slope%.:	2
Subregion (LRR): Middl	e Atlantic			La	at: 42.4	472969		L	ong:	-73.07	3417		Datum: NA	D83
Soil Map Unit Name: Pe	ru-Marlow	associat	ion, ro	lling, ext	remely	stony					NWI C	lassification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	ne site ty	pical f	or this ti	ne of ye	ear?:	Z Yes		No (If no	o, exp	lain in Rem	narks.)		
Are Vegetation Soil	or H	ydrology	/ □	signific	antly dis	sturbed?	☐ No	Ar	e "Norma	al" Cir	cumstance	s present?	✓ Yes	□ No
Are Vegetation 🗹 Soil	or H	ydrology	∕ □	natural	ly probl	ematic?	□ No							
SUMMARY OF FINDI	NGS - At	tach	site n	nap sh	owing	g samplir	ng poin	t loc	ations	s, tra	nsects,	importan	t features	, etc.
Hydrophytic Vegetation Pres	ent?	V	Yes	□ 1	10									
Hydric Soil Present?		\checkmark	Yes	□ 1	10				the San thin a W			☑ Yes [□ No	
Wetland Hydrology Present?		V	Yes	1	10									
Field Wetland Classification:	PSS													
Remarks:														
HYDROLOGY														
Wetland Hydrology Indicate	ors:									5	Secondary	Indicators (2	2 or more req	uired)
Primary Indicators (minimum	of one req	uired; cl	heck a	ll that ap	ply)						Surfac	e Soil Crack	s (B6)	
☐ Surface Water (A1)			[☐ Wat	er-Stain	ed Leaves ((B9)				☐ Draina	ige Patterns	(B10)	
✓ High Water Table (A2)			[☐ Aqu	atic Fau	ına (B13)		☐ Moss Trim Lines (B16)						
✓ Saturation (A3)			[☐ Mar	Depos	its (B15)		Dry-Season Water Table (C2)						
■ Water Marks (B1)			[☐ Hyd	rogen S	Sulfide Odor	(C1)				Crayfis	sh Burrows (C8)	
☐ Sediment Deposits (B2)			[Oxio	dized Rh	nizospheres	along Livir	ng Ro	oots (C3)		☐ Satura	tion Visible	on Aerial ima	gery (C9)
☐ Drift Deposits (B3)			6	√ Pres	sence of	f Reduced Ir	on (C4)	·						
☐ Algal Mat or Crust (B4)			[Rec	ent Iron	Reduction is	n Tilled Sc	ils (C	6)			orphic Positi		
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7))					w Aquitard (I	,			
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark						rks)	Microtopographic Relief (D4)							
Sparsely Vegetated Con	ncave Surfa	ace (B8)	1							[✓ FAC-N	leutral Test ((D5)	
Field Observations:	<u> </u>										<u> </u>		·	·
Surface Water Present?	☐ Yes	☑ 1	No I	Depth (ir	nches):									
Water Table Present?	✓ Yes	□ 1	l ol	Depth (ir	nches):	2			Wetlan	nd Hyd	drology Pr		7 V □	N.
Saturation Present? (includes capillary fringe)	√ Yes	□ ¹	No I	Depth (ir	nches):	0						<u>v</u>] Yes □	NO
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring w	vell, aeri	ial photos, pi	revious ins	pecti	ons), if a	ıvailab	le):			
VEGETATION														
Tree Stratum														
Plot Size: 30														
Scientific Name									% Co	over		ominant	Indicat	or Status
Fraxinus pennsylvanica Tsuga canadensis									20 10)		YES YES		ACU ACU
						Т	Fotal Cove	r:	30	0				



Sapling/Shrub Stratum Plot Size: 15 Scientific Name Acer rubrum Alnus incana Lindera benzoin To		% Cover	Dominant	
Scientific Name Acer rubrum Alnus incana Lindera benzoin			Dominant	l
Acer rubrum Alnus incana Lindera benzoin			Dominant	
Alnus incana Lindera benzoin To				Indicator Status
		15 20 25	YES YES YES	FAC FACW FACW
Herh Stratum	otal Cover:	60		
Ticib dilatan				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Carex crinita Osmunda claytoniana Galium asprellum Onoclea sensibilis		80 5 10 5	YES NO NO NO	OBL FAC OBL FACW
To	otal Cover:	100		
Woody Vine Stratum				
Plot Size: 30	1	1		1
Scientific Name		% Cover	Dominant	Indicator Status
То	otal Cover:			
Dominance Test Worksheet: Pr	revalence Index	Worksheet:		
	otal % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	BL Species:	<u>90</u>	x 1 = <u>90</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	ACW Species:	<u>70</u>	x 2 = <u>140</u>	
F/	AC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)	ACU Species:	<u>10</u>	x 4 = <u>40</u>	
UI	PL Species:	<u>0</u>	x 5 = <u>0</u>	
Co	olumn Totals:	<u>190 (A)</u>	330 (B)	
	Pre	evalence Index =	B/A = <u>1.74</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
_	vdrophytic Vec	getation Present	t? ☑ Yes [] No
data in Remarks or on a separate sheet)	,	,		
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
Remarks:				



Providence, F	KI 02904										
SOIL											
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm th	ne absen	ce of indicators.)		
Depth	Matrix				atures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	-	Textu	ure	R	emarks
0-4	, ,		Color (molety	,,,	.,,,,			CANDY	LOAM		
0-4	10YR 4/1	100						SANDY	LOAM		
4-12	2.5Y 3/1	50	2.5Y 6/1 10YR 4/6	45 5	D C	M M		SANDY	LOAM		
			1011(4/0			""					
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining, M=	Matrix
Hydric Soil Inc	licators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pi	roblematic Hydr	ic Soils³:
☐ Histosol (A	A1)			olvvali	ue Below	Surface (S	88) (LRR R,		☐ 2 cm Muck (A10) (LRR K, L, I	MLRA 149B)
_ `	pedon (A2)			ILŔA 1		(-	,			e Redox (A16) (L	•
☐ Black Hist			ПТ	hin Da	rk Surface	e (S9) (I R	R R, MLRA	149R)	_	Peat or Peat (S3	·
								1430)		•	
	Sulfide (A4)		_	-	-		(LRR K, L)			e (S7) (LRR K, L,	·
	Layers (A5)		_	-	Gleyed Ma					elow Surface (S8	
	Below Dark Surfa	ace (A1	_	-	d Matrix (•			_	urface (S9) (LRR	•
	k Surface (A12)		_		Dark Surfa				_	ese Masses (F12	
	ucky Mineral (S1))		eplete	d Dark Su	urface (F7))		☐ Piedmont Flo	oodplain Soils (F	19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)				c (TA6) (MLRA 1	44A, 145, 149B)
☐ Sandy Re	edox (S5)								☐ Red Parent	Material (F21)	
☐ Stripped I	Matrix (S6)								□ Very Shallov	v Dark Surface (1	F12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						☐ Other (Expla	in in Remarks)	
3Indicators of I	nvdrophytic veae	tation a	and wetland hydro	ology n	nust be pr	esent. unl	ess disturbe	d or prob	lematic.		
Remarks:											
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:					
Wetland Qualit	ty: 🗹 High		Moderate	Low			Isolated V	Vetland?	☐ Yes 🗹	No 🔲 Uni	known
General Comm	ients:										





SW



WE	TLAND	DET	ERM	INATI	ON FORM -	Northc	entral an	d No	ortheast	Region		
☑ Centerline ☐ Re-R	oute _	Acces	ss Road	d 🗆	Ancillary Facility		Transmissior	n Line	☐ Oth	er		
Project/Site: NED			N	filepost:	82557.2	County:	Berks	hire		Date:	06/11/201	15
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	oling Point	HN-M-W	010-UPL	
Investigators: CM	(Quad Na	ame: F	Peru		Township	p: Hinsd	ale				
Logbook No.: 3	Logb	ook Pg.	: 79		Tract: 20984							
Landform (hillslope, terrace, e	etc.):	Slope -	mid	•	Local F	Relief:	Concave	V	Convex	☐ None	Slope%.:	10
Subregion (LRR): Middl	e Atlantic			Lat	t: 42.473264		Long:	-73.07	3609		Datum: NA	D83
Soil Map Unit Name: Per	ru-Marlow a	associat	ion, roll	ing, extre	emely stony				NWI Cla	assification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	r this tim	ne of year?:	√ Yes	☐ No (If n	no, expl	lain in Rema	arks.)		
Are Vegetation	or Hy	/drology		significa	antly disturbed?	☑ No	Are "Norm	nal" Circ	cumstances	present?	☑ Yes	☐ No
Are Vegetation	or Hy	/drology		naturally	y problematic?	☑ No						
SUMMARY OF FINDIN	NGS - At	tach s	site m	ap sho	owing sampli	ng point	locations	s, tra	nsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☑ No	0							
Hydric Soil Present?			Yes	☑ No	0		Is the Sar	mpied Netlar	nd?] Yes ⊡	∑ No	
Wetland Hydrology Present?			Yes	☑ No	0							
Field Wetland Classification:	UPL	AND PL	ОТ									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	ors:							5	Secondary I	ndicators (2	or more requ	uired)
Primary Indicators (minimum	of one req	uired; ch	neck all	that app	oly)				Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) ☐ Drainage Patterns (B10)												
☐ High Water Table (A2)] Aqua	itic Fauna (B13)				☐ Moss T	rim Lines (B	16)	
☐ Saturation (A3)				Marl I	Deposits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
□ Water Marks (B1)] Hydro	ogen Sulfide Odor	(C1)			Crayfish	n Burrows (C	C8)	
☐ Sediment Deposits (B2)				Oxidi	zed Rhizospheres	along Livin	ng Roots (C3)) [☐ Saturat	ion Visible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Prese	ence of Reduced I	ron (C4)			Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Rece	ent Iron Reduction	in Tilled So	ils (C6)		Geomo	rphic Positio	on (D2)	
☐ Iron Deposits (B5)				Thin I	Muck Surface (C7)				Aquitard (D	•	
☐ Inundation Visible on A	erial Imager	y (B7)		Other	r (Explain in Rema	arks)				pographic R		
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)							☐ FAC-Ne	eutral Test (I	D5)	
Field Observations:												
Surface Water Present?	☐ Yes	Ø N	lo D	epth (inc	ches):							
Water Table Present?	☐ Yes	_		epth (inc	•		Wetlai	nd Hyd	Irology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ N	lo D	epth (inc	ches):						163 1	140
Remarks (Describe Recorded	Data (streat	am gage	e, moni	toring we	ell, aerial photos, p	revious ins	pections), if a	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Do	minant	Indicat	or Status
Betula alleghaniensis Acer saccharum Fagus grandifolia							2 3 5		,	YES YES YES	F/	AC ACU
						Total Cover	ı	00	ı		1	



Sapling/Shrub Stratum Plot Size: 15 Scientific Name				
Scientific Name				
		% Cover	Dominant	Indicator Status
Tsuga canadensis Acer pensylvanicum Fagus grandifolia Picea rubens		10 15 10 10	YES YES YES YES	FACU FACU FACU FACU
	Total Cover:	45	I	I
Herb Stratum				
Plot Size: 5				
	ı	% Cover	Dominant	Indicator Status
Scientific Name		% Cover 15	YES	Indicator Status FACU
Polygonatum biflorum Polystichum acrostichoides		5	NO	FACU
Parathelypteris novaboracnesis	T-t-I C	10	YES	FAC
	Total Cover:	30		
Woody Vine Stratum				
Plot Size: 30	1		1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover	of:	Multiply by:	
THAT ALE OBE, I ACW, OF I AC.	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 9 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
oposios / toroco / till ottatal	FAC Species:	<u>30</u>	x 3 = <u>90</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 22 (A/B)	FACU Species:	<u>145</u>	x 4 = <u>580</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>175 (A)</u>	<u>670 (B)</u>	
	F	Prevalence Index	= B/A = 3.83	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? 🗌 Yes 🛭	☑ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



2011	02004											
SOIL												
•		the de	·			dicator o	r confirm	he absen	ce of indicators.)			
Depth (inches)	Matrix		Red		atures			Text	ıre		Rer	marks
(11101100)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		10/10				
0-1	5YR 2.5/1	100						ORGA	NIC			
1-10	5YR 5/8	100						LOA	M			
10-18	5YR 4/6	80	7.5YR 3/4	20	С	М		LOAMY	SAND			
¹Tvpe: C=Cond	L centration. D=De	epletion	l n, RM=Reduced I	Matrix.	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	a. M=M:	atrix
		<u> </u>	o all LRR's, unle						Indicators for Pr			
		cabic t					0\				-	
Histosol (/	•			ILRA 1		Surface (S	8) (LRR R		2 cm Muck (
	pedon (A2)		-	L:- D-	-1. O4	- (CO) (I DI	D D MI D/	4.40D)	Coast Prairie			•
☐ Black Hist			_			. , .	R R, MLRA	(149B)			. , .	LRR K, L, R)
	Sulfide (A4)		_	•	•	` '	(LRR K, L)		☐ Dark Surface			
	Layers (A5)	nns (^ *		•	Gleyed Ma	, ,			Polyvalue Be		. , .	•
	Below Dark Surfa	ace (A1	_	-	d Matrix (I	•			Thin Dark Su	, ,		•
_	k Surface (A12)				Dark Surfa				_			(LRR K, L, R)
_	icky Mineral (S1)			-		ırface (F7)			☐ Piedmont Flo	odplain So	ils (F19)) (MLRA 149B)
	eyed Matrix (S4)		☐ R	edox [Depressio	ns (F8)			_			A, 145, 149B)
☐ Sandy Re									☐ Red Parent I		•	
☐ Stripped N	Matrix (S6)								□ Very Shallov	Dark Surf	ace (TF1	12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	rks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturb	ed or prob	lematic.			
Restrictive Lay	er Present?	1	res ☐ No	□ U	nknown							
ROCK									Hydric Soil Prese	nt?	Yes	☑ No
18												
Remarks:												
Description of	Habitat Characta	riotico	Aguatia Divaraity	or Co	noral Cam	monto						
Description of	nabilal Characle	ristics,	Aquatic Diversity	or Ge	nerai Con	imenis:						
Watland Ovalit	uu 🗖 Iliada	_ ,	Andersta 🗖				laalatad	\MatlandO		No. 🗖	المادة ا	
wetiand Qualit	y: High	Цľ	Moderate	LOW			isolated	Wetland?	☐ Yes ☐	NO L	Unkno	own
General Comm	ents:											





ΝE



WETLAND DETERMINATION FORM - Northcentral and Northeast Region											
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Tra	ansmission	Line	Other							
Project/Site: NED Milepost: 99276.9 Cour	inty:	Berksh	nire		Date:	06/17/2015					
Applicant/Owner: Kinder Morgan State	te: M	IA	Samplir	ng Point: W	R-M-W0	12-PSS					
Investigators: CM Quad Name: Peru Town	nship:	Winds									
Logbook No.: 3M Logbook Pg.: 112 Tract: 26951											
Landform (hillslope, terrace, etc.): Stream fringe Local Relief:	V	Concave	☐ Co	onvex 🔲	None 3	Slope%.:	2				
Subregion (LRR): Middle Atlantic Lat: 42.491856		Long:	-73.0219	978	[Datum: NAD	83				
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony				NWI Classific	cation:	Not map	ped				
Are climatic / hydrologic conditions on the site typical for this time of year?:	es 🗖	No (If no	o, explair	n in Remarks.)						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ ↑	No	Are "Norma	al" Circur	mstances pres	sent?	√ Yes	☐ No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ ↑	No										
SUMMARY OF FINDINGS - Attach site map showing sampling po	oint l	ocations	trans	sects imn	ortant f	ieatures	etc				
Hydrophytic Vegetation Present? ✓ Yes ☐ No		oodiione	, traire	scoto, imp	or turner	outui co,					
	ls	s the San	npled A	Area ✓ Y	es □	No					
Hydric Soil Present? ✓ Yes ☐ No Wetland Hydrology Present? ✓ Yes ☐ No	V	within a W	Vetland	?	62 🗆	NO					
Field Wetland Classification: PSS											
Remarks:											
Remarks.											
HYDROLOGY											
Wetland Hydrology Indicators:			Sec	condary Indica	ators (2 o	r more requi	red)				
Primary Indicators (minimum of one required; check all that apply)				Surface Soil	Cracks (B6)					
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)			\checkmark	Drainage Pa	itterns (B	10)					
✓ High Water Table (A2)				Moss Trim L	ines (B16	6)					
✓ Saturation (A3)				Dry-Season	Water Ta	able (C2)					
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)				Crayfish Bur	rows (C8	3)					
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	Living	Roots (C3)		Saturation V	isible on	Aerial image	ery (C9)				
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	4)	, ,		Stunted or S	Stressed F	Plants (D1)					
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tiller	,	(C6)		Geomorphic	Position	(D2)					
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		()		Shallow Aqu	itard (D3)					
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)				Microtopogra	aphic Rel	ief (D4)					
□ Sparsely Vegetated Concave Surface (B8)				FAC-Neutra	Test (D5	5)					
Field Observations:											
Surface Water Present? ☐ Yes ☑ No Depth (inches):					_						
Water Table Present? ✓ Yes No Depth (inches): 2		Wetlan	d Hydro	ology Present	_	Yes □	No				
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)					_	_					
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	ıs inspe	ections), if a	vailable)	:							
VEGETATION											
Tree Stratum											
Plot Size: 30		1 .		I -							
Scientific Name		% Co		Domina	ant	Indicator					
Abies balsamea	_	10		NO		FA	C				
Total C	Cover:	10	J								



% Cover Dominant Indicator Status	Providence, RI 02904				
20	Sapling/Shrub Stratum				
20	Plot Size: 15		·		
10	Scientific Name		% Cover	Dominant	Indicator Status
No No FAC So No No FAC FACW So No No No FACW No No No FACW No No No No FACW No No No No No No No N	Salix nigra Spiraea alba Vaccinium corymbosum Hamamelis virginiana		10 10	NO NO	FACW FACW
10	· · · · · · · · · · · · · · · · · · ·	Total Cover:		1	1
10					
10	Herb Stratum				
10	Plot Size: 5	ı		1	1
Total Cover: 65 Total Cover: South Sou	Scientific Name				
Total Cover: 65	Solidago rugosa Onoclea sensibilis				
	Galium palustre			NO	OBL
% Cover Dominant Indicator Status		Total Cover:	65		
Total Cover: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: $25 \times 1 = 25 \times 10^{-5} \times 10^{-5$	Woody Vine Stratum				
Total Cover: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: $25 \times 1 = 25$ FACW Species: $70 \times 2 = 140$ FAC Species: $20 \times 3 = 60$ Total % Cover of: Strata: $3 \times 3 \times 3 = 60$ FACU Species: $3 \times 3 \times 3 = 60$ Total % Cover of: Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Multiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Nultiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Nultiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Nultiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: Nultiply by: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ Total % Cover of: OBL Species: $3 \times 3 = 60$ To	Plot Size: 30			1	1
For Expected Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 25	Scientific Name		% Cover	Dominant	Indicator Status
For Expected Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 25					
Total % Cover of: Multiply by: OBL Species: 25		Total Cover:			
W, or FAC: $2(A)$ OBL Species: 25 FACW Species: 70 FAC Species: 20 FAC Species: 20 FACU Spec	Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
OBL Species: 25	Number of Dominant Species	Total % Cover	of:	Multiply by:	
Strata: 3 (B) FAC Species: $20 \times 3 = 60$ FACU Species: $50 \times 4 = 200$ UPL Species: $0 \times 5 = 0$ Column Totals: 165 (A) Prevalence Index = B/A = 2.58 ation Indicators: for Hydrophytic Vegetation Test is > 50% Index is ≤ 3.0 cal Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? \checkmark Yes \checkmark No	That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>25</u>	x 1 = <u>25</u>	
FAC Species: $20 \times 3 = 60$ t Species W , or FAC: 67 (A/B) FACU Species: $50 \times 4 = 200$ UPL Species: $0 \times 5 = 0$ Column Totals: 165 (A) Prevalence Index = B/A = 2.58 ation Indicators: for Hydrophytic Vegetation Test is > 50% Index is ≤ 3.0 and Adaptations! (Provide supporting Hydrophytic Vegetation Present? \checkmark Yes \checkmark No	Total Number of Dominant	FACW Species	: <u>70</u>	x 2 = <u>140</u>	
W, or FAC: ### UPL Species: ### Quantities	Species Across All Strata: 3 (B)	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
UPL Species: $0 \times 5 = 0$ Column Totals: 165 (A) 425 (B) Prevalence Index = B/A = 2.58 ation Indicators: for Hydrophytic Vegetation Test is > 50% Index is ≤ 3.0 and Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? \checkmark Yes \bigcirc No	Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)	FACU Species:	<u>50</u>	x 4 = <u>200</u>	
Prevalence Index = B/A = 2.58 ation Indicators: for Hydrophytic Vegetation Test is > 50% Index is ≤ 3.0 cal Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes ☐ No	That Ale Obl., FACW, 01 FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
ation Indicators: for Hydrophytic Vegetation Test is > 50% Index is ≤ 3.0 cal Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes ☐ No		Column Totals:	<u>165 (A)</u>	<u>425 (B)</u>	
for Hydrophytic Vegetation Test is > 50% Index is ≤ 3.0 cal Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes ☐ No			Prevalence Index	= B/A = 2.58	
for Hydrophytic Vegetation Test is > 50% Index is ≤ 3.0 cal Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes ☐ No	Hydrophytic Vegetation Indicators:				
Test is > 50% Index is ≤ 3.0 cal Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes ☐ No	☐ 1 - Rapid Test for Hydrophytic Vegetation				
Index is ≤ 3.0 cal Adaptations¹ (Provide supporting	✓ 2 - Dominance Test is > 50%				
cal Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes 🗆 No	✓ 3 - Prevalence Index is ≤ 3.0				
		Hydronhytic \	/egetation Prese	nt? ☑ Vas I	□ No
	data in Remarks or on a separate sheet)	nyaropnyae t	egetation i resc	<u>F</u> 163 [_ 140
drophytic Vegetation¹ (Explain)	☐ Problematic Hydrophytic Vegetation¹ (Explain)				
	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
urbed or problematic.	Remarks:				
urbed or problematic.					
urbed or problematic.					
soil and wetland hydrology must be	¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
	•				
urbed or problematic.	Remarks:				
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SOIL												
Profile Descrip		the d				dicator o	r confirm the	e absen	ce of indicators.)			
Depth (inches)	Matrix			dox Fe				Textu	ıre		Rei	marks
(11101103)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		TOXIC				
0-5	5YR 2.5/1	100						SILT LO	DAM			
5-9	5YR 3/1	95	10YR 4/6	5	С	PL	L	LOAMY	SAND			
9-16	7.5YR 5/2	35	7.5YR 6/1	60	D	М	L	LOAMY	SAND			
			10YR 4/6	5	С	М						
¹Tvpe: C=Cond	L centration. D=De	epletion	L n, RM=Reduced	Matrix.	CS=Cov	ered Sand	L I or Coated G	Grains.	² Location: PL=	Pore Linine	a. M=M	atrix
			o all LRR's, unle						Indicators for Pr			
		oubic t				-	0) /I DD D				•	
Histosol (•			1LRA 1		Surface (S	8) (LRR R,		2 cm Muck (•
	pedon (A2)					(00) (I DI	D D M DA 4	40D)	Coast Prairie			•
☐ Black Hist			_				R R, MLRA 1	49B)			. , ,	(LRR K, L, R)
	Sulfide (A4)		_	•	•	` '	(LRR K, L)		☐ Dark Surface			
	Layers (A5)		-	-	Gleyed Ma				Polyvalue Be			
	Below Dark Surfa	ace (A1	_	•	d Matrix (I	•			Thin Dark Su			-
_	k Surface (A12)		_		Dark Surfa	. ,			_			(LRR K, L, R)
_	ucky Mineral (S1))	_	•		ırface (F7)			☐ Piedmont Flo	oodplain Sc	ils (F19) (MLRA 149B)
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144/										⊦A, 145, 149B)		
☐ Sandy Redox (S5) ☐ Red Parent Material (F21)												
☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12)												12)
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	rks)	
3Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed	or probl	ematic.			
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown							
									Hydric Soil Prese	nt? 🔽	Yes	□ No
										_		_
Remarks:												
D			A .: D: ::									
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	ty: 🔽 High		Moderate	Low			Isolated W	/etland?	☐ Yes 🗹	No 🔲	Unkn	own
General Comm	ents:											





W



WETLAND DETERMINATION FORM - N	lorthcer	ntral and N	ortheast Regio	n				
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Tra	ansmission Line	☐ Other					
Project/Site: NED Milepost: 99336.8	County:	Berkshire	Date	e: 06/17/2015				
Applicant/Owner: Kinder Morgan	State: M	1A Sam	pling Point: WR-M-	W012-UPL				
Investigators: CM Quad Name: Peru	Township:	Windsor						
Logbook No.: 3M Logbook Pg.: 113 Tract: 26951								
Landform (hillslope, terrace, etc.): Slope - mid Local Re	lief:	Concave 🗹	Convex None	e Slope%.: 5				
Subregion (LRR): Middle Atlantic Lat: 42.492006		Long: -73.0	21790	Datum: NAD83				
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony			NWI Classification	n: Not mapped				
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes	No (If no, exp	olain in Remarks.)					
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	Z No	Are "Normal" Ci	rcumstances present?	☑ Yes 🔲 No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☐	Z No							
SUMMARY OF FINDINGS - Attach site map showing sampling	g point l	ocations, tra	nsects, importa	nt features, etc.				
Hydrophytic Vegetation Present? ☐ Yes ☑ No								
Hydric Soil Present? ☐ Yes ☑ No	. I	ls the Sample within a Wetla	d Area and? □ Yes	☑ No				
Wetland Hydrology Present?								
Field Wetland Classification: UPLAND PLOT								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:			Secondary Indicators	(2 or more required)				
Primary Indicators (minimum of one required; check all that apply)			☐ Surface Soil Crac	ks (B6)				
□ Surface Water (A1) □ Water-Stained Leaves (B9) □ Drainage Patterns (B10)								
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines	(B16)				
☐ Saturation (A3) ☐ Marl Deposits (B15)			□ Dry-Season Wate	er Table (C2)				
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C	21)		Crayfish Burrows					
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	long Living	110013 (00)		on Aerial imagery (C9)				
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	n (C4)		Stunted or Stress					
Algal Mat or Crust (B4) Recent Iron Reduction in	Tilled Soils	s (C6)	Geomorphic Posi	, ,				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)			Shallow Aquitard					
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	s)		Microtopographic					
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test	(05)				
Field Observations:								
Surface Water Present?								
Water Table Present?		Wetland Hy	drology Present?	☐ Yes ☑ No				
Saturation Present?			L	_ Tes 🛂 NO				
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pre	vious inspe	ections), if availal	ole):					
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name		% Cover	Dominant	Indicator Status				
Tsuga canadensis Pinus strobus		80 10	YES NO	FACU FACU				
To	tal Cover:	90						

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Gaultheria procumbens		10	NO	FACU
	Total Cover:	10	'	'
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 1 (B)	FACW Species:	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 1 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>100</u>	x 4 = <u>400</u>	
That Ale ODE, I AOW, OI I AO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>100 (A)</u>	400 (B)	
	F	Prevalence Index :	= B/A = 4.00	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	☑ No
, ,				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, I	02304											6.8.3.3.0.0
SOIL												
Profile Descrip		the de	·			dicator o	r confirm tl	he absen	ce of indicators.)			
Depth (inches)	Matrix				atures			Text	ure		R△	marks
(110/100)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		ı catı				
0-1	10YR 2/1	100						ORGA	NIC			
1-5	10YR 3/4	100					FI	NE SAND	DY LOAM			
5-18	10YR 4/3	70	7.5YR 4/4	30				SANDY	LOAM			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	g, M=N	
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)			Indicators for Pr	oblematic	Hydric	Soils ³ :
☐ Histosol (/	A1)		□Р	olyvalı	ue Below :	Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR	K, L, M	LRA 149B)
	pedon (A2)			ILŔA 1		,			☐ Coast Prairie			•
☐ Black Hist			ПΤ	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)	_			(LRR K, L, R)
	Sulfide (A4)		_			. , .	(LRR K, L)	,	☐ Dark Surface		` '	
	Layers (A5)			-	Gleyed Ma		. ,		☐ Polyvalue Be			
_	Below Dark Surfa	ace (A1	_	-	d Matrix (I				☐ Thin Dark Su		. , ,	,
☐ Thick Dar	k Surface (A12)		R	edox [Dark Surfa	ce (F6)			_		•	(LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)						9) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		R	edox I	Depressio	ns (F8)				-		4A, 145, 149B)
☐ Sandy Re	dox (S5)		_		•	, ,			☐ Red Parent I			,,,
☐ Stripped N	Matrix (S6)								☐ Very Shallow		•	:12)
	ace (S7) (LRR R	. MLRA	\ 149B)						☐ Other (Expla			,
_			and wetland hydro	Joay n	nuet he nr	ecent unla	ace dieturhe	d or prob	_			
							233 distarbe	u or prob	iomatic.			
Restrictive Lay	er Present?		Yes ☑ No	U	nknown					_		_
									Hydric Soil Prese	nt?	Yes	☑ No
Remarks:												
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: 🔲 High		Moderate	_ow			Isolated \	Wetland?	☐ Yes 🗹	No 🔲	Unkr	nown
General Comm	onto:											
General Comm	ents:											





Ν



WETLAND DETERMINATION FORM - Northcentral and Northeast Region													
VVE	WETEAND DETERMINATION FORM - Northcentral and Northeast Region												
☑ Centerline ☐ Re-R	oute	☐ Acc	ess Ro	ad 🔲	Ancilla	ary Facility		Transmiss	sion Line	☐ Ot	her		
Project/Site: NED				Milepost:	1004	70.2	County:	Ве	rkshire		Date	: 06/15/201	15
Applicant/Owner: Kinder Mo	rgan						State:	MA	Sam	pling Poir	nt: WR-N-V	V002-PFO	
Investigators: JM		Quad	Name:	Peru			Townshi	p: Wi	ndsor	<u>. </u>			
Logbook No.: 3M	Lo	gbook F	g.: 104	4	Trac	ct: 1014							
Landform (hillslope, terrace,	etc.):	Depr	ession	I		Local R	elief:	Z Conca	ve 🔲	Convex	None	Slope%.:	1
Subregion (LRR): Middl	e Atlanti	С		Lat	42.4	95273		Long:	-73.0	21082		Datum: NA	D83
Soil Map Unit Name: Tu	nbridge-	Lyman a	ssociati	on, rolling,	extrem	nely stony				NWI C	lassification:	: Not ma	apped
Are climatic / hydrologic cond	litions or	the site	typical	for this tim	e of year	ar?:	7 Yes	□ No ((If no, exp	olain in Ren	narks.)		
Are Vegetation ☐ Soil	□ or	Hydrolo	ау П	significa	ntly dis	turbed?	√ No	Are "No	ormal" Ci	rcumstance	es present?	√ Yes	. □ No
Are Vegetation ☐ Soil	— or	Hydrolo	av П	naturally	proble	ematic?	— ✓ No						
_		-					_						
SUMMARY OF FINDII	NGS -	Attach	site	map sho	owing	g samplir	ng poin	t location	ons, tra	insects,	importar	nt features	s, etc.
Hydrophytic Vegetation Pres	ent?	√	Yes	☐ No)			la tha (Sample	d Araa			
Hydric Soil Present?		✓	Yes	☐ No)				Sample a Wetla		☑ Yes	□ No	
Wetland Hydrology Present?		✓] Yes	□ No)								
Field Wetland Classification:	PI	FO											
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicate	ors:									Secondary	Indicators (2	2 or more req	uired)
Primary Indicators (minimum	of one i	equired;	check a	all that app	ly)					☐ Surfac	e Soil Crack	(s (B6)	
☑ Surface Water (A1) ☐ Water-Stained Leaves (B9) ☑ Drainage Patterns (B10)													
✓ High Water Table (A2)				☐ Aquat	tic Faur	na (B13)				☐ Moss	Trim Lines (I	B16)	
✓ Saturation (A3)				☐ Marl [Deposit	ts (B15)				☐ Dry-S	eason Water	r Table (C2)	
■ Water Marks (B1)				☐ Hydro	gen Su	ulfide Odor	(C1)			☐ Crayfi	sh Burrows ((C8)	
☐ Sediment Deposits (B2)				✓ Oxidiz	zed Rhi	izospheres	along Livi	ng Roots (C3)	☐ Satura	ation Visible	on Aerial ima	gery (C9)
☐ Drift Deposits (B3)				✓ Prese	nce of	Reduced Ir	on (C4)			☐ Stunte	ed or Stresse	ed Plants (D1))
☐ Algal Mat or Crust (B4)				☐ Recei	nt Iron I	Reduction is	n Tilled So	oils (C6)		☑ Geom	orphic Positi	ion (D2)	
☐ Iron Deposits (B5)				☐ Thin I	Muck S	urface (C7)				☑ Shalld	w Aquitard ((D3)	
☐ Inundation Visible on A	erial Ima	gery (B7)		☐ Other	(Expla	in in Remai	rks)			_	opographic l		
☐ Sparsely Vegetated Con	ncave Si	urface (B	8)							✓ FAC-N	Neutral Test	(D5)	
Field Observations:													
Surface Water Present?	☑ Y	es 🔲	No	Depth (inc	hes):	1							
Water Table Present?	✓ Y	es 🔲	No	Depth (inc	hes):	0		We	tland Hy	drology Pı	_		
Saturation Present? (includes capillary fringe)	₹ Y	es 🔲	No	Depth (inc	hes):	0					V	∐ Yes □	No
Remarks (Describe Recorded	l Data (s	tream ga	ge, mo	nitoring we	II, aeria	al photos, pi	revious ins	spections),	if availat	ole):			
	,			J						,			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name								9/	6 Cover	[Dominant	Indicat	or Status
Tsuga canadensis									15		NO		ACU
Betula alleghaniensis Acer rubrum									10 15		NO NO		AC AC
						Т	Total Cove	r: '	40	'		1	



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rhamnus alnifolia		30	YES	OBL
Acer rubrum	Total Cover:	10 40	YES	FAC
	Total Cover.	40		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Carex sp Solidago rugosa		40 5	YES NO	FACW FAC
Onoclea sensibilis		25	YES	FACW
	Total Cover:	70		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:	'		'
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>30</u>	x 1 = 30	
Total Number of Dominant	FACW Species:	<u>65</u>	x 2 = <u>130</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>40</u>	x 3 = <u>120</u>	
Percent of Dominant Species	FACU Species:		x 4 = <u>60</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>150 (A)</u>	340 (B)	
	F	Prevalence Index =	= B/A = 2.27	
Hydrophytic Vegetation Indicators:			<u> </u>	
3 - Prevalence Index is ≤ 3.0 A Marshalacian Adaptational / Dravida supporting	Urdranbytia V	ometation Dress	42	7 No
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydropnytic v	egetation Presen	t? ☑ Yes [] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
Nemaro.				



Providence, r	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the abso	ence of indicators.)	
Depth	Matrix		-	dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	exture	Remarks
0.4	` ′		` ′				CII T	LOAM	
0-4	2.5Y 2.5/1	95	7.5YR 4/6	5	С	PL	SILI	LOAM	
4-12	2.5Y 4/1	40	2.5Y 6/2 10YR 5/6	50 10	D C	M M	FINE SAI	NDY LOAM	
			10110 3/0	10		IVI			
¹Type: C=Con	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	. ² Location: PL:	=Pore Lining, M=Matrix
Hydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A1)			Polyvali	ue Below	Surface (S	8) (LRR R,	☐ 2 cm Muck ((A10) (LRR K, L, MLRA 149B)
<u> </u>	pedon (A2)			ILRA 1		- Canado (C	(=: :: : : : ;		e Redox (A16) (LRR K, L, R)
_				hin Do	rk Curfoo	o (SO) (LB	D D MI DA 140D)	=	
☐ Black Hist							R R, MLRA 149B)	= '	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_	-	-		(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed Ma			☐ Polyvalue B	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	I1) 🗹 🖸	Peplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))		Peplete	d Dark Su	urface (F7)		☐ Piedmont FI	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		 F	Redox I	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							□ Red Parent	Material (F21)
☐ Stripped I	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
			•	ology n	nuct bo pr	ocont unl	ess disturbed or pro		,
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Quali	ty:	☑ :	Moderate	Low			Isolated Wetland	d? ☐ Yes ☑	No □ Unknown
Welland Quan	iy. 🔲 Tilgii	<u>v</u>	vioderate	LOW			isolated Wetlant	a: ☐ 1e3 [v]	140 GIRHOWH
General Comm	ients:								





NW



WE	TLANI	D DE1	ERN	IINAT	ION I	FORM -	Northc	entral	and N	ortheast	Region	ı	
☑ Centerline ☐ Re-R	oute [Acce	ss Roa	ad 🗆	Ancil	lary Facility	,	Transmis	ssion Line	☐ Othe	r		
Project/Site: NED				Milepost:	1014	451.2	County:	В	erkshire		Date:	07/19/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA	Sam	pling Point:	WR-N-W	002-PSS	
Investigators: CM		Quad N	ame:	Peru			Townshi	p: W	/indsor				
Logbook No.: 5M	Log	book Po	j.: 60		Tra	ict: 1014							
Landform (hillslope, terrace,	etc.):	Flood	olain te	rrace		Local F	Relief:	Conc	ave 🔲	Convex [√ None	Slope%.:	0
Subregion (LRR): Middl	e Atlantic			La	t: 42.4	495655		Long	: -73.0	17461		Datum: NA	D83
Soil Map Unit Name: Be	rkshire-Ma	arlow ass	sociatio	n, 15 to	45 perc	ent slopes,	steep, extr	emely sto	ony	NWI Clas	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on t	he site t	ypical f	or this tir	ne of ye	ear?: [√ Yes	□ No	(If no, exp	olain in Remai	rks.)		
Are Vegetation Soil	or H	lydrolog	y 🗖	significa	antly dis	sturbed?	☑ No	Are "N	lormal" Ci	rcumstances	present?	✓ Yes	☐ No
Are Vegetation Soil	or F	lydrolog	у 🗖	naturall	y proble	ematic?	☑ No						
SUMMARY OF FINDI	NGS - A	ttach	site n	nap sh	owing	g sampli	ing poin	t locati	ons, tra	nsects, in	nportan	t features	, etc.
Hydrophytic Vegetation Prese		$\overline{\mathbf{V}}$	Yes	N		<u> </u>							-
Hydric Soil Present?		$\overline{\mathbf{V}}$	Yes		0			Is the	Sample a Wetla	d Area ☑	Yes [] No	
Wetland Hydrology Present?		<u></u>	Yes		0			within	i a wetia	na? —	_	_	
Field Wetland Classification:	PSS	3											
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicator	ors:									Secondary In	dicators (2	or more requ	uired)
Primary Indicators (minimum		auired: c	heck a	ll that an	oly)					☐ Surface	Soil Cracks	s (B6)	
_	01 0110 10	quirou, c				ed Leaves	(B9)			— ☑ Drainage	e Patterns ((B10)	
✓ Surface Water (A1) ✓ High Water Table (A2)						ina (B13)	(109)				m Lines (B	16)	
✓ Saturation (A3)						its (B15)				— ☐ Dry-Seas	son Water	Table (C2)	
☐ Water Marks (B1)					-	Sulfide Odor	· (C1)			 ✓ Crayfish	Burrows (0	C8)	
Sediment Deposits (B2)					-	nizospheres		na Roots	(C3)	☐ Saturation	n Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				_		f Reduced I	-	.9		☐ Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)						Reduction		oils (C6)		✓ Geomorp	ohic Positio	on (D2)	
☐ Iron Deposits (B5)						Surface (C7		()		☐ Shallow	Aquitard (E	03)	
☐ Inundation Visible on A	erial Image	erv (B7)				ain in Rema	•				ographic R	telief (D4)	
☐ Sparsely Vegetated Cor	_			_	. (=,,,,,,,		o,			✓ FAC-Neu	utral Test (I	D5)	
			, 					I					
Field Observations:	□ V		NI- 1	D = = 41= /:=	-11-	4							
Surface Water Present?	✓ Yes	_		Depth (in	-	1				daalaaa Baa	10		
Water Table Present?	✓ Yes	_		Depth (in	,	0		VV.	etiano Hy	drology Pres		Yes □	No
Saturation Present? (includes capillary fringe)	✓ Yes	· 📙 '	No	Depth (in	cnes):	0					_	_	
Remarks (Describe Recorded	l Data (stre	eam gag	e, mor	nitoring w	ell, aeri	al photos, p	orevious ins	spections), if availat	ole):			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name									% Cover	Dor	minant	Indicate	or Status
Tsuga canadensis									20	N	10	FA	ACU
							Total Cove	r:	20	•			



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15		· · · · · · · · · · · · · · · · · · ·		
Scientific Name		% Cover	Dominant	Indicator Status
Alnus glutinosa		5	NO	FACW
Alnus incana Salix interior		30 30	YES YES	FACW FACW
	Total Cover:	65	ı	1
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Spiraea alba		10	YES	FACW
Typha latifolia		10	YES	OBL
Equisetum fluviatile Phragmites australis		10 20	YES YES	OBL FACW
Carex crinita Eurybia radula		10 10	YES YES	OBL OBL
	Total Cover:	70		1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
		70 0010.	20111110111	maisator Status
	 Total Cover		1	I
Dominance Test Worksheet:		dex Worksheet:		
	Total % Cover		Multiply by:	
Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)	OBL Species:		Multiply by: x 1 = 40	
Total Number of Dominant	FACW Species	<u>40</u> s: <u>95</u>	$x 1 = \frac{40}{40}$ $x 2 = \frac{190}{100}$	
Species Across All Strata: 8 (B)	FAC Species:	o. <u>95</u> <u>0</u>	x 3 = 0	
Percent of Dominant Species	FACU Species		x 4 = 80	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	. <u>20</u> <u>0</u>	x 5 = 0	
	Column Totals:		310 (B)	
		Prevalence Index	, ,	
Lludranhutia Varatatian Indicatara		T revalence index	2.00	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0	11. 11. 4			-
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic	egetation Prese	ent? ☑ Yes I	⊔ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Domorko				
Remarks.				
Remarks:				
Remarks:				



OIL	1 02904									
,UIL										
rofile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm the abse	nce of indicators.)		
Depth	Matrix		Re	dox Fe	atures			-		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture		Remarks
0-4	2.5Y 4/1	100					FINE S	SAND		
4-8	2.5Y 6/1	60	2.5Y 5/2 10YR 6/8	30 10	C C	M PL	FINE S	SAND		
8-16	2.5Y 5/1	70	2.5Y 6/1 2.5Y 5/6	25 5	D C	M M	SAI	ND		20% SILT
Гуре: C=Cond	centration, D=De	epletion	, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, I	M=Matrix
lydric Soil Ind	icators: (Appli	cable t	o all LRR's, unle	ess oth	erwise n	oted.)		Indicators for P	roblematic Hy	dric Soils³:
□ Black Hist □ Hydrogen □ Stratified I □ Depleted I □ Thick Dark □ Sandy Mu □ Sandy Gle □ Stripped I □ Dark Surfa	bedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surface (A12) cky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	, MLRA	T	ALRA 1 Thin Da	49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	e (S9) (LRF neral (F1) (atrix (F2) F3) ace (F6) arface (F7) ns (F8)		Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark St Iron-Mangar Piedmont Fle Mesic Spodi Red Parent Very Shallov Other (Explain	e Redox (A16) Peat or Peat (e (S7) (LRR K, elow Surface (Surface (S9) (LR nese Masses (Foodplain Soils	S3) (LRR K, L, R) L, M) S8) (LRR K, L) R K, L) F12) (LRR K, L, R) (F19) (MLRA 149B) A 144A, 145, 149B) (TF12)
estrictive Lay			∕es ☑ No		nknown			Hydric Soil Prese	ent? ☑ Y	es 🗌 No
	Habitat Characte		Aquatia Diversite	or Ge						
Description of I	labitat Characte	ristics,	Aqualic Diversity	01 00	nerai Corr	iments.				
			WR-M-SH003 (
VR-M-SH002 (BEAVER COMP y: 🗹 High	LEX) &		WEST			Isolated Wetland?	' ☐ Yes ☑	No □ U	Jnknown





SE



WETLAND DETERMINATION FORM - Northcer	ntral and Northeast Region
 ☑ Centerline	ansmission Line
Project/Site: NED Milepost: 100493.9 County:	Berkshire Date: 06/15/2015
Applicant/Owner: Kinder Morgan State: M.	
Investigators: CM Quad Name: Peru Township:	Windsor
Logbook No.: 3M Logbook Pg.: 105 Tract: 1014	
Landform (hillslope, terrace, etc.): Flat Local Relief:	Concave ☑ Convex ☐ None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.495124	Long: -73.020913 Datum: NAD83
Soil Map Unit Name: Tunbridge-Lyman association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ☑ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SLIMMARY OF FINDINGS. Attach site man showing compling point le	eastions transacts important features etc
SUMMARY OF FINDINGS - Attach site map showing sampling point to	ocations, transects, important leatures, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	s the Sampled Area
Hydric Soil Present?	within a Wetland? ☐ Yes ☑ No
Wetland Hydrology Present? Yes No	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
□ Saturation (A3) □ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
Sediment Deposits (B2)	Roots (C3) Saturation Visible on Aerial imagery (C9)
□ Drift Deposits (B3) □ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	(C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	
Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ✓ No
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspe-	ections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Acer saccharum Fraxinus americana	10 NO FACU 25 YES FACU
Tsuga canadensis Carya cordiformis	15 NO FACU 10 NO FAC
Total Cover:	60



Sapling/Shrub Stratum Plot Size: 15 Scientific Name Acer saccharum Acer pensylvanicum Fagus grandifolia Pinus strobus Tsuga canadensis Herb Stratum Plot Size: 5 Scientific Name THELYPTERIS NOVEBORACENSIS	Total Cover:	% Cover 5 35 10 20 5 75	Dominant NO YES NO YES NO YES NO	Indicator Status FACU FACU FACU FACU FACU FACU
Scientific Name Acer saccharum Acer pensylvanicum Fagus grandifolia Pinus strobus Tsuga canadensis Herb Stratum Plot Size: 5 Scientific Name THELYPTERIS NOVEBORACENSIS		5 35 10 20 5 75	NO YES NO YES NO	FACU FACU FACU FACU
Acer saccharum Acer pensylvanicum Fagus grandifolia Pinus strobus Tsuga canadensis Herb Stratum Plot Size: 5 Scientific Name THELYPTERIS NOVEBORACENSIS		5 35 10 20 5 75	NO YES NO YES NO	FACU FACU FACU FACU
Acer pensylvanicum Fagus grandifolia Pinus strobus Tsuga canadensis Herb Stratum Plot Size: 5 Scientific Name THELYPTERIS NOVEBORACENSIS		35 10 20 5 75	YES NO YES NO	FACU FACU FACU
Plot Size: 5 Scientific Name THELYPTERIS NOVEBORACENSIS		% Cover	Dominant	
Plot Size: 5 Scientific Name THELYPTERIS NOVEBORACENSIS			Dominant	
Scientific Name THELYPTERIS NOVEBORACENSIS			Dominant	
THELYPTERIS NOVEBORACENSIS			Dominant	
			1	Indicator Status
Woody Vine Stratum		20	YES	NONE
Woody Vine Stratum	Total Cover:	20	1	1
Woody Ville Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	1
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species		x 2 = <u>0</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species	FACU Species:	: <u>125</u>	x 4 = <u>500</u>	
That Are OBL, FACW, or FAC: 0 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	135 (A)	530 (B)	
		Prevalence Index		
Hydrophytic Vegetation Indicators:				
_				
3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting	Uvdrophytic \	/egetation Preser	nt2 🗖 Van F	7 No.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	пуагорпунс ч	regetation Fresei	nt? ☐ Yes ☑	☑ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	r confirm the ab	sence of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		-	Texture	Remarks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Texture	remans
0-1	5Y 2.5/1	100					OF	RGANIC	
					_				
1-9	5YR 6/8	50	5YR 4/6	50	С	М	l	LOAM	
9-18	10YR 4/4	100					SAN	IDY LOAM	
9-10	10114/4	100					SAN	IDT LOAIVI	
¹Type: C=Cond	centration. D=De	pletion	, RM=Reduced I	Matrix.	CS=Cov	ered Sand	or Coated Grain	ns. ² Location: PL=	Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	<u> </u>	o all LRR's, unle						oblematic Hydric Soils³:
☐ Histosol (A						-	8) (LRR R,	_	A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILŔA 1		(-	-, (,		e Redox (A16) (LRR K, L, R)
☐ Black Hist			ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B		Peat or Peat (S3) (LRR K, L, R)
_	Sulfide (A4)						LRR K, L)		e (S7) (LRR K, L, M)
	_ayers (A5)		_	•	Gleyed Ma	` '	•	<u> </u>	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1		-	d Matrix (F				urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		□ R	edox [Dark Surfa	ice (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	rface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox [Depression	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							□ Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallow	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pre	esent, unle	ess disturbed or p	problematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown				
								Hydric Soil Prese	nt? ☐ Yes ☑ No
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	ments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetla	and?	No Unknown
General Comm	onte:								
General Comm	enis.								





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145					4 71011	5001				41 4			
WE	ILA	אט טו	EIE	RMIN	ATION	FORM -	Northc	entral an	d No	ortheast	Region		
☑ Centerline ☐ Re-R	oute	□ A	ccess	Road	☐ Anc	illary Facility		Transmission	n Line	☐ Othe	er		
Project/Site: NED				Mile	oost: 10	7775.0	County:	Berksl	hire		Date:	06/18/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA	Samp	oling Point:	WR-M-W	015-PFO	
Investigators: CM		Quad	d Nam	ne: Plair	nfield		Townshi	p: Winds	sor				
Logbook No.: 3M	L	_ogbook	Pg.:	136	Tr	act: 1003	1						
Landform (hillslope, terrace,	etc.):	Slo	pe - n	nid	<u> </u>	Local R	elief:	Z Concave		Convex	None	Slope%.:	3
Subregion (LRR): Middl	e Atlant	tic			Lat: 42	.501327		Long:	-72.99	5775		Datum: NAI	D83
Soil Map Unit Name: Pe	ru-Marlo	ow asso	ciatio	n, rolling	extremely	stony				NWI Cla	ssification:	Not ma	pped
Are climatic / hydrologic cond	litions o	n the sit	e typi	ical for th	is time of y	/ear?: ▽	7 Yes	☐ No (If n	o, expl	lain in Rema	arks.)		
Are Vegetation Soil	□ ∘	r Hydrol	logy	☐ sig	nificantly d	listurbed?	√ No	Are "Norm	al" Circ	cumstances	present?	✓ Yes	☐ No
Are Vegetation Soil	□ ∘	r Hydrol	logy	nat	urally prob	lematic?	☑ No						
				_									
SUMMARY OF FINDI		Attac	h sit	te map	showir	ng samplir	ng point	t locations	s, trai	nsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		√ \	res _	No			Is the Sar	mnled	ΙΔτοα			
Hydric Soil Present?			√ \	Yes _	No			within a V			Yes [] No	
Wetland Hydrology Present?			√ \	Yes _	No								
Field Wetland Classification:	Р	PFO											
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicate	ors:								<u>S</u>	Secondary I	ndicators (2	or more requ	uired)
Primary Indicators (minimum	of one	required	d; che	ck all tha	it apply)					Surface	Soil Cracks	s (B6)	
✓ Surface Water (A1)				V	Water-Stai	ned Leaves (B9)		5	✓ Drainag	e Patterns ((B10)	
✓ High Water Table (A2)				_	Aquatic Fa	•	,			Moss Ti	rim Lines (B	16)	
✓ Saturation (A3)					Marl Depo:	sits (B15)				☐ Dry-Sea	son Water	Table (C2)	
☐ Water Marks (B1)					Hydrogen :	Sulfide Odor	(C1)			Crayfish	Burrows (C	C8)	
☐ Sediment Deposits (B2)					Oxidized R	Rhizospheres	along Livir	ng Roots (C3)) [Saturati	on Visible o	n Aerial imag	jery (C9)
☐ Drift Deposits (B3)					Presence o	of Reduced In	on (C4)			Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)					Recent Iro	n Reduction is	n Tilled So	oils (C6)		Geomoi	phic Position	on (D2)	
☐ Iron Deposits (B5)					Thin Muck	Surface (C7)				Shallow	Aquitard (D	03)	
☐ Inundation Visible on A	erial Ima	agery (B	7)		Other (Exp	lain in Remai	rks)			Microtop	oographic R	elief (D4)	
☐ Sparsely Vegetated Cor	ncave S	Surface (B8)						5	✓ FAC-Ne	eutral Test (I	D5)	
Field Observations:													
Surface Water Present?	 ✓ Y	∕es □	No	Dept	h (inches):	1							
Water Table Present?	 ✓ Y	∕es □	No	Dept	h (inches):	0		Wetlar	nd Hyd	Irology Pre	sent?		
Saturation Present? (includes capillary fringe)	∀ Y	∕es □	No	Dept	h (inches):	0					V	Yes □	No
Remarks (Describe Recorded	Data /	stream o	nage	monitori	ng well ac	rial photos p	revious ins	nections) if a	availahl	le)·			
Tremarks (Bescribe Recorded	Data (ou cam g	gago,	momon	ig weii, ac	nai priotos, pi	icvious inc	,pections), ii e	avanabi	10).			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name								% C	over	0-	minant	Indiact	or Status
Prunus serotina								10		_	minant NO		CU
Acer saccharum								10	0		NO	FA	CU
Fraxinus pennsylvanica						-	otal Carr	- 50 7		,	/ES	FA	CW
						'	otal Cove	ı. <i>1</i>	0				



1 Tovidence, IXI 02304				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Acer saccharum		50 20	YES YES	FAC FACU
Ace Saconarum	Total Cover:	70	123	1 400
Herb Stratum				
Plot Size: 5	1		1	I
Scientific Name		% Cover	Dominant	Indicator Status
Thelypteris palustris		40	YES	FACW
	Total Cover:	40		
Woody Vine Stratum				
Plot Size: 30	1		1	ı
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species:	90	x 2 = <u>180</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>50</u>	x 3 = <u>150</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)	FACU Species:	<u>40</u>	x 4 = <u>160</u>	
That Are OBL, FACW, or FAC: 75 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	180 (A)	490 (B)	
	F	Prevalence Index	= B/A = <u>2.72</u>	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☑ Yes □	7 No.
data in Remarks or on a separate sheet)	,	-g	💆 163 💆	1 110
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:		·		



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures		_		6 .
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ture	Remarks
0-6	2.5Y 3/2	100					FINE SAN	DY LOAM	
6-14	10YR 5/2	40	10YR 6/1	60	D	М	FINE SAN	DY LOAM	
¹Type: C=Cond	centration, D=De	pletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	icators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A	A1)					Surface (S	8) (LRR R,	□ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		N	1LRA 1	49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□т	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	ayers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔽 🗅	eplete	d Matrix (I	F3)		☐ Thin Dark Su	ırface (S9) (LRR K, L)
☐ Thick Dark	Surface (A12)		☐ R	ledox [Dark Surfa	ce (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	cky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		☐ R	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of h	ydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Remarks:								Hydric Soil Prese	nt? ☑ Yes □ No
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: 🔲 High	П	Moderate √	Low			Isolated Wetland?	P ☑ Yes ☐	No □ Unknown
		<u> </u>	viodorato 🛂				Toolatoa Wottana.		
General Comm	enis.								





SW



WE	TLAND) DET	ERN	IINATI	ON F	ORM - I	Northc	entra	al and	Nort	heast	Region	l	
☑ Centerline ☐ Re-R	oute] Acces	ss Roa	d 🔲	Ancilla	ary Facility		Transn	mission Lir	ne	☐ Oth	er		
Project/Site: NED			ı	Milepost:	1080	21.5	County:		Berkshire	!		Date:	06/19/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA	Sa	mplin	g Point	WR-M-W	/016-PFO	
Investigators: CM		Quad Na	ame: I	Plainfield			Townshi	p:	Windsor					
Logbook No.: 4M	Logi	oook Pg	.: 9		Trac	t: 1003								
Landform (hillslope, terrace,	etc.):	Slope	- mid			Local R	elief:	Z Coi	ncave [Co	nvex	☐ None	Slope%.:	5
Subregion (LRR): Middl	e Atlantic			Lat	42.50	01586		Lor	ng: -72	.99492	29		Datum: NA	D83
Soil Map Unit Name: Be	rkshire-Mai	rlow ass	ociatio	n, 15 to 4	5 perce	nt slopes, s	steep, extr	emely	stony		NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	ne site ty	pical fo	or this tim	e of yea	ar?: ▼	7 Yes		No (If no, e	explain	in Rema	arks.)		
Are Vegetation Soil	or H	ydrology	,	significa	ntly dist	turbed?	☑ No	Are	"Normal"	Circun	nstances	present?	√ Yes	☐ No
Are Vegetation Soil	or H	ydrology	['] □	naturally	proble	matic?	☑ No							
SUMMARY OF FINDII	NGS - Af	tach s	site n	nap sho	wina	samplir	na poin	t loca	ations. t	rans	ects. i	mportan	t features	. etc.
Hydrophytic Vegetation Pres		V	Yes	No		•	<u> </u>					•		<u>*</u>
Hydric Soil Present?		_ ☑	Yes	— П No)				ne Samp] Yes [□ No	
Wetland Hydrology Present?		<u> </u>	Yes					with	in a Wet	land	, –			
Field Wetland Classification:	PFO													
Remarks:														
HYDROLOGY														
Wetland Hydrology Indicate	ors:									Sec	ondary I	ndicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one req	uired; cl	heck al	ll that app	<u>ly)</u>						Surface	Soil Crack	s (B6)	
☐ Surface Water (A1)			5	⊘ Wate	-Staine	d Leaves (B9)			$\overline{\checkmark}$	_	e Patterns		
✓ High Water Table (A2)				☐ Aquat	ic Faun	na (B13)						rim Lines (E	•	
✓ Saturation (A3)				Marl [Deposit	s (B15)					-	ason Water		
□ Water Marks (B1)				☐ Hydro	gen Su	Ifide Odor ((C1)				-	n Burrows (•	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhi	zospheres	along Livii	ng Roo	ots (C3)		Saturat	on Visible o	on Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of	Reduced In	on (C4)				Stunted	or Stresse	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recei	nt Iron F	Reduction in	n Tilled So	ils (C6	5)		Geomo	rphic Position	on (D2)	
☐ Iron Deposits (B5)				Thin I	Muck Si	urface (C7)					Shallow	Aquitard (I	D3)	
☐ Inundation Visible on A	erial Image	ry (B7)		Other	(Explai	in in Remar	rks)				Microto	pographic F	Relief (D4)	
☐ Sparsely Vegetated Con	ncave Surfa	ace (B8)								✓	FAC-Ne	eutral Test (D5)	
Field Observations:														
Surface Water Present?	☐ Yes	√ 1	No [Depth (inc	hes):									
Water Table Present?	✓ Yes		No [Depth (inc	hes):	0		,	Wetland I	Hydrol	logy Pre	sent?	_	
Saturation Present? (includes capillary fringe)	✓ Yes	1	No [Depth (inc	hes):	0						✓	∣ Yes □	No
Remarks (Describe Recorded	l Data (stre	am gag	e, mon	itoring we	II, aeria	l photos, pr	revious ins	spection	ns), if avai	lable):				
VEGETATION														
Tree Stratum														
Plot Size: 30														
Scientific Name									% Cove	r	Do	minant	Indicat	or Status
Acer saccharum Ostrya virginiana									40 15			YES NO		ACU ACU
Acer rubrum									40			YES		AC
						Т	otal Cove	r:	95					



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Tsuga canadensis Betula alleghaniensis Fraxinus pennsylvanica		10 20 15	NO YES NO	FACU FAC FACW
Acer rubrum	T 0	10	NO	FAC
	Total Cover:	55		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Onoclea sensibilis		15	NO	FACW
Impatiens capensis	Total Cover:	30 45	YES	FACW
MALE SHOWN THE STATE OF THE STA	Total Cover.	45		
Woody Vine Stratum Plot Size: 30				
	I	l «.a	1 5	1
Scientific Name		% Cover	Dominant	Indicator Status
	T 0			
	Total Cover:			
Dominance Test Worksheet:		dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover	of:	Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	s: <u>60</u>	x 2 = <u>120</u>	
	FAC Species:	<u>70</u>	x 3 = <u>210</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)	FACU Species		x 4 = 260	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	: <u>195 (A)</u>	<u>590 (B)</u>	
		Prevalence Index	$= B/A = \underline{3.03}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	Vegetation Prese	nt? ☑ Yes [□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	·			



SOIL												
Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	Matrix		Re	dox Fe	atures		_		Remarks			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture					
0-1	10YR 2/1	100					ORGA	NIC				
1-12 5GY 6/1 70			N6	30	С	М	LOAMY	SAND				
1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. 2Location: PL=Pore Lining, M=Matrix												
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :												
☐ Histosol (A1) ☐ Polyvalue Below Surface (S8) (LRR R, ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B) ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)												
Histic Epipedon (A2) Coast Prairie Redox (A16) (LRR K, L, R)												
☐ Black His									Peat or Peat (S3) (LRR K, L, R)			
	Sulfide (A4)			-	=		LRR K, L)	_	e (S7) (LRR K, L, M)			
	Layers (A5)	(4.	_	-	Gleyed Ma			_	elow Surface (S8) (LRR K, L)			
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L)												
	k Surface (A12)		_		Dark Surfa				ese Masses (F12) (LRR K, L, R)			
	ucky Mineral (S1)		_	•		ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)			
	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)			
	_ ,											
☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12)									, ,			
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)			
3Indicators of	hydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	lematic.				
Restrictive Layer Present?												
Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown												
General Comn	nents:											





NE



WE	TLAND) DET	ERN	IINATI	ON F	ORM - I	Northc	entral a	nd N	ortheast	Region		
☑ Centerline ☐ Re-R	oute] Acces	ss Roa	ıd 🔲	Ancilla	ry Facility		Transmissio	on Line	☐ Oth	ier		
Project/Site: NED			ı	Milepost:	10909	98.2	County:	Berk	shire		Date:	06/22/201	15
Applicant/Owner: Kinder Mo	rgan						State:	MA	Sam	pling Point	: WR-M-W	/020-PFO	
Investigators: CM		Quad Na	ame:	Plainfield			Townshi	p: Wind	dsor				
Logbook No.: 4M	Logi	oook Pg	.: 24		Trac	t: 1003	•						
Landform (hillslope, terrace,	etc.):	Slope	- mid	'		Local R	elief:	Z Concave	₽ 🔲	Convex	None	Slope%.:	5
Subregion (LRR): Middl	e Atlantic			Lat	: 42.50	02454		Long:	-72.99	91108		Datum: NA	D83
Soil Map Unit Name: Be	rkshire-Ma	rlow ass	ociatio	n, 15 to 4	5 perce	nt slopes, s	steep, extr	emely stony	,	NWI Cla	assification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	ne site ty	pical f	or this tim	e of year	ar?: ▽	7 Yes	☐ No (If	no, exp	lain in Rem	arks.)		
Are Vegetation Soil	or H	ydrology	, _□	significa	ntly dist	urbed?	☑ No	Are "Nori	mal" Cir	cumstances	s present?	 ✓ Yes	☐ No
Are Vegetation Soil	or H	ydrology	[']	naturally	/ probler	matic?	☑ No						
SUMMARY OF FINDII	NGS - A	tach e	site n	nan sh	owina	samnlir	na noin	t location	ne tra	inserts i	mnortan	t features	etc
Hydrophytic Vegetation Pres		<u>√</u>	Yes			campin	ig poiii	r roodiror	10, 110		inportan	r routur oc	
Hydric Soil Present?		☑	Yes					Is the Sa			∐ Yes □	□ No	
Wetland Hydrology Present?		☑	Yes					within a	Wetla	nd?	_ 1 C 3 _	40	
Field Wetland Classification:	PFC												
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicate	ors:									Secondary I	Indicators (2	or more req	uired)
Primary Indicators (minimum	of one rec	uired; cl	heck a	ll that app	oly)					☐ Surface	e Soil Cracks	s (B6)	
✓ Surface Water (A1)			5	✓ Wate	r-Staine	d Leaves (B9)						
✓ High Water Table (A2)				☐ Aqua	tic Faun	a (B13)	Moss Trim Lines (B16)						
✓ Saturation (A3)				Marl	Deposits	s (B15)	Dry-Season Water Table (C2)						
■ Water Marks (B1)				Hydro	ogen Su	lfide Odor (
☐ Sediment Deposits (B2)				Oxidi	zed Rhiz	zospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)						gery (C9)
☐ Drift Deposits (B3)				Prese	ence of I	Reduced In	<u>_</u>						
☐ Algal Mat or Crust (B4)				Rece	nt Iron F	Reduction in	n Tilled Sc	Tilled Soils (C6) Geomorphic Position (D2)					
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)							Shallow Aquitard (D3)						
☐ Inundation Visible on A	erial Image	ry (B7)		Othe	r (Explai	n in Remar	rks)	·					
□ Sparsely Vegetated Concave Surface (B8) □ FAC-Neutral Test (D5)													
Field Observations:													
Surface Water Present?	✓ Yes	1	l ol	Depth (inc	ches):								
Water Table Present?	✓ Yes	1	l ol	Depth (ind	ches):	1		Wetla	and Hy	drology Pre		<u> </u>	
Saturation Present? (includes capillary fringe)	☑ Yes	1	No [Depth (ind	ches):	0					V	Yes □	No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):													
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name								% (Cover	De	ominant	Indicat	or Status
Betula alleghaniensis Tsuga canadensis Fagus grandifolia									70 20 10		YES NO NO	FA	AC ACU ACU
. agae g.ananona						Т	otal Cove	1	100	I		1	



Providence, Ri 02904										
Sapling/Shrub Stratum										
Plot Size: 15										
Scientific Name		% Cover	Dominant	Indicator Status						
Tsuga canadensis Betula alleghaniensis		5 20	NO NO	FACU FAC						
Detula allegriarilerisis	Total Cover:	25	NO	TAC						
Herb Stratum										
Plot Size: 5	1		ı	ı						
Scientific Name		% Cover	Dominant	Indicator Status						
Impatiens capensis Dryopteris intermedia		5 5	NO NO	FACW FAC						
	Total Cover:	10	I	l						
Woody Vine Stratum										
Plot Size: 30										
Scientific Name		% Cover	Dominant	Indicator Status						
	Total Cover:		ı							
Dominance Test Worksheet:	Prevalence Index Worksheet:									
Number of Dominant Species	Total % Cover of: Multiply by:									
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>							
Total Number of Dominant Species Across All Strata: 1 (B)	FACW Species:	<u>5</u>	x 2 = <u>10</u>							
Species Across All Strata: 1 (B)	FAC Species:	<u>95</u>	x 3 = <u>285</u>							
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>35</u>	x 4 = <u>140</u>							
That Ale ODE, I AGW, OIT AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>							
	Column Totals:	<u>135 (A)</u>	435 (B)							
	F	Prevalence Index =	= B/A = <u>3.22</u>							
Hydrophytic Vegetation Indicators:										
1 - Rapid Test for Hydrophytic Vegetation										
✓ 2 - Dominance Test is > 50%										
☐ 3 - Prevalence Index is ≤ 3.0										
✓ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☑ Yes ☐ No									
data in Remarks or on a separate sheet)										
☐ Problematic Hydrophytic Vegetation¹ (Explain)										
¹ Indicators of hydric soil and wetland hydrology must be										
present, unless disturbed or problematic.										
Remarks: BUTTRESSED ROOTS PRESENT										



SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				6
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-1	5Y 2.5/1	100					ORG <i>i</i>	ANIC	
1-14	N7	30	10Y 6/1	70	С	M	FINE SANI	DY LOAM	
1T. 0.0		1.0	DM D I I		00.0			21 t' DI	D. III M.M.C.
		•	-				or Coated Grains.		Pore Lining, M=Matrix
		cable	to all LRR's, unle				0) // DD D		oblematic Hydric Soils ³ :
Histosol (•			/ILRA 1		Surface (S	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
= '	pedon (A2)			hin Do	rk Curfood	- (SO) (LB)	D D MI DA 140D)		Redox (A16) (LRR K, L, R)
☐ Black His							R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_	-	-		(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)	200 (A	· 	-	Gleyed Ma				elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ACE (A			d Matrix (I				urface (S9) (LRR K, L)
	k Surface (A12)		_		Dark Surfa				ese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)	1	_	•		ırface (F7)			podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		□ F	keaox i	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re								_	Material (F21)
_	Matrix (S6)	MID	1 4 40D)					_ '	Dark Surface (TF12)
	ace (S7) (LRR R		•						in in Remarks)
Restrictive Lay		tation a	and wetland nydro	ology n	nust be pr	esent, unie	ess disturbed or prob	Diematic.	
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Quali	ty: High	V	Moderate	Low			Isolated Wetland?	Yes 🗹	No Unknown
General Comm	nents:								





ΝE



WETLAND DETERMINATION FORM - Norti	ncentral an	d Northeast Re	gion	
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission	Line		
Project/Site: NED Milepost: 108998.6 Coun	ty: Berksh	nire	Date: 06/22/2015	
Applicant/Owner: Kinder Morgan State	: MA	Sampling Point: W	R-M-W020-UPL	
Investigators: CM Quad Name: Plainfield Town	ship: Winds	or		
Logbook No.: 4M Logbook Pg.: 26 Tract: 1003				
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave	☑ Convex □	None Slope%.: 7	
Subregion (LRR): Middle Atlantic Lat: 42.502532	Long:	-72.991537	Datum: NAD83	
Soil Map Unit Name: Berkshire-Marlow association, 15 to 45 percent slopes, steep, 6	extremely stony	NWI Classific	cation: Not mapped	
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If n	o, explain in Remarks.)		
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ N	o Are "Norm	al" Circumstances pres	sent? ☑ Yes ☐ No	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ N	0			
SUMMARY OF FINDINGS - Attach site map showing sampling po	int locations	s, transects, impo	ortant features, etc.	
Hydrophytic Vegetation Present? ☐ Yes ☑ No				
Hydric Soil Present? ☐ Yes ☑ No	is the San within a V	npled Area Vetland? □ Y	es ☑ No	
Wetland Hydrology Present?				
Field Wetland Classification: UPLAND PLOT				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		Secondary Indica	ators (2 or more required)	
Primary Indicators (minimum of one required; check all that apply)		☐ Surface Soil	Cracks (B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		Drainage Pa	tterns (B10)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			ines (B16)	
☐ Saturation (A3) ☐ Marl Deposits (B15)		□ Dry-Season	Water Table (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish Bur	rows (C8)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along L	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)			
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	on (C4) Stunted or Stressed Plants (D1)			
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	n Tilled Soils (C6) Geomorphic Position (D2)			
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)			
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)			
☐ Sparsely Vegetated Concave Surface (B8)		☐ FAC-Neutral	Test (D5)	
Field Observations:				
Surface Water Present?				
Water Table Present? Yes No Depth (inches):	Wetlan	nd Hydrology Present	? □ Yes ☑ No	
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)			□ Tes 🖭 NO	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	inspections), if a	vailable):		
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name	% Co	over Domina	ant Indicator Status	
Tsuga canadensis Acer saccharum	50 40		FACU FACU	
Total Co	over: 90	0		



Providence, Ri 02904			- 1			
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Tsuga canadensis		5	NO	FACU		
	Total Cover:	5				
Herb Stratum						
Plot Size: 5						
Scientific Name	1	% Cover	Dominant	Indicator Status		
Dryopteris intermedia		5	NO	FAC		
Diyopona memodia	Total Cover:	5	140	17.0		
Woody Vine Stratum	Total Cover.					
Plot Size: 30						
Scientific Name	1	% Cover	Dominant	Indicator Status		
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:				
Number of Dominant Species	Total % Cover of		Multiply by:			
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant	FACW Species:		x 2 = 0			
Species Across All Strata: 2 (B)	FAC Species:	. <u> </u>	x 3 = 15			
Percent of Dominant Species	FACU Species:		x 4 = 380			
That Are OBL, FACW, or FAC: 0 (A/B)	UPL Species:	<u>0</u>	$x \cdot 5 = 0$			
	Column Totals:		395 (B)			
	r	Prevalence Index :	= B/A = <u>3.95</u>			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
2 - Dominance Test is > 50%						
3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	Hydrophytic Vegetation Present? ☐ Yes ☑ No				
data in Nemarks of on a separate sheety						
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹Indicators of hydric soil and wetland hydrology must be						
present, unless disturbed or problematic.						
Remarks:						



SOIL											
Profile Descrip	tion: (Describe	the de	epth needed to d	locum	ent the in	dicator o	r confirm t	he absen	ce of indicators.)		
Depth (inches)	Matrix		Red	lox Fe	atures			Text	Ire		Remarks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		16811	il e		Remarks
0-1	10YR 2/1	100						ORGA	NIC		
	N/D - /0	400									
1-7	7.5YR 5/6	100						LOA	M		
7-18	7.5YR 5/4	50	7.5YR 5/8	50				LOA	M		
7 10	7.011(0)1		7.011(0/0	00				2071			
¹Type: C=Cond	centration, D=De	epletion	l n, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining,	M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)			Indicators for Pr	oblematic H	ydric Soils³:
☐ Histosol (A	A1)					Surface (S	8) (LRR R,		☐ 2 cm Muck (A10) (LRR K,	L, MLRA 149B)
☐ Histic Epip	pedon (A2)		N	ILRA 1	49B)				☐ Coast Prairie	Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□⊤	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)	☐ 5 cm Mucky	Peat or Peat	(S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRR K	C, L, M)
☐ Stratified L	ayers (A5)			oamy (Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surface	(S8) (LRR K, L)
☐ Depleted i	Below Dark Surfa	ace (A1	11) 🔲 D	eplete	d Matrix (I	F3)			☐ Thin Dark Su	ırface (S9) (L	RR K, L)
☐ Thick Dark	Surface (A12)		☐ R	edox [Dark Surfa	ce (F6)			☐ Iron-Mangan	ese Masses	(F12) (LRR K, L, R)
☐ Sandy Mu	cky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	odplain Soils	s (F19) (MLRA 149B)
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B									A 144A, 145, 149B)		
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F21))
☐ Stripped N	Matrix (S6)								□ Very Shallov	/ Dark Surfac	e (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						☐ Other (Expla	in in Remarks	3)
3Indicators of h	ydrophytic vege	tation a	and wetland hydro	logy n	nust be pre	esent, unle	ess disturbe	ed or prob	lematic.		
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown						
									Hydric Soil Prese	nt? 🔲 Y	Yes ☑ No
Remarks:											
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	ments:					
Wetland Qualit	y: High		Moderate	_OW			Isolated	Wetland?	☐ Yes ☐	No 🔲	Unknown
General Comm	ents:										







WETLAND DETERMINATION FOR	M - Northcentral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary F	acility
Project/Site: NED Milepost: 116307.8	County: Hampshire Date: 06/25/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: PL-M-W006-PF0
Investigators: PF CM Quad Name: Plainfield	Township: Plainfield
Logbook No.: 2015-1 Logbook Pg.: 24 Tract: 9	30
Landform (hillslope, terrace, etc.): Slope - mid L	ocal Relief: ☑ Concave ☐ Convex ☐ None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.50953	7 Long: -72.966132 Datum: NAD83
Soil Map Unit Name: Lyman-Tunbridge association, rolling, extremely s	tony NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	✓ Yes ☐ No (If no, explain in Remarks.)
Are Vegetation Soil or Hydrology significantly disturbe	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problemati	
The regolation - Con - Control of the Indianal problemati	
SUMMARY OF FINDINGS - Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No	
Hydric Soil Present? ☑ Yes ☐ No	ls the Sampled Area ☑ Yes □ No within a Wetland?
Wetland Hydrology Present? ☑ Yes ☐ No	
Field Wetland Classification: PFO	
Remarks: LOGGING ROAD RUT AREA	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☑ Surface Water (A1) ☐ Water-Stained Le	aves (B9) Drainage Patterns (B10)
☑ High Water Table (A2) ☐ Aquatic Fauna (B	13) Moss Trim Lines (B16)
☑ Saturation (A3) ☐ Marl Deposits (B	5) Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide	Odor (C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizosp	heres along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Red	uced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	ction in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface	<u> </u>
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in	Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ✓ Yes ☐ No Depth (inches): 1	
Water Table Present?	Wetland Hydrology Present?
Saturation Present?	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial pho	otos, previous inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Fagus grandifolia	10 YES FACU
Tsuga canadensis Betula alleghaniensis	30



Providence, RI 02904							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name			% Cover	Dominant	Indicator Status		
Fagus grandifolia Acer pensylvanicum Viburnum lantanoides		Total Cover:	15 5 5 25	YES YES YES	FACU FACU FACU		
Herb Stratum							
Plot Size: 5							
Scientific Name		1	% Cover	Dominant	Indicator Status		
Juncus effusus Carex vulpinoidea Parathelypteris noveboracensis Carex lurida Carex crinita			20 25 15 25 20	YES YES NO YES YES	OBL OBL FAC OBL OBL		
		Total Cover:	105				
Woody Vine Stratum							
Plot Size: 30							
Scientific Name			% Cover	Dominant	Indicator Status		
		Total Cover:					
Dominance Test Worksheet:		Prevalence Ind	lex Worksheet:				
Number of Dominant Species That Are OBL, FACW, or FAC:	5 (A)	Total % Cover of	of:	Multiply by:			
That Are OBL, FACW, or FAC.	<u> </u>	OBL Species:	<u>90</u>	x 1 = <u>90</u>			
Total Number of Dominant Species Across All Strata:	10 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>			
		FAC Species:	<u>25</u>	x 3 = <u>75</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50 (A/B)</u>	FACU Species:	<u>65</u>	x 4 = <u>260</u>			
		UPL Species:	<u>0</u>	x 5 = <u>0</u>			
		Column Totals:	<u>180 (A)</u>	<u>425 (B)</u>			
		F	Prevalence Index =	= B/A = 2.36			
Hydrophytic Vegetation Indicators:							
☐ 1 - Rapid Test for Hydrophytic Veg	etation						
☐ 2 - Dominance Test is > 50%							
3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Prodata in Remarks or on a separate		Hydrophytic Vegetation Present? ☑ Yes ☐ No					
☐ Problematic Hydrophytic Vegetatio	n¹ (Explain)						
¹ Indicators of hydric soil and wetland hy- present, unless disturbed or problemation							
Remarks:							



TOVIGOTICO, I	11 02304									
SOIL										
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	confirm the abser	nce of indicators.)		
Depth	Matrix		Re	dox Fe	atures					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks	
0-10	10YR 2/2	98	7.5YR 3/4	2	С	M,PL	FINE SAN	DY LOAM		
10-20	5G 4/1	95	7.5YR 4/4	5	С	М	SANDY	LOAM		
Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	rered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix	
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:	
☐ Histosol (/			•			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)	
	pedon (A2)			/ILŔA 1		,		_	e Redox (A16) (LRR K, L, R)	
☐ Black Hist				hin Da	ırk Surface	e (S9) (LRI	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)	
	Sulfide (A4)					neral (F1) (·		e (S7) (LRR K, L, M)	
	Layers (A5)			-	Gleyed Ma		, ,	_	elow Surface (S8) (LRR K, L)	
_	Below Dark Surfa	ace (A1	_	-	d Matrix (_	urface (S9) (LRR K, L)	
_ '	k Surface (A12)	•	· —	•	Dark Surfa	•		_	nese Masses (F12) (LRR K, L, R)	
	ıcky Mineral (S1)		_			urface (F7)			podplain Soils (F19) (MLRA 149B)	
	eyed Matrix (S4)		_	•	Depressio	` '			c (TA6) (MLRA 144A, 145, 149B)	
☐ Sandy Re	edox (S5)		_		•				Material (F21)	
☐ Stripped N	Matrix (S6)								v Dark Surface (TF12)	
	ace (S7) (LRR R	, MLRA	A 149B)						in in Remarks)	
_			•	ology n	nust he nr	esent unle	ess disturbed or prob		,	
Remarks:							I			
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:				
Wetland Qualit	ty:	☑ 1	Moderate	Low			Isolated Wetland?	? ☐ Yes ☑	No 🔲 Unknown	
Conoral Comm	onto:									
General Comm	ients:									





WEST



WE	TLAND	DETI	ERMII	NATI	ON FORM - I	Northce	entral a	nd No	ortheast	Region		
☑ Centerline ☐ Re-R	oute	Acces	s Road		Ancillary Facility		Transmissio	n Line	☐ Othe	er		
Project/Site: NED			Mil	epost:	116369.6	County:	Ham	pshire		Date:	06/25/201	5
Applicant/Owner: Kinder Mo	rgan		·			State:	MA	Sam	pling Point:	PL-M-W0	06-UPL	
Investigators: SE	(Quad Na	me: Pla	ainfield		Township	: Plair	nfield				_
Logbook No.: 1E	Logb	ook Pg.:	: 51		Tract: 930							
Landform (hillslope, terrace,	etc.):	Slope -	mid		Local R	elief:] Concave	• 🗹	Convex	☐ None	Slope%.:	6
Subregion (LRR): Middl	e Atlantic			Lat:	42.509444		Long:	-72.96	55845		Datum: NA	D83
Soil Map Unit Name: Lyi	nan-Tunbri	dge asso	ociation,	rolling,	extremely stony				NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site typ	oical for	this time	e of year?:	7 Yes	☐ No (If	no, exp	lain in Rema	rks.)		
Are Vegetation Soil	or Hy	drology	☐ s	ignifica	ntly disturbed?	☑ No	Are "Nor	mal" Cir	cumstances	present?	✓ Yes	☐ No
Are Vegetation	or Hy	drology	□ n	aturally	problematic?	☑ No						
SUMMARY OF FINDI	NGS - At	tach s	ite ma	p sho	wing samplir	ng point	location	ıs, tra	nsects, ir	nportant	features	, etc.
Hydrophytic Vegetation Pres	ent?		Yes	√ No)		la tha Ca					
Hydric Soil Present?			Yes	√ No)		Is the Sa within a			Yes 🛂	∐ No	
Wetland Hydrology Present?			Yes	√ No)							
Field Wetland Classification:	UPL	AND PLO	TC									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicate	ors:							9	Secondary Ir	ndicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one req	uired; ch	eck all t	nat app	l <u>y)</u>			[Surface	Soil Cracks	(B6)	
☐ Surface Water (A1)				Water	-Stained Leaves (I	B9)		[☐ Drainag	e Patterns (B10)	
☐ High Water Table (A2)				Aquat	ic Fauna (B13)			[☐ Moss Tr	im Lines (B	16)	
☐ Saturation (A3)				Marl [Deposits (B15)			[☐ Dry-Sea	son Water	Table (C2)	
■ Water Marks (B1)				Hydro	gen Sulfide Odor ((C1)		[_	Burrows (C	· ·	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)				gery (C9)		
☐ Drift Deposits (B3)				Prese	nce of Reduced Ire	<u> </u>						
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction in	· ,						
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7)		Shallow Aquitard (D3)					
☐ Inundation Visible on A	_			Other	(Explain in Remar	ks)				ographic R		
Sparsely Vegetated Con	ncave Surfa	ice (B8)						L	FAC-Ne	utral Test ([J5) 	
Field Observations:	_											
Surface Water Present?	Yes	✓ N		pth (inc	•							
Water Table Present?	Yes	☑ N		pth (inc	•		Wetla	and Hyd	drology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	⊘ N	о De	pth (inc	hes):					_	.00	
Remarks (Describe Recorded	Data (strea	am gage	, monito	ring we	ll, aerial photos, pr	revious insp	pections), if	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% (Cover	Do	minant	Indicate	or Status
Tsuga canadensis Fagus grandifolia Betula alleghaniensis Fraxinus americana								25 15 8 10	Y	ÉS ÉS NO NO	FA F	ACU ACU AC ACU
					Т	otal Cover	:	58	ı		1	



Sapling/Shrub Stratum			,			
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Viburnum lantanoides		3	NO	FACU		
	Total Cover:	3		17.00		
Herb Stratum						
Plot Size: 5	,		1	ı		
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Woody Vine Stratum						
Plot Size: 30			ı	ı		
Scientific Name		% Cover	Dominant	Indicator Status		
	T					
	Total Cover:					
Dominance Test Worksheet:		dex Worksheet:				
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)	Total % Cover		Multiply by:			
	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>			
	FAC Species:	<u>8</u>	x 3 = <u>24</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species	: <u>53</u>	x 4 = <u>212</u>			
	UPL Species:	<u>0</u>	x 5 = <u>0</u>			
	Column Totals:	61 (A)	<u>236 (B)</u>			
		Prevalence Index =	= B/A = 3.87			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
2 - Dominance Test is > 50%						
☐ 3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☐ Yes ☑ No					
data in Remarks or on a separate sheet)						
Problematic Hydrophytic Vegetation¹ (Explain)						
¹Indicators of hydric soil and wetland hydrology must be						
present, unless disturbed or problematic.						
Remarks:						



Providence, R	RI 02904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	confirm the abse	ence of indicators.)	
Depth	Matrix		-	dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	xture	Remarks
0-3	7.5YR 3/2	100					ORG	BANIC	
3-5	10YR 2/1	100					ORG		
5-9	10YR 4/3	100					SAND	Y LOAM	
9-20	7.5YR 4/4	100					FINE SAI	NDY LOAM	
1T 0.0			DM D		00.0		0 1 10 1	al .: Di	D. III M. M. M.
	•		-				or Coated Grains.		Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unl	ess otl	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A	A1)			Polyvalı //LRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		יו	/ILIXA	1490)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ¹	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)		ا 🗖	oamy	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)		□ I	oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔲 [Deplete	d Matrix (F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		□ F	☐ Iron-Mangan	=				
☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Piedmont Floodplain Soils (F19) (MLRA 149E									
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallow	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	. MLRA	(149B)						in in Remarks)
_			·	oloav n	nust be pr	esent unle	ess disturbed or pro		,
Restrictive Lay					Inknown				
Restrictive Lay	er Fresent?	ш .	res 🔽 140	ш °	JIKIOWII			Hydric Soil Prese	nt? ☐ Yes ☑ No
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland	d? ☐ Yes ☐	No 🔲 Unknown
General Comm	ents:								





Ε



WETLAND DETERMINATION FORM - Northcentral and Northeast Region									
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Tra	ansmission Line								
Project/Site: NED Milepost: 116524.4 County:	Hampshire Date: 06/25/2015								
Applicant/Owner: Kinder Morgan State: MA	A Sampling Point: PL-M-W004-PFO								
Investigators: SE Quad Name: Plainfield Township:	Plainfield								
Logbook No.: 1E Logbook Pg.: Tract: 930									
Landform (hillslope, terrace, etc.): Depression Local Relief:	Concave Convex None Slope%.: 1								
Subregion (LRR): Middle Atlantic Lat: 42.509324	Long: -72.965180 Datum: NAD83								
Soil Map Unit Name: Lyman-Tunbridge association, rolling, extremely stony	NWI Classification: Not mapped								
Are climatic / hydrologic conditions on the site typical for this time of year?: ✓ Yes ✓	No (If no, explain in Remarks.)								
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes ☐ No								
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No									
SUMMARY OF FINDINGS - Attach site map showing sampling point lo	ocations transects important features etc								
Hydrophytic Vegetation Present? ✓ Yes ☐ No	realistic, manifestic, imperialit realistics, ster								
Hydric Soil Present?	s the Sampled Area								
Wetland Hydrology Present? ✓ Yes ☐ No	vithin a Wetland? ☑ Tes ☐ No								
Field Wetland Classification: PFO									
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)								
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)								
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)								
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)									
✓ Saturation (A3) ☐ Marl Deposits (B15)	□ Dry-Season Water Table (C2)								
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)								
Sediment Deposits (B2)	Roots (C3) Saturation Visible on Aerial imagery (C9)								
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	on (C4) Stunted or Stressed Plants (D1)								
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils	Comment Destrict (DO)								
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)								
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	(S) Microtopographic Relief (D4)								
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)								
Field Observations:									
Surface Water Present? ☐ Yes ☑ No Depth (inches):									
Water Table Present? ✓ Yes ☐ No Depth (inches): 1	Wetland Hydrology Present? ✓ Yes □ No								
Saturation Present? ✓ Yes ☐ No Depth (inches): 0 (includes capillary fringe)	<u>_</u>								
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspec	ctions), if available):								
VEGETATION									
Tree Stratum									
Plot Size: 30	1								
Scientific Name	% Cover Dominant Indicator Status								
Fraxinus americana Acer rubrum	10 NO FACU 15 NO FAC								
Tsuga canadensis Betula alleghaniensis	60 YES FACU 35 YES FAC								
Total Cover:	120								
1 3 3 3 3 3 3 3									



Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
	Total Cover:					
Herb Stratum						
Plot Size: 5	ı		I	I		
Scientific Name		% Cover	Dominant	Indicator Status		
Dryopteris carthusiana		8	YES	FACW		
	Total Cover:	8				
Woody Vine Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:				
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover	of:	Multiply by:			
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	s: <u>8</u>	x 2 = <u>16</u>			
Species Across All Strata: 3 (B)	FAC Species:	<u>50</u>	x 3 = <u>150</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)	FACU Species	: <u>70</u>	x 4 = <u>280</u>			
That Ale OBE, I AGW, OIT AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>			
	Column Totals:	<u>128 (A)</u>	<u>446 (B)</u>			
		Prevalence Index :	= B/A = <u>3.48</u>			
Hydrophytic Vegetation Indicators:						
☐ 1 - Rapid Test for Hydrophytic Vegetation						
✓ 2 - Dominance Test is > 50%						
☐ 3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☑ Yes ☐ No					
data in Remarks or on a separate sheet)	riyaropiiyac t	regetation i reser	V les L	_ NO		
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Remarks:						
Nemans.						



SOIL									
Profile Descri	otion: (Describe	the d	epth needed to d	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures		.		Domestic
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ui <i>e</i>	Remarks
0-10	10YR 2/1	100					ORGA	ANIC	MUCK
10-18	10YR 6/1	97	10YR 5/3	3	С	M	LOAMY FII	NE SAND	
1T 0. 0		-1-4:	DM Dadward	Mandadi .	00.0			21 DI	Dans Lining M. Matrix
	· · · · · · · · · · · · · · · · · · ·	•	•				or Coated Grains.		Pore Lining, M=Matrix
		cable	to all LRR's, unle			-	0) // DD D		roblematic Hydric Soils ³ :
Histosol (,			olyvali ILRA 1		Surrace (S	8) (LRR R,	_	A10) (LRR K, L, MLRA 149B)
_	pedon (A2)			hin Do	rk Curfoo	- (SO) (LB)	D D MI DA 140D)		Redox (A16) (LRR K, L, R)
☐ Black His							R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			-	-		(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)	200 (A	_	•	Gleyed Ma	. ,		_ '	elow Surface (S8) (LRR K, L)
	Below Dark Surfa k Surface (A12)	aue (A	_	•	ed Matrix (I	,			urface (S9) (LRR K, L)
	k Surface (A12) ucky Mineral (S1)	,	_		Dark Surfa	ice (F6) irface (F7)			pese Masses (F12) (LRR K, L, R) podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)	'	_	-	Depressio				
☐ Sandy Re			L 1	redux i	Depressio	115 (1 0)			c (TA6) (MLRA 144A, 145, 149B)
	Matrix (S6)								Material (F21)
	ace (S7) (LRR R	MID	\ 140B)						v Dark Surface (TF12) in in Remarks)
			·	مامسا			ess disturbed or prob		iii iii Keinaiks)
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No
·		_	Aquatic Diversity		neral Com	nments:			=
Wetland Quali	ty:	√	Moderate	Low			Isolated Wetland?	☐ Yes ☑	No Unknown
General Comm	nents:								







WE	TLAND	DET	ERMIN	ATI	ON FORM - I	Northce	entr	al and	Nort	heast	Region		
☑ Centerline ☐ Re-R	oute	Acces	s Road		Ancillary Facility		Trans	mission Li	ne	Othe	r		
Project/Site: NED			Mile	post:	116550.2	County:		Hampshi	re		Date:	06/25/201	5
Applicant/Owner: Kinder Mo	rgan		·			State:	MA	Sa	amplin	ng Point:	PL-M-W	004-UPL	
Investigators: SE		Quad Na	me: Plai	nfield		Township):	Plainfield					_
Logbook No.: 1E	Logb	ook Pg.:	50		Tract: 930								
Landform (hillslope, terrace,	etc.):	Slope -	mid		Local Re	elief:] Co	oncave [] Co	nvex [✓ None	Slope%.:	3
Subregion (LRR): Middl	e Atlantic			Lat:	42.509458		Lo	ong: -72	2.96514	42		Datum: NA	D83
Soil Map Unit Name: Lyi	nan-Tunbri	dge asso	ciation, re	olling,	extremely stony					NWI Clas	sification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site typ	oical for th	nis tim	e of year?:] Yes		No (If no,	explain	in Remar	ks.)		
Are Vegetation Soil	or Hy	/drology	☐ sig	ınificaı	ntly disturbed?	√ No	Are	e "Normal"	Circum	nstances p	oresent?	✓ Yes	☐ No
Are Vegetation	or Hy	/drology	□ na	turally	problematic?	☑ No							
SUMMARY OF FINDI	NGS - At	tach s	ite map	sho	wing samplir	ng point	loca	ations, t	trans	ects, in	nportant	t features	, etc.
Hydrophytic Vegetation Pres	ent?		Yes 🔽] No	1		1- 41	0	11 A .				
Hydric Soil Present?			Yes 🔽] No	1		with	he Samp hin a We	ied Ai tland?	rea ? □	Yes 🔽	∑ No	
Wetland Hydrology Present?			Yes 🔽] No	1								
Field Wetland Classification:	UPL	AND PLO	T										
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicate	ors:								Sec	ondary In	dicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one req	uired; ch	eck all tha	at app	y).					Surface S	Soil Cracks	s (B6)	
☐ Surface Water (A1)				Water	-Stained Leaves (I	B9)				Drainage	Patterns ((B10)	
☐ High Water Table (A2)				Aquat	ic Fauna (B13)					Moss Tri	m Lines (B	16)	
☐ Saturation (A3)				Marl [Deposits (B15)					Dry-Seas	son Water	Table (C2)	
■ Water Marks (B1)				Hydro	gen Sulfide Odor ((C1)				Crayfish	Burrows (0	C8)	
☐ Sediment Deposits (B2)				Oxidiz	ed Rhizospheres	along Livin	g Roo	ots (C3)		Saturatio	n Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of Reduced Iro	on (C4)						d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction in	n Tilled Soi	ils (C6	6)			hic Positio	, ,	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7)						Aquitard (D	•	
☐ Inundation Visible on A	erial Imager	y (B7)		Other	(Explain in Remar	ks)				-	ographic R		
Sparsely Vegetated Con	ncave Surfa	ace (B8)				ı				FAC-Neu	ıtral Test (I	D5)	
Field Observations:	_	_											
Surface Water Present?	Yes	✓ N	-	th (inc	•					_			
Water Table Present?	Yes	✓ N	-	th (inc	•			Wetland	Hydrol	logy Pres		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ N	о Dep	th (inc	nes):						_	.00	
Remarks (Describe Recorded	Data (strea	am gage	, monitori	ng we	ll, aerial photos, pr	evious insp	pectio	ons), if ava	ilable):	:			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name							\perp	% Cove	er	Don	ninant	Indicate	or Status
Tsuga canadensis Fagus grandifolia					Т	otal Cover	:	65 25 90			ES ES		VCN VCN



1 TOVIDENCE, IXI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fagus grandifolia Viburnum lantanoides		20 8	YES YES	FACU FACU
Vibumum iantanoides	Total Cover:	o 28	165	FACU
Herb Stratum				
Plot Size: 5	ı		1 5	l
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Woody Vine Stratum	Total Cover.			
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
- Colonial Tallo		70 00001	Dominant	maloator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species		x 2 = <u>0</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>118</u>	x 4 = <u>472</u>	
That Ale OBL, FACW, 01 FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>118 (A)</u>	<u>472 (B)</u>	
	ı	Prevalence Index	$= B/A = \underline{4.00}$	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? ☐ Yes ☑	∐ No
data in Remarks or on a separate sheet)				
_				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, R	(1 02904								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	confirm the ab	sence of indicators.)	
Depth	Matrix		•	dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	٦	Texture	Remarks
0-3	10YR 2/1	100					Ol	RGANIC	
3-6	5YR 5/2	100					FINE S	SANDY LOAM	
6-16	7.5YR 4/4	100					FINE S	SANDY LOAM	
16-20	10YR 4/4	100					FINE S	SANDY LOAM	
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grain		Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
☐ Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		N	/ILRA 1	(49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ¹	hin Da	ırk Surface	e (S9) (LRI	R R, MLRA 149E	B) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified L	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔲 🛭	Deplete	d Matrix (I	F3)		☐ Thin Dark St	urface (S9) (LRR K, L)
☐ Thick Dark	k Surface (A12)		□ F	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangar	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	icky Mineral (S1)			Deplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)								v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	. MLRA	(149B)						in in Remarks)
_	nydrophytic vege		·	ology n	nust he nr	esent unle	es disturbed or i		,
Restrictive Lay					Inknown			F	
Restrictive Lay	er Fresent?	<u></u>	es v 140	υ °	TIKHOWH			Hydric Soil Prese	ent? ☐ Yes ☑ No
Remarks:							I		
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetla	and? 🔲 Yes 🔲	No Unknown
General Comm	ents:								





NW



WETLAND DETERMINATION FORM - Northce	entral and No	rtheast Region	
Centerline	Transmission Line	☐ Other	
Project/Site: NED Milepost: 116631.5 County:	Hampshire	Date:	06/25/2015
		ling Point: PL-E-W00	1-PFO
Investigators: SE Quad Name: Plainfield Township		9 · •	
Logbook No.: 1E Logbook Pg.: 52 Tract: 930			
Landform (hillslope, terrace, etc.): Depression Local Relief:	Concave (Convex 🔽 None	Slope%.:
Subregion (LRR): Middle Atlantic Lat: 42.509336	Long: -72.964	764	Datum: NAD83
Soil Map Unit Name: Tunbridge-Lyman association, steep, extremely stony		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, expla	nin in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circ	umstances present?	☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No			
SUMMARY OF FINDINGS. Attach cite man showing compling point	locations tran	saata impartant	footures etc
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations, tran	isects, important	reatures, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	Is the Sampled	Area 🚽 🗸 🗖	
Hydric Soil Present? ✓ Yes ☐ No	within a Wetlan		No
Wetland Hydrology Present? ✓ Yes ☐ No			
Field Wetland Classification: PFO			
Remarks: USE PL-M-W004_UPL AS REPRESENTATIVE UPLAND PLOT			
HYDROLOGY			
Wetland Hydrology Indicators:	<u>S</u>	econdary Indicators (2 c	or more required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks	(B6)
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9)		Drainage Patterns (B	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines (B1	6)
✓ Saturation (A3) ☐ Marl Deposits (B15)		Dry-Season Water Ta	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8	3)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livin	a Roots (C3)	Saturation Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		Stunted or Stressed	Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soi	ils (C6)	Geomorphic Position	(D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	(55) 	Shallow Aquitard (D3	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		Microtopographic Re	lief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D	5)
_ , , ,			
Field Observations:			
Surface Water Present?			
Water Table Present?	Wetland Hydr	rology Present? ✓	Yes □ No
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)		V	ies 🗀 No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inst	pections), if available	p):	
VECETATION			
VEGETATION Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Prunus serotina	% Cover 8	NO	FACU
Fagus grandifolia	35	YES	FACU
Tsuga canadensis Betula alleghaniensis	10 25	NO YES	FACU FAC
Total Cover	: ['] 78	, '	



Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30				1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 1 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>	
	FAC Species:	<u>25</u>	x 3 = <u>75</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species	: <u>53</u>	x 4 = <u>212</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	: <u>78 (A)</u>	<u>287 (B)</u>	
		Prevalence Index	= B/A = <u>3.68</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	egetation Presei	nt? ☑ Yes 🗆] No
data in Normanic of on a departure officery				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: VEGETATION IS GROWING IN UPLAND ADJACENT TO A	VERY SMALL POOL			



SOIL									
JOIL									
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix			dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture	Remarks
0-6	10YR 2/1	100					ORG	ANIC	
6-14	10YR 5/1	94	10YR 5/6	6	С	М	FINE SAN	DY LOAM	
Type: C=Conc	centration, D=De	pletion	, RM=Reduced	l Matrix,	CS=Cov	ered Sand	I or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
	licators: (Applic	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A			•			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	·			ILRA 1		(-	-, (=,	_	Redox (A16) (LRR K, L, R)
☐ Black Histi			ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)		(S7) (LRR K, L, M)
	ayers (A5)		· <u>—</u>	-	Gleyed Ma		(=: :: : : ; =)	_	elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1	_	-	d Matrix (I				irface (S9) (LRR K, L)
	Surface (A12)		′ –	•	Dark Surfa	•			ese Masses (F12) (LRR K, L, R)
	cky Mineral (S1)		_			rface (F7)		_	oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	-	Depressio			_	c (TA6) (MLRA 144A, 145, 149B)
Sandy Red			_			- (- /		_	Material (F21)
Stripped №	Matrix (S6)							_	Dark Surface (TF12)
	ace (S7) (LRR R	. MLRA	\ 149B)					_ ′	in in Remarks)
			•	ology n	aust bo pr	noont unk	ess disturbed or prob		,
			∕es 🗹 No	□ [∪]	nknown			Hydric Soil Prese	nt? ☑ Yes 🗆 No
Remarks:					TIKITOWIT			Hydric Soil Prese	nt? ☑ Yes ☐ No
	Habitat Characte		Aquatic Diversity			nments:		Hydric Soil Prese	nt? ☑ Yes ☐ No
Description of H		ristics,	Aquatic Diversity			nments:			
Description of H		ristics,	Aquatic Diversity			nments:	Isolated Wetland?		nt? ✓ Yes □ No No □ Unknown
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Description of I	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Description of I	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Description of I	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of H Wetland Quality General Commi	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Description of I	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?		
Description of I	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		







WE.	TLAND) DETI	ERMINAT	ION F	ORM - N	Northce	entral and I	Northeast F	Region	
	ute Г	1 Acces	s Road 🔲	Ancilla	ry Facility	п.	Transmission Lir	ne Other		
Project/Site: NED		•	Milepost:			County:	Hampshir		Date:	06/23/2015
Applicant/Owner: Kinder Mor	gan						<u>_</u>		PL-M-W00	
Investigators: DS		Quad Na	me: Plainfield			Township		1 3 -		
Logbook No.: DS'S BOOK	Logi	book Pg.:	59	Tract	t: 925	1				
Landform (hillslope, terrace, e	tc.):	Depres	sion		Local Re	elief: 🔽	Concave	Convex	None	Slope%.: 2
Subregion (LRR): Middle	Atlantic		La	t: 42.51	4962		Long: -72	.942145		Datum: NAD83
Soil Map Unit Name: Peru	u-Marlow	associatio	on, rolling, extr	emely sto	ony			NWI Class	sification:	PEM1E
Are climatic / hydrologic condi	tions on th	ne site typ	oical for this tin	ne of yea	ır?: ✓	¶ Yes	☐ No (If no, e	explain in Remark	(s.)	
Are Vegetation Soil	or H	ydrology	significa	antly distu	urbed?	□ No	Are "Normal"	Circumstances p	resent?	✓ Yes □ No
Are Vegetation	or H	ydrology	naturall	y problen	natic?	√ No				
SUMMARY OF FINDIN	IGS - A	ttach s	ite map sh	owing	samplin	ng point	locations, t	ransects, im	portant	features, etc.
Hydrophytic Vegetation Prese	nt?	\checkmark	Yes N	0			la tha Camuul	lad Ausa		
Hydric Soil Present?		\checkmark	Yes 🔲 N	0			Is the Sampl within a Wet		Yes □	No
Wetland Hydrology Present?		V	Yes 🔲 N	0						
Field Wetland Classification:	PEM	1								
Remarks:										
HYDROLOGY										
Wetland Hydrology Indicator	rs:							Secondary Ind	licators (2 c	r more required)
Primary Indicators (minimum c	of one rec	uired; ch	eck all that app	oly)				☐ Surface S	oil Cracks	(B6)
✓ Surface Water (A1)			☐ Wate	er-Stained	d Leaves (E	39)		✓ Drainage	Patterns (B	310)
✓ High Water Table (A2)			☐ Aqua	itic Fauna	a (B13)				n Lines (B1	6)
✓ Saturation (A3)			■ Marl	Deposits	(B15)			☐ Dry-Seas	on Water T	able (C2)
■ Water Marks (B1)			☐ Hydr	ogen Sul	lfide Odor (C1)		☐ Crayfish E	Burrows (C8	3)
☐ Sediment Deposits (B2)			□ Oxid	ized Rhiz	zospheres a	along Livin	g Roots (C3)	☐ Saturation	n Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3)			☐ Pres	ence of F	Reduced Iro	on (C4)		☐ Stunted o	r Stressed	Plants (D1)
☐ Algal Mat or Crust (B4)			☐ Rece	ent Iron R	Reduction in	n Tilled Soi	ils (C6)		hic Position	•
☐ Iron Deposits (B5)			☐ Thin	Muck Su	ırface (C7)			☐ Shallow A	quitard (D3	3)
☐ Inundation Visible on Aer	rial Image	ry (B7)	☐ Othe	r (Explair	n in Remar	ks)			graphic Re	
☐ Sparsely Vegetated Cond	cave Surfa	ace (B8)						✓ FAC-Neut	tral Test (Da	5)
Field Observations:										
Surface Water Present?	☐ Yes	√ N	o Depth (in	ches):						
Water Table Present?	✓ Yes	□ N	o Depth (in	ches):	5		Wetland H	Hydrology Prese	ent?	
Saturation Present? (includes capillary fringe)	√ Yes	□ N	o Depth (in	ches):	0				\square	Yes No
Remarks (Describe Recorded	Data (stre	am gage	, monitoring w	ell, aerial	photos, pr	evious insi	pections), if avai	lable):		
`	,	0 0	, G		. /!	•	, ,,	,		
VEGETATION										
Tree Stratum										
Plot Size: 30										
Scientific Name							% Cove	r Dom	inant	Indicator Status
					T	otal Cover	:			



Providence, RI 02904				7460111
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Aronia prunifolia		10	YES	FACW
Spiraea alba Viburnum dentatum		25 15	YES YES	FACW FAC
	Total Cover:	50	I	
Herb Stratum				
Plot Size: 5				
		% Cover	Dominant	Indicator Status
Scientific Name			Dominant NA	NONE
Carex sp Juncus effusus		15 10	NO	OBL
Lysimachia terrestris Glyceria sp		20 5	YES NA	OBL NONE
- y	Total Cover:	50	1	1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
Rubus hispidus		25	YES	FACW
•	Total Cover:	25	1	
Daminanaa Taat Waykahaat		dex Worksheet:		
Dominance Test Worksheet:			Maritain Ira hara	
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)	Total % Cover		Multiply by:	
Total Number of Dominant	OBL Species:	<u>30</u>	x 1 = 30 x 2 = 120	
Species Across All Strata: 5 (B)	FACW Species FAC Species:			
Percent of Dominant Species		<u>15</u>	x 3 = 45	
That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species UPL Species:	: <u>0</u> <u>0</u>	$x 4 = \underline{0}$ $x 5 = 0$	
	Column Totals:		195 (B)	
		Prevalence Index	= B/A = <u>1.86</u>	
Hydrophytic Vegetation Indicators:				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	egetation Prese	nt? ☑ Yes I	□ No
data in Nomanie di dii a doparate dilediy				
-				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
process, amone distances of problematic.				
Remarks:				



	(1 0200 -											
SOIL												
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm t	he absen	ce of indicators.)			
Depth	Matrix		Re	dox Fe	atures							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Text	ure		Rei	marks
0.5-0								ORGA	NIC			
0-12	10YR 3/2	50	10YR 4/1	20				SANDY	LOAM	15% ORG	ANIC: [DISTURBED SOILS
• .=			7.5YR 4/6	5	RM	М						IT OF WAY
12-16	10YR 4/2 & 4/3	90	10YR 4/2 10YR 5/2	10	D	M		LOA	M			
12-10	1018 4/2 & 4/3	90	101K 5/2	10	D	IVI		LOA	IIVI			
¹Type: C=Con	centration, D=De	epletior	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	=Pore Linin	, M=M 	atrix
Hydric Soil Inc	licators: (Applic	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pi	roblematic	Hydric	Soils ³ :
Histosol (A	A1)					Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR	K, L, MI	LRA 149B)
☐ Histic Epi	oedon (A2)		N	/ILRA 1	49B)				☐ Coast Prairie	e Redox (A	16) (LRF	R K, L, R)
■ Black Hist	ic (A3)		П 1	hin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)	5 cm Mucky	Peat or Pe	at (S3) ((LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRR	K, L, N	1)
Stratified	Layers (A5)			oamy (Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surfac	e (S8) ((LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	11) 🔽 🖸	Deplete	d Matrix (F3)			☐ Thin Dark Su	urface (S9)	(LRR K	L)
	k Surface (A12)	,	_	-	Dark Surfa	•			_			(LRR K, L, R)
_	ıcky Mineral (S1)		_			. ,			_) (MLRA 149B)
	eyed Matrix (S4)		_	-		ırface (F7)			_	•	,	
			☐ F	keaox i	Depressio	ns (F8)			_			4A, 145, 149B)
☐ Sandy Re									☐ Red Parent		•	
☐ Stripped I	Matrix (S6)								□ Very Shallov	v Dark Surf	ace (TF	12)
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						☐ Other (Expla	in in Rema	rks)	
³ Indicators of I	nydrophytic veget	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	d or prob	lematic.			
Restrictive Lay	er Present?		Yes ☑ No	□ ∪	nknown							
_			_						Hydric Soil Prese	ent? 🟹	Yes	□ No
									,		103	
Domorko												
Remarks:	E 000E0VE0											
DISTURBANC	E OBSEKVED											
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: High		Moderate ✓	Low			Isolated \	Wetland?	☐ Yes 🗹	No 🔲	Unkn	iown
0 10												
General Comm	ents:											







WETLAND DETERMINATION FORM - Northc	entral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 123096.2 County:	Hampshire Date: 06/23/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: PL-M-W002-UPL
Investigators: DS Quad Name: Plainfield Townshi	p: Plainfield
Logbook No.: DS'S Logbook Pg.: 59 Tract: 925	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave ☑ Convex ☐ None Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.515112	Long: -72.942092 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)
Are Vegetation ☑ Soil ☑ or Hydrology ☑ significantly disturbed? ☐ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation □ Soil □ or Hydrology □ naturally problematic? ☑ No	· = -
Are vegetation Soil or rigulology haddraily problematic: V_ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	Is the Sampled Area
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area within a Wetland? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	□ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livir	ng Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled So	ils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	Wester III Julya Barra 10
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ☑ No
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	2 2
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous ins	pections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Acer rubrum Picea glauca	20 YES FAC 25 YES FACU
Quercus rubra	20 YES FACU
Total Cove	r: 65



rovidence, RI 02904				A_CON
apling/Shrub Stratum				
lot Size: 15				
cientific Name		% Cover	Dominant	Indicator Status
cer rubrum etula populifolia opulus tremuloides ex verticillata		5 10 15 5	NO YES YES NO	FAC FAC FACU FACW
	Total Cover:	35	I	l
erb Stratum				
lot Size: 5				
cientific Name		% Cover	Dominant	Indicator Status
anthonia spicata Ismunda claytoniana Jennstaedtia punctilobula		15 15 25	YES YES YES	UPL FAC UPL
	Total Cover:	55		1
oody Vine Stratum				
lot Size: 30				
cientific Name		% Cover	Dominant	Indicator Status
ubus flagellaris		10	YES	FACU
	Total Cover:	10	1	1
Oominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
lumber of Dominant Species	Total % Cover	of:	Multiply by:	
hat Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>0</u>	x 1 = 0	
otal Number of Dominant	FACW Species		x 2 = <u>10</u>	
pecies Across All Strata: 9 (B)	FAC Species:	<u>=</u> <u>50</u>	x 3 = 150	
Percent of Dominant Species	FACU Species:		x 4 = 280	
hat Are OBL, FACW, or FAC: 33 (A/B)	UPL Species:	40	x 5 = 200	
	Column Totals:		640 (B)	
		Prevalence Index		
lydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? 🗌 Yes 🛚	 No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
ndicators of hydric soil and wetland hydrology must be resent, unless disturbed or problematic.				
resent, unless disturbed of problematic.				



T TOVIGETICE, T	(1 0200+										11 11 11 11 11		
SOIL													
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm th	e absen	ce of indicators.)				
Depth	Matrix		Re	dox Fe	atures								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Textu	ıre		Remarks		
0.5.40	10YR 4/4				71 -			100	N 4				
0.5-12	1018 4/4	100						LOA	IVI				
0-0.5	10YR 3/3	100						LOA	M				
0.5-0								ORGA	NIC				
12-16	10YR 4/3	95	7.5YR 4/6	5	D	М		LOA	M				
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated 0	Grains.	² Location: PL=	Pore Linin	ig, M=Matrix		
Hydric Soil Inc	licators: (Annli	cable t	o all LRR's, unle	es oth	nerwise n	oted)			Indicators for Pi	oblematic	Hydric Soils ³		
		cabic t	·			•	a) // DD D				•		
Histosol (41)			'olyvalı ∕ILRA 1		Surface (S	8) (LRR R,		2 cm Muck (410) (LRR	K, L, MLRA 149B)	1	
☐ Histic Epi	pedon (A2)				.02)				☐ Coast Prairie	Redox (A	(16) (LRR K, L, R)		
■ Black Hist	tic (A3)		□ 1	hin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)	☐ 5 cm Mucky	Peat or Pe	eat (S3) (LRR K, L,	R)	
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surface	(S7) (LRF	R K, L, M)		
	Layers (A5)		_	•	Gleyed Ma	` '					ce (S8) (LRR K, L)	l	
	Below Dark Surfa	aco (A1	_	-	-								
		ace (A i	_	•	d Matrix (I	•			Thin Dark Su	,	, ,		
_	k Surface (A12)		□ F	Redox L	Dark Surfa	ace (F6)			☐ Iron-Mangar	ese Masse	es (F12) (LRR K, L,	, R)	
☐ Sandy Mu	ıcky Mineral (S1))		Peplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	odplain So	oils (F19) (MLRA 1	49B)	
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B									↓9В)				
☐ Sandy Re	edox (S5)								☐ Red Parent	Material (F:	21)		
								•					
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)													
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	arks)		
3Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed	d or prob	lematic.				
Restrictive Lay	er Present?		∕es 🔽 No	ΠV	nknown								
		_	_	_					Hydric Soil Prese	nt?	Yes ☑ No		
									riyane son r rese		ies 🔽 No		
Remarks:													
Description of	Hahitat Characte	rietice	Aquatic Diversity	or Ga	neral Com	mente:							
Description of	i labitat Characte	1131103,	Aquatic Diversity	01 06	nerai con	iiiieiiis.							
Wetland Qualit	ty: 🔲 High		Moderate	Low			Isolated V	Vetland?	☐ Yes ☐	No 🗌] Unknown		
Canaral Camm	anta.												
General Comm	ienis:												
												ļ	
												l	
												l	







WE	TLAN	D DE	TER	MINATION F	ORM - I	Northc	entral aı	nd Nor	rtheast	Region	ı	
☑ Centerline ☐ Re-Ro	oute	☐ Ac	cess Ro	pad	ary Facility		Transmissio	n Line	Othe	r		
Project/Site: NED				Milepost: 1238	95.0	County:	Ham	pshire		Date:	06/22/20	15
Applicant/Owner: Kinder Mor	rgan					State:	MA	Sampl	ing Point:	PL-M-W	001-PFO	
Investigators: PF		Quad	Name:	Plainfield		Township	o: Plain	field				
Logbook No.: PF'S BOOK	Lo	gbook l	Pg.: 6	Trac	ct: 925							
Landform (hillslope, terrace, e	tc.):	Dep	ression		Local Re	elief:	1 Concave		Convex [None	Slope%.:	2
Subregion (LRR): Middle	Atlantic			Lat: 42.5	16187		Long:	-72.939	463		Datum: NA	AD83
Soil Map Unit Name: Per	u-Marlov	assoc	iation, r	olling, extremely s	tony				NWI Clas	sification:	Not m	napped
Are climatic / hydrologic condi	tions on	the site	typical	for this time of ye	ar?: ✓	Yes	☐ No (If	no, expla	in in Remar	ks.)		
Are Vegetation Soil	☐ or l	Hydrolo	gy 🗖	significantly dis	turbed?	☑ No	Are "Norr	nal" Circu	ımstances p	oresent?	√ Ye:	s 🔲 No
Are Vegetation Soil	or l	Hydrolo	gy 🗖	naturally proble	ematic?	— ☑ No						
SUMMARY OF FINDIN	IGS - A	Attack	site	map showing	g samplin	g point	location	s, tran	sects, in	nportan	t feature:	s, etc.
Hydrophytic Vegetation Prese	nt?	v	Yes Yes	s □ No								
Hydric Soil Present?		v	Yes Yes	s □ No			Is the Sa within a			Yes [□ No	
Wetland Hydrology Present?		v	Yes Yes	s □ No								
Field Wetland Classification:	PF	0										
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicator	rs:							Se	econdary In	dicators (2	or more red	quired)
Primary Indicators (minimum o	of one re	quired	check	all that apply)					Surface S	Soil Cracks	s (B6)	
☐ Surface Water (A1)				✓ Water-Staine	ed Leaves (E	39)			Drainage	Patterns	(B10)	
✓ High Water Table (A2)				Aquatic Fau	na (B13)				Moss Tri	m Lines (B	16)	
✓ Saturation (A3)				☐ Marl Deposit	ts (B15)				Dry-Seas	son Water	Table (C2)	
☐ Water Marks (B1)				☐ Hydrogen St	ulfide Odor (C1)			Crayfish	Burrows (0	28)	
☐ Sediment Deposits (B2)				✓ Oxidized Rh	izospheres a	along Livin	g Roots (C3	3)	Saturatio	n Visible o	on Aerial ima	agery (C9)
☐ Drift Deposits (B3)				☐ Presence of	Reduced Iro	on (C4)			Stunted of	or Stressed	d Plants (D1)
			☐ Recent Iron	Reduction in	Tilled So	ils (C6)	(C6) Geomorphic Position (D2)					
☐ Iron Deposits (B5)			☐ Thin Muck S	urface (C7)		☐ Shallow Aquitard (D3)						
☐ Inundation Visible on Ae	rial Imag	ery (B7)	☐ Other (Expla	in in Remar	ks)			Microtope	ographic R	telief (D4)	
☐ Sparsely Vegetated Con-	cave Sui	rface (E	88)					\checkmark	FAC-Neu	ıtral Test (D5)	
Field Observations:												
Surface Water Present?	□ v ₀	s 🗹	No	Depth (inches):								
Water Table Present?	☐ Ye	_	No No	Depth (inches):	1		Watis	nd Hydr	ology Pres	ont?		
Saturation Present?	✓ Ye	_	No		1 0		Wella	iliu riyur	ology Fies	ent: ☑	∫ Yes □] No
(includes capillary fringe)	✓ Ye	» ⊔	No	Depth (inches):	0							
Remarks (Describe Recorded	Data (sti	ream ga	age, mo	onitoring well, aeria	al photos, pr	evious ins	pections), if	available	·):			



Providence, RI 02904				
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus		10	NO	FACU
Acer rubrum Betula alleghaniensis		50 20	YES YES	FAC FAC
Picea rubens Acer saccharum		10 20	NO YES	FACU FACU
71001 Gabonaram	Total Cover:	110	1 .20	17.00
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Prunus serotina		5	YES	FACU
Acer pensylvanicum Betula alleghaniensis		5 10	YES YES	FACU FAC
Dotala allogramonolo	Total Cover:	20	120	17.0
		•		
Herb Stratum				
Plot Size: 5 Scientific Name	1	% Cover	Dominant	Indicator Status
Trientalis borealis Maianthemum racemosum		20 15	YES YES	FAC FACU
Dryopteris intermedia Streptopus lanceolatus		10 20	NO YES	FAC FACU
	Total Cover:	65		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		ı	ı
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 9 (B)	FAC Species:	<u>110</u>	x 3 = <u>330</u>	
Percent of Dominant Species That Are OBL FACW or FAC: 44 (A/B)	FACU Species:	<u>85</u>	x 4 = <u>340</u>	
That Are OBL, FACW, or FAC: 44 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>195 (A)</u>	670 (B)	
	F	Prevalence Index	= B/A = <u>3.44</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydronhytic V	egetation Preser	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)	,	ogotumom i rocci	🖸 163 [_ 110
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	1			



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	confirm the abs	ence of indicators.)	
Depth (inches)	Matrix		Red	lox Fe	atures		To	exture	Remarks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		xture	remans
0-2	10YR 2/1	100					ORG	GANIC	
2.12	10) (5.0)		VO 0 /0			<u> </u>	5W 5 0 4	VIDV. 1 0 1 1 1	
2-10	10YR 3/2	95	7.5YR 3/3	5	С	PL	FINE SA	NDY LOAM	
10-20	5Y 4/2	95	10YR 3/3	5	С	M	FINE	SAND	
10-20	31 4/2	33	10110 3/3	3	O	IVI	I IINL	CAND	
¹Type: C=Cond	centration, D=De	pletion	L	Matrix,	CS=Cov	ered Sand	or Coated Grains	. ² Location: PL=	Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	<u> </u>	o all LRR's, unle						oblematic Hydric Soils³:
☐ Histosol (A						-	8) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
	pedon (A2)		_ N	ILŔA 1	49B)	,			e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1)	LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🗹 D	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		□R	edox [Dark Surfa	ace (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)		□ D	eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		☐ R	edox [Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							□ Red Parent I	Material (F21)
☐ Stripped M	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	logy n	nust be pr	esent, unle	ess disturbed or pr	oblematic.	
Restrictive Lay	er Present?		res ☑ No	□ U	nknown				
								Hydric Soil Prese	nt? ☑ Yes ☐ No
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High	√ 1	Moderate	_ow			Isolated Wetland	d? 🔲 Yes 🔲	No 🗹 Unknown
General Comm	onts:								
General Comm	ents.								





Ν



WETLAND DETERMINATION FORM - Northc	entral and Northeast Region
Centerline Re-Route Access Road Ancillary Facility	Transmission Line
Project/Site: NED Milepost: 123826.7 County:	Hampshire Date: 06/22/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: PL-M-W001-UPL
Investigators: PF Quad Name: Plainfield Townshi	p: Plainfield
Logbook No.: PF'S Logbook Pg.: 8 Tract: 925	
Landform (hillslope, terrace, etc.): Flat Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.515968	Long: -72.939627 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point	t locations, transects, important features, etc.
Hydrophytic Vegetation Present?	In the Committed Account
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area within a Wetland? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livin	ng Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Sc	oils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous ins	spections), if available):



Providence, RI 02904				1 1 1 1 1 1 1 1 1
VEGETATION				
Free Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Pinus strobus		60 5	YES NO	FAC FACU
Acer saccharum		20	NO NO	FACU
Picea rubens Prunus serotina		10 10	NO NO	FACU FACU
Tunus scround	Total Cover:	105		17.00
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus		15	NO	FACU
Fagus grandifolia Acer saccharum		40 5	YES NO	FACU FACU
Acer pensylvanicum		15	NO	FACU
Abies balsamea		5	NO	FAC
	Total Cover:	80		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Osmundastrum cinnamomeum Trientalis borealis		5 25	NO YES	FACW FAC
Maianthemum canadense		5	NO	FACU
	Total Cover:	35	•	•
Voody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species That Are OBL_FACW_or FAC: 2 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species:	<u>5</u>	x 2 = <u>10</u>	
Species Across All Strata: 3 (B)	FAC Species:	<u>90</u>	x 3 = <u>270</u>	
Percent of Dominant Species	FACU Species:	<u>125</u>	x 4 = <u>500</u>	
That Are OBL, FACW, or FAC: 67 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	220 (A)	780 (B)	
		Prevalence Index		
Hydrophytic Vegetation Indicators:		TOVALORIOO IRIGOX	_ <u>5.00</u>	
_				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Prese	nt? ☐ Yes	☑ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Depth										
Color (moist) % Color (moist) % Type! Loc² Texture Remarks 10YR 3/2 100	3OIL									
Color (moist)	rofile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	r confirm the abse	nce of indicators.)	
10YR 3/2										
8-20	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	ture	Remarks
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.	0-8	10YR 3/2	100					FINE SAN	DY LOAM	
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.										
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	8-20	10YR 3/4	90	7.5YR 3/4	10	D	М	FINE SAN	DY LOAM	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)										
Histosol (A1)	Type: C=Cond	centration, D=De	pletion	, RM=Reduced	Matrix,	CS=Cov	ered Sand	l or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Histosol (A1)	lydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
Histic Epipedon (A2) Histic Epipedon (A2)	☐ Histosol (/	A1)		□ F	olyvalı	ue Below :	Surface (S	88) (LRR R,		-
Black Histic (A3)	:	·					,	, ,	_	
Hydrogen Sulfide (A4)	_			ПΤ	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	_	
□ Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Polyvalue Below Surface (S8) (LRR K, L) □ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Other (Explain in Remarks) □ No □ Unknown □ Hydric Soil Present? □ Yes ☑ No □ Unknown □ Vestland Quality: □ High □ Moderate □ Low □ Isolated Wetland? □ Yes □ No □ Unknown □ Unknown □ Vestland Quality: □ High □ Moderate □ Low □ Isolated Wetland? □ Yes □ No □ Unknown	 ☐ Hydrogen	Sulfide (A4)		П .	oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Piedmont Floodplain Soils (F19) (MLRA 149B) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☐ Sandy Redox (S5) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12) ☐ Dark Surface (S7) (LRR R, MLRA 149B) ☐ Other (Explain in Remarks) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? ☐ Yes ☑ No ☐ Unknown ☐ Hydric Soil Present? ☐ Yes ☑ No		Layers (A5)		_	-	=		, ,	☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Piedmont Floodplain Soils (F19) (MLRA 149B) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☐ Sandy Redox (S5) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12) ☐ Dark Surface (S7) (LRR R, MLRA 149B) ☐ Other (Explain in Remarks) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? ☐ Yes ☑ No ☐ Unknown Hydric Soil Present? ☐ Yes ☑ No Remarks:		Below Dark Surfa	ace (A1	_	-	-				
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. **Restrictive Layer Present? □ Yes ☑ No ■ Hydric Soil Present? □ Yes ☑ No **Remarks: **Description of Habitat Characteristics, Aquatic Diversity or General Comments: **Wetland Quality: □ High □ Moderate □ Low Isolated Wetland? □ Yes □ No □ Unknown	☐ Thick Dark	k Surface (A12)		F	Redox [Dark Surfa	ace (F6)			
Sandy Redox (S5)	☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
Stripped Matrix (S6)	☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)		☐ Mesic Spodi	c (TA6) (MLRA 144A, 145, 149B)
Dark Surface (S7) (LRR R, MLRA 149B)	☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?	☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
Restrictive Layer Present? Yes No Unknown Hydric Soil Present? Yes No No No Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown	☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
Restrictive Layer Present? Yes No Unknown Hydric Soil Present? Yes No No No Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown	3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prol	olematic.	
Wetland Quality:	Restrictive Lay	er Present?		∕es ☑ No	□ U	Inknown				ent? ☐ Yes ☑ No
		ver Present?		∕es 🗹 No	□ ∪	Inknown				ent? ☐ Yes ☑ No
	Remarks:			_			nments:			ent? □ Yes ☑ No
General Comments:	Remarks: Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland	Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?	Hydric Soil Prese	





NW



WETLAND DETERMINATION FORM - N	lorthcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 123942.4	County: Hampshire Date: 06/25/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: PL-M-W007-PSS
Investigators: PF CM Quad Name: Plainfield	Township: Plainfield
Logbook No.: 2015-1 Logbook Pg.: 28 Tract: 927	
Landform (hillslope, terrace, etc.): Flat Local Re	elief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.515804	Long: -72.939094 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ✓ Soil or Hydrology significantly disturbed?	No Are "Normal" Circumstances present? ☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area
Wetland Hydrology Present? ✓ Yes No	within a Welland:
Field Wetland Classification: PSS	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (E	Drainage Patterns (B10)
✓ High Water Table (A2)	
✓ Saturation (A3)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	(S) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present?	Wetland Hydrology Present?
Saturation Present?	☑ Yes ☐ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pro	vious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
т.	otal Cover:



Providence, RI 02904				- 1	A_CON
Sapling/Shrub Stratum					
Plot Size: 15					
Scientific Name			% Cover	Dominant	Indicator Status
Acer rubrum			40	YES	FAC
liburnum dentatum Spiraea tomentosa			10 30	NO YES	FAC FACW
ornus amomum			20	NO	FACW
Spiraea alba			30	YES	FACW
		Total Cover:	130		
erb Stratum					
lot Size: 5					
cientific Name			% Cover	Dominant	Indicator Status
Solidago rugosa Rubus hispidus			20 15	YES YES	FAC FACW
helypteris palustris			30	YES	FACW
		Total Cover:	65		
oody Vine Stratum					
lot Size: 30		-		1	-
cientific Name			% Cover	Dominant	Indicator Status
	Т	Total Cover:			
Pominance Test Worksheet:			lex Worksheet:	A.A. Inc. A.	
lumber of Dominant Species hat Are OBL, FACW, or FAC:	<u>6 (A)</u>	Total % Cover		Multiply by:	
		OBL Species:	<u>0</u>	x 1 = 0	
otal Number of Dominant Species Across All Strata:	<u>6 (B)</u>	FACW Species	: <u>125</u>	x 2 = <u>250</u>	
podos Adioss Ali Stiata.	- · · ·	FAC Species:	<u>70</u>	x 3 = <u>210</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>	
HALAIE ODL, FACTY, OF FACT	· // */	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
		Column Totals:	<u>195 (A)</u>	460 (B)	
		ı	Prevalence Index	= B/A = <u>2.36</u>	
lydrophytic Vegetation Indicators:					
1 - Rapid Test for Hydrophytic Veg	getation				
_ , , , , ,	,				
_					
3 - Prevalence Index is ≤ 3.0			_	_	_
4 - Morphological Adaptations¹ (Pr data in Remarks or on a separate	rovide supporting e sheet)	Hydrophytic V	egetation Prese	nt? ☑ Yes [□ No
Problematic Hydrophytic Vegetation	on¹ (Explain)				
Indicators of hydric soil and wetland hy present, unless disturbed or problemati	/drology must be ic.				
Remarks:					



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	confirm the abse	nce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		Tay	ture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		.ui G	ivenialits
0-2	10YR 3/2	100					FINE SAN	DY LOAM	
2-14	10YR 3/2	95	7.5YR 3/4	5	С	PL	FINE SAN	DY LOAM	
14.20	2 EV 4/2	00	40VD 2/2			M	CANDY	(L O A M	
14-20	2.5Y 4/3	90	10YR 3/2 10YR 4/4	5 5	C C	M M	SANDY	LOAM	
¹Type: C=Cond	centration D=De	enletion	RM=Reduced I	Matrix	CS=Cov	ered Sand	or Coated Grains.	² l ocation: Pl =	 =Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·		o all LRR's, unle				or coated Crame.		roblematic Hydric Soils³:
☐ Histosol (A						-	8) (LRR R,	_	(A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILRA 1		- C	o, (= · · · ·,		e Redox (A16) (LRR K, L, R)
☐ Black Hist			Пт	hin Da	ırk Surface	e (S9) (LRI	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
_	Sulfide (A4)		_				LRR K, L)		e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1		-	d Matrix (I				urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		_ R	edox [Dark Surfa	ice (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ ∪	Inknown				
								Hydric Soil Prese	ent? ☑ Yes ☐ No
								-	
Remarks:							I		
Description of I	Habitat Characte	ristics.	Aquatic Diversity	or Ge	neral Com	ments:			
, , , ,		,	, , , , , , , , , , , , , , , , , , , ,						
Wetland Qualit	y: High		Moderate ✓	Low			Isolated Wetland	? 🔲 Yes 🗹	No 🔲 Unknown
General Comm	ents:								





SOUTH



WETLAND DETERMINATION FORM - No	rthcentral and Northeast Region
	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 124009.2 Co	ounty: Hampshire Date: 06/25/2015
Applicant/Owner: Kinder Morgan St	ate: MA Sampling Point: PL-M-W007-UPL
Investigators: SE Quad Name: Plainfield To	wnship: Plainfield
Logbook No.: 1E Logbook Pg.: 54 Tract: 927	
Landform (hillslope, terrace, etc.): Flat Local Relief	: Concave Convex None Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.515862	Long: -72.938859 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation Soil or Hydrology significantly disturbed? □	No Are "Normal" Circumstances present? ☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ✓	No
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	Is the Sampled Area
Hydric Soil Present? ☐ Yes ☑ No	within a Wetland? ☐ Yes ☑ No
Wetland Hydrology Present? Yes V No	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres alon	Cotypation Visible on Assistance (CO)
□ Drift Deposits (B3) □ Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Til	led Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present?	Wetland Hydrology Present?
Saturation Present?	☐ Yes ☑ No
(includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	ous inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	1
Scientific Name	% Cover Dominant Indicator Status
Total	Cover:



1 Tovidence, IXI 02004				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Spiraea latifolia		60	YES	FACW
	Total Cover:	60		
Herb Stratum				
Plot Size: 5				
Scientific Name	ĺ	% Cover	Dominant	Indicator Status
Solidago rugosa		15	NO	FAC
Rubus flagellaris Carex sp		10 6	NO NA	FACU NONE
Rubus idaeus		20	YES	FACU
	Total Cover:	51		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:	'		
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 1(A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	: <u>60</u>	x 2 = <u>120</u>	
Species Across All Strata: 2 (B)	FAC Species:	<u>15</u>	x 3 = <u>45</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species:	30	x 4 = <u>120</u>	
That Ale OBL, I AGW, OF I AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>105 (A)</u>	<u>285 (B)</u>	
		Prevalence Index =	= B/A = <u>2.71</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	egetation Presen	t? ☐ Yes ဩ	∐ No
data in Remarks or on a separate sheet)	,,			
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:	I			



	1 02304								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the ir	ndicator o	r confirm the abs	ence of indicators.)	1
Depth	Matrix		Red	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	16	exture	Remarks
0-4	10YR 3/2	100					FINE SA	NDY LOAM	
4-14	10YR 4/4	100					FINE SA	NDY LOAM	
							2 0/1		
44.00	2 EV E/4	100					FINIT CA	NDY LOAM	
14-20	2.5Y 5/4	100					FINE SA	NDY LOAM	
		<u> </u>					or Coated Grains	. ² Location: PL=	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ss otl	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		N	ILRA 1	149B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
☐ Black Hist	ic (A3)		Пт	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_				(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed Ma		(=- ····, =/	_	elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (Δ1	_	-	ed Matrix (urface (S9) (LRR K, L)
		ace (A i	_	•	,	•		_	
_	k Surface (A12)		_		Dark Surfa			_	nese Masses (F12) (LRR K, L, R)
_	ıcky Mineral (S1)			•		ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)			ledox	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							□ Red Parent	Material (F21)
☐ Stripped I	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pr	oblematic.	
Restrictive Lay	var Present?		Yes √ No	—— П (Inknown				
ivestrictive Lay	er i resent:	ш	163 🔽 110		TIKITOWIT			Uhadaia Cail Bassa	
								Hydric Soil Prese	ent? ☐ Yes ☑ No
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	v: 🗖 High		Moderate	Low			Isolated Wetlan	d? □ Yes □	No Unknown
	, _	_	_						
General Comm	ents:								





NE



WETLAND DETERMINATION FORM - N	orthcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 133301.2	County: Hampshire Date: 07/01/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: PL-E-W003-PEM
Investigators: CM Quad Name: Plainfield	Township: Plainfield
Logbook No.: 4M Logbook Pg.: 41 Tract: 891	
Landform (hillslope, terrace, etc.): Slope - mid Local Re	lief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.524004	Long: -72.909301 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	No Are "Normal" Circumstances present?
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☐	 ☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	j point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	Is the Sampled Area
Hydric Soil Present? ✓ Yes No	within a Wetland? Yes \(\square\) No
Wetland Hydrology Present?	
Field Wetland Classification: PEM	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B	9) Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
✓ Saturation (A3)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C	C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	long Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	n (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	s) Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present? Yes No Depth (inches): 2 (includes capillary fringe)	✓ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pre	
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Тс	otal Cover:



Providence, RI 02904				ALCON!
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Salix interior Spiraea tomentosa		10 10	YES YES	FACW FACW
Acer rubrum		5	YES	FAC
	Total Cover:	25		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Carex crinita		35	YES	OBL
Onoclea sensibilis Solidago rugosa		15 10	NO NO	FACW FAC
Scirpus cyperinus		15	NO	OBL FACW
Carex scoparia	Total Cover:	20 95	YES	FACW
Woody Vine Stratum	1000 00001.			
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
Rubus hispidus		15	YES	FACW
- Audus Mopleaus	 Total Cover:	15	1 .20	
Dominance Test Worksheet:	Prevalence Ind			
Number of Dominant Species	Total % Cover of		Multiply by:	
That Are OBL, FACW, or FAC: 6 (A)	OBL Species:	5 <u>50</u>	x 1 = 50	
Total Number of Dominant	FACW Species		x = 30 x = 140	
Species Across All Strata: 6 (B)	FAC Species:	. <u> </u>	$x = \frac{1}{2}$	
Percent of Dominant Species	FACU Species:		x 4 = <u>0</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	135 (A)	235 (B)	
	F	Prevalence Index	= B/A = <u>1.74</u>	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydronhytic V	egetation Prese	ent? ☑ Yes [□ No
data in Remarks or on a separate sheet)	Trydrophytic v	egetation i rese	iii: <u>V</u> 165 [_ NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	·			



SOIL									
Profile Descri	ption: (Describe	the d	epth needed to	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				6 .
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-2	10YR 2/2						ORGA	ANIC	
2-12	N6	70	10Y 3/1 7.5YR 4/6	20 10	C C	M M	FINE SANI	DY LOAM	
¹Type: C=Con	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil In	dicators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epi	pedon (A2)		N	/ILRA 1	(49B)			☐ Coast Prairie	Redox (A16) (LRR K, L, R)
■ Black His	tic (A3)		□ ⊺	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydroger	Sulfide (A4)			.oamy l	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	11) 🔲 🖸	Peplete	d Matrix (I	F3)		☐ Thin Dark Su	ırface (S9) (LRR K, L)
☐ Thick Da	k Surface (A12)		□ F	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy M	ucky Mineral (S1)			Peplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☑ Sandy G	eyed Matrix (S4)		☐ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy R	edox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped	Matrix (S6)							□ Very Shallov	Dark Surface (TF12)
☐ Dark Sur	face (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	in in Remarks)
³ Indicators of	hydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Remarks:								Hydric Soil Prese	nt? ☑ Yes □ No
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qual	ty: High	7 1	Moderate	Low			Isolated Wetland?	Yes 🗹	No 🔲 Unknown
General Comn	nents:								





V٨



WETLAND DETERMINATION FORM - Northcentral and Northeast Region										
WE TEAM DETERMINATION TORM - Not incential and Not ineast Region										
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other									
Project/Site: NED Milepost: 133714.4 Cc	ounty: Hampshire Date: 06/27/2015									
Applicant/Owner: Kinder Morgan Sta	tate: MA Sampling Point: PL-E-W003-PFO									
Investigators: SE Quad Name: Plainfield To	ownship: Plainfield									
Logbook No.: 1E Logbook Pg.: 60 Tract: 919										
Landform (hillslope, terrace, etc.): Stream fringe Local Relief	f: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 2									
Subregion (LRR): Middle Atlantic Lat: 42.523329	Long: -72.907822 Datum: NAD83									
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: PFO1E									
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)									
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No Are "Normal" Circumstances present? ☑ Yes ☐ No									
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No									
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, transects, important features, etc.									
Hydrophytic Vegetation Present? ✓ Yes ☐ No	Is the Sampled Area									
Hydric Soil Present? ✓ Yes No	within a Wetland?									
Wetland Hydrology Present?										
Field Wetland Classification: PFO										
Remarks:										
HYDROLOGY										
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)									
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)									
☑ Surface Water (A1) ☑ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)									
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)									
Saturation (A3) Marl Deposits (B15)	☐ Dry-Season Water Table (C2)									
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)										
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres alon	_									
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (D Communician Desiries (DO)									
Algal Mat or Crust (B4) Recent Iron Reduction in Til	Challey Aquitard (D2)									
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Minaton annulis Deliat (DA)									
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	T 540 N + 17 + (D5)									
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)									
Field Observations:										
Surface Water Present?										
Water Table Present?	Wetland Hydrology Present?									
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)	☑ Yes □ No									
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	ous inspections), if available):									
VEGETATION										
Tree Stratum										
Plot Size: 30										
Scientific Name	% Cover Dominant Indicator Status									
Betula alleghaniensis Larix laricina	30 YES FAC 10 NO FACW									
Acer rubrum	15 YES FAC									
Total	l Cover: 55									



T TOVIDENCE, TXT 02004				1 1 1 1 1 1 1 1 1 1				
Sapling/Shrub Stratum								
Plot Size: 15				ı				
Scientific Name		% Cover	Dominant	Indicator Status				
llex verticillata		6	YES	FACW				
	Total Cover:	6						
Herb Stratum								
Plot Size: 5								
Scientific Name	I	% Cover	Dominant	Indicator Status				
Equisetum pratense		5	YES	FACW				
Glyceria sp		45	NA	NONE				
Galium obtusum Impatiens capensis		5 12	YES YES	FACW FACW				
	Total Cover:	67		I				
Woody Vine Stratum								
Plot Size: 30								
Scientific Name		% Cover	Dominant	Indicator Status				
		70 0010.	20111110111	maioator otatao				
	Total Cover:			I				
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:						
Number of Dominant Species	Total % Cover	of:	Multiply by:					
That Are OBL, FACW, or FAC: 6 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>					
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species	: <u>38</u>	x 2 = <u>76</u>					
Species Across All Strata: 6 (B)	FAC Species:	<u>45</u>	x 3 = <u>135</u>					
Percent of Dominant Species That Are OBL_FACW_or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>					
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>					
	Column Totals:	<u>83 (A)</u>	211 (B)					
		Prevalence Index =	= B/A = <u>2.54</u>					
Hydrophytic Vegetation Indicators:			<u> </u>					
✓ 1 - Rapid Test for Hydrophytic Vegetation✓ 2 - Dominance Test is > 50%								
☑ 3 - Prevalence Index is ≤ 3.0								
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Vegetation Present? ☑ Yes ☐ No							
☐ Problematic Hydrophytic Vegetation¹ (Explain)								
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.								
Remarks:								



T TOVIGETICE, I	(1 02304								1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
SOIL									
Profile Descrip	otion: (Describe	e the d	epth needed to	docum	nent the ir	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-9	10YR 2/1	100					ORG <i>A</i>	ANIC	
							0.10		
0.40	40)/D 0/4	400					004505	- 04410	VEDV OD AVELLY
9-10	10YR 6/1	100					COARSE	SAND	VERY GRAVELLY
¹Type: C=Con	centration, D=De	epletior	ı, RM=Reduced	Matrix	, CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Inc	dicators: (Appli	cable t	to all LRR's, unle	ess ot	herwise n	oted.)		Indicators for Pro	oblematic Hydric Soils³:
☐ Histosol (A1)					Surface (S	8) (LRR R,	2 cm Muck (A	A10) (LRR K, L, MLRA 149B)
✓ Histic Epi	pedon (A2)		N	ILRA 1	149B)			☐ Coast Prairie	Redox (A16) (LRR K, L, R)
☐ Black His	tic (A3)		пπ	hin Da	ark Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky i	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)		L	.oamv	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	(S7) (LRR K, L, M)
	Layers (A5)		_	-	Gleyed Ma		, ,	_	low Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1	_	•	ed Matrix (` ,		_	rface (S9) (LRR K, L)
_ '	k Surface (A12)	(, (,	· —	•	Dark Surfa	•			ese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)	١	_			urface (F7)			
	•		_	•					odplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		☐ F	kedox	Depressio	ns (F8)		_	(TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re								Red Parent N	
	Matrix (S6)								Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	\ 149B)					Other (Explai	n in Remarks)
3Indicators of	hydrophytic vege	tation a	and wetland hydro	ology r	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	yer Present?	 ✓ `	Yes 🔲 No		Jnknown				
GRAVE								Hydric Soil Preser	nt? ☑ Yes ☐ No
L &								,	
ROCK									
10									
Remarks:									
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	eneral Con	nments:			
Wetland Quali	ty: 🔲 High	☑ 1	Moderate	Low			Isolated Wetland?	Yes ✓	No Unknown
	-								
General Comm	nents:								





Ε



WE	TLAND	DET	ERM	INATIO	ON FO	RM - N	Northc	entı	ral an	d No	orthea	st Reg	gion		
☑ Centerline ☐ Re-Re	oute 🔲	Acces	s Road	d 🗆	Ancillary I	Facility		Trans	smission	Line		ther			
Project/Site: NED			N	filepost:	133715.4	4	County:		Hamps	shire			Date:	06/27/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA		Sam	oling Po	nt: PL	-E-W0	03-PSS	
Investigators: SE		Quad Na	ame: P	Plainfield			Townshi	p:	Plainfi	eld					
Logbook No.: 1E	Logb	ook Pg.	: 60		Tract: 9	919									
Landform (hillslope, terrace, e	etc.):	Depres	sion			Local Re	elief:	7 C	oncave		Convex	1	None	Slope%.:	2
Subregion (LRR): Middle	e Atlantic			Lat:	42.5236	65		Lo	ong:	-72.90	7903			Datum: NAI	D83
Soil Map Unit Name: Per	ru-Marlow a	associati	on, roll	ing, extre	mely stony	/					NWI	Classifica	ation:	PEM1E	
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	r this time	e of year?:	√	Yes		No (If no	o, exp	lain in Re	marks.)			
Are Vegetation	or Hy	/drology		significar	ntly disturb	ed?	√ No	Ar	e "Norma	al" Cir	cumstand	es prese	ent?	√ Yes	☐ No
Are Vegetation Soil	or Hy	/drology		naturally	problemat	tic?	— ☑ No								
			_				_								
SUMMARY OF FINDIN	NGS - At	tach s	ite m	ap sho	wing sa	amplin	g poin	t loc	ations	s, tra	nsects	, impo	rtant	features	, etc.
Hydrophytic Vegetation Prese	ent?	$\overline{\checkmark}$	Yes	☐ No				le f	he San	nnlad	l Aroa				
Hydric Soil Present?		\checkmark	Yes	☐ No				wit	hin a V	Vetla	nd?	✓ Ye	es 🗆] No	
Wetland Hydrology Present?		$\overline{\mathbf{A}}$	Yes	☐ No											
Field Wetland Classification:	PSS														
Remarks:															
HYDROLOGY															
Wetland Hydrology Indicato	ors:									<u> </u>	Secondar	y Indicat	ors (2	or more requ	uired)
Primary Indicators (minimum	of one requ	uired; ch	neck all	that appl	<u>y)</u>					[Surfa	ice Soil (Cracks	(B6)	
☐ Surface Water (A1)] Water	-Stained L	eaves (E	39)			[☐ Drain	age Pati	terns (B10)	
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)						B13)				[Moss	Trim Lir	nes (B	16)	
✓ Saturation (A3)				Marl D	eposits (B	315)				[Dry-S	Season V	Vater 1	Table (C2)	
☐ Water Marks (B1)] Hydro	gen Sulfide	e Odor (C1)			[Cray	fish Burr	ows (C	(8)	
☐ Sediment Deposits (B2)				Oxidiz	ed Rhizos	pheres a	along Livii	ng Ro	ots (C3)	. [Satu	ration Vis	sible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)] Prese	nce of Rec	duced Iro									
☐ Algal Mat or Crust (B4)] Recer	t Iron Red	uction in	n Tilled Soils (C6) Geomorphic Position (D2)								
☐ Iron Deposits (B5)				Thin N	luck Surfa	ce (C7)	Shallow Aquitard (D3)								
☐ Inundation Visible on Ae	rial Imager	y (B7)		O ther	(Explain ir	n Remarl	ks) Microtopographic Relief (D4)								
☐ Sparsely Vegetated Cor	ncave Surfa	ice (B8)								[√ FAC-	Neutral [*]	Test (E	05)	
Field Observations:															
Surface Water Present?	☐ Yes	☑ N	lo D	epth (incl	nes):										
Water Table Present?	√ Yes		lo D	epth (incl	nes): 2				Wetlan	nd Hyd	drology F	resent?			
Saturation Present? (includes capillary fringe)	∀ Yes		lo D	epth (incl	nes): 0								$\overline{\mathbf{A}}$	Yes □	No
Remarks (Describe Recorded	Data (strea	am gage	e, monit	toring wel	l, aerial ph	otos, pre	evious ins	spection	ons), if a	availab	ile):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Co	over		Dominar	nt	Indicato	or Status
						To	otal Cove	r:							



% Cov 10 5 15 35 10 5 10 5 10 5 10 5 10 5 10 5 10 5 10 10	ver Do heet: Multiply x 1 = x 2 =	ominant YES NO YES NO NO Ominant YES NO YES NO Ominant	Indicator Status FACW FACW FACW FACW FACW FACW FACW FAC				
10 5 15 35 10 5 15 35 10 5 15 35 10 5 15 25 15 25 25 25 25	ver Do heet: Multiply x 1 = x 2 =	ominant YES NO YES NO NO Ominant YES NO YES NO Ominant	FACW FACW FACW FACW FACW FACW FACW Indicator Status FACW OBL FACW NONE				
10 5 15 35 10 5 15 35 10 5 15 35 10 5 15 25 15 25 25 25 25	ver Do heet: Multiply x 1 = x 2 =	ominant YES NO YES NO NO Ominant YES NO YES NO Ominant	FACW FACW FACW FACW FACW FACW FACW Indicator Status FACW OBL FACW NONE				
% Cover: 80 % Cover: 80 % Cover: 80 % Cover: 75 % Cover: 75 % Cover: 80 % Cover of: 80	ver Do heet: Multiply x 1 = x 2 =	NO YES NO	FACW FACW FACW FACW FACW Indicator Status FACW OBL FACW NONE				
% Cover: 80 % Cover: 30 5 15 25 25 Cover: 75 % Cover: 8 8 8 8 8 8 8 8 8 8	ver Do heet: Multiply x 1 = x 2 =	ominant YES NO YES NA ominant	Indicator Status FACW OBL FACW NONE				
% Cov 30 5 15 25 25 Cover: 75	ver Do heet: Multiply x 1 = x 2 =	YES NO YES NA	FACW OBL FACW NONE				
30 5 15 25 25 Cover: 75 % Cover % Cover of: Species: 5 V Species: 110 Species: 0 Species: 0 Species: 0 Species: 0	ver Do heet: Multiply x 1 = x 2 =	YES NO YES NA	FACW OBL FACW NONE				
30 5 15 25 25 Cover: 75 % Cover % Cover of: Species: 5 V Species: 110 Species: 0 Species: 0 Species: 0 Species: 0	ver Do heet: Multiply x 1 = x 2 =	YES NO YES NA	FACW OBL FACW NONE				
30 5 15 25 25 Cover: 75 % Cover % Cover of: Species: 5 V Species: 110 Species: 0 Species: 0 Species: 0 Species: 0	ver Do heet: Multiply x 1 = x 2 =	YES NO YES NA	FACW OBL FACW NONE				
5 15 25 25 25 25 25 25	heet: Multiply x 1 = x 2 =	NO YES NA	OBL FACW NONE				
Cover: 75 % Cov % Cov Cover: ** Cover of: % Cover of: Species: 5 V Species: 110 Species: 0 Species: 0 Species: 0 nn Totals: 130	heet: Multiply x 1 = x 2 =	ominant					
Cover: Alence Index Works % Cover of: Species: 5	heet: Multiply x 1 = x 2 =		Indicator Status				
Cover: Alence Index Works % Cover of: Species: 5	heet: Multiply x 1 = x 2 =		Indicator Status				
Cover: Alence Index Works % Cover of: Species: 5	heet: Multiply x 1 = x 2 =		Indicator Status				
Alence Index Works % Cover of: Species: 5 V Species: 110 Species: 0 Species: 0 Species: 0 nn Totals: 130	Multiply x 1 = x 2 =	y by:					
Alence Index Works % Cover of: Species: 5 V Species: 110 Species: 0 Species: 0 Species: 0 nn Totals: 130	Multiply x 1 = x 2 =	y by:					
% Cover of: Species: 5 V Species: 110 Species: 0 Species: 0 Species: 0 Inn Totals: 130	Multiply x 1 = x 2 =	y by:					
Species: 5 V Species: 110 Species: 15 J Species: 0 Species: 0 nn Totals: 130	x 1 = x 2 =	y by:					
V Species: 110 Species: 15 J Species: 0 Species: 0 nn Totals: 130	x 2 =						
Species: 15 J Species: 0 Species: 0 nn Totals: 130		<u>5</u>					
J Species: 0 Species: 0 nn Totals: 130		<u>220</u> <u>45</u>					
Species: 0 nn Totals: 130	x 3 = x 4 =	<u>45</u> <u>0</u>					
nn Totals: 130	x 5 =	<u>o</u>					
		<u>270 (B)</u>					
	Index = B/A =	2.08					
Hydrophytic Vegetation Present?							
opnyne regenanen	riocont. <u>e</u>	_ 103 1	•				
ophytic Vegeta	ıtion	ition Present?	ation Present? ☑ Yes ☐ N				



Providence, R	1 02904													
SOIL														
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the ir	ndicator o	r confirm t	he absen	nce of i	ndicators.)				
Depth	Matrix		Red	dox Fe	atures									
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		Text	ure			Re	emarks	
0-6	10YR 2/1	100						ORGA	ANIC			M	IUCK	
6-12	10YR 6/1	96	10YR 6/4	4	С	М		LOAMY	SAND					
1Type: C-Cond	entration D-De	nletion	, RM=Reduced	Matrix		ered Sand	or Coated	Graine	21 6	cation: PL:	-Pore Lini	na M-N		
			·				1 01 Coaled	Giailis.						
		cable t	o all LRR's, unle			-				ators for P		•		_,
Histosol (A	,			'olyvalı /ILRA 1		Surface (S	88) (LRR R,		_	2 cm Muck (
_	pedon (A2)					/==\		= \	_	Coast Prairi			•	
☐ Black Hist							R R, MLRA	149B)		cm Mucky				_, R)
	Sulfide (A4)		_	-	=		(LRR K, L)			Dark Surfac			-	
	_ayers (A5)		_	-	Gleyed Ma				_	Polyvalue B		. ,	•	.)
	Below Dark Surfa	ace (A1	_		d Matrix (•				Thin Dark S	urface (S9	ı) (LRR K	(, L)	
	Surface (A12)		_		Dark Surfa	` ,				ron-Mangar	nese Mass	es (F12)	(LRR K,	L, R)
	cky Mineral (S1)			eplete	d Dark Su	ırface (F7)				Piedmont Fl	oodplain S	3oils (F19)) (MLRA	149B)
_	eyed Matrix (S4)			Redox I	Depressio	ns (F8)				Mesic Spodi	c (TA6) (N	/ILRA 14	4A, 145, 1	149B)
☐ Sandy Re	dox (S5)									Red Parent	Material (I	- 21)		
✓ Stripped N	Matrix (S6)									/ery Shallov	v Dark Su	rface (TF	⁻ 12)	
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)							Other (Expla	in in Rem	arks)		
3Indicators of h	ydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	d or prob	olematio	D.				
Restrictive Lay	er Present?		Yes ☑ No	□ u	Inknown				Hydric	: Soil Prese	ent? ✓] Yes	□ No	•
Remarks:														
Nemarks.														
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:								
Wetland Qualit	y: High	V N	Moderate	Low			Isolated '	Wetland?		Yes ✓	No [☐ Unkr	nown	
General Comm	ente:													
General Comm	ents.													





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WETLAND DETERMINATION FORM - North	central and Northeast Region					
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line					
Project/Site: NED Milepost: 133823.5 Count	y: Hampshire Date: 06/27/2015					
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: PL-E-W003-UPL					
Investigators: SE Quad Name: Plainfield Towns	hip: Plainfield					
Logbook No.: 1E Logbook Pg.: 50 Tract: 919						
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 4					
Subregion (LRR): Middle Atlantic Lat: 42.523692	Long: -72.907502 Datum: NAD83					
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped					
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, explain in Remarks.)					
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present?					
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No						
SUMMARY OF FINDINGS - Attach site map showing sampling points	nt locations, transects, important features, etc.					
Hydrophytic Vegetation Present? ☐ Yes ☑ No						
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No within a Wetland?					
Wetland Hydrology Present? ☐ Yes ☑ No						
Field Wetland Classification: UPLAND PLOT						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)					
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)					
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)					
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)					
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)					
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)					
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Li	ving Roots (C3) Saturation Visible on Aerial imagery (C9)					
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	<u> </u>					
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	_					
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)					
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present?						
Water Table Present?	Wetland Hydrology Present? ☐ Yes ☑ No					
Saturation Present?						
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	nspections), if available):					
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name	% Cover Dominant Indicator Status					
Total Co	ver:					



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Kalmia angustifolia Juniperus communis Hamamelis virginiana Tsuga canadensis Picea glauca Pinus strobus Spiraea latifolia	Total Cover:	12 25 5 5 8 5 12	YES YES NO NO NO NO YES	FAC FACU FACU FACU FACU FACU FACW
T	Total Gover.	12		
Herb Stratum Plot Size: 5				
Scientific Name	ı	% Cover	Dominant	Indicator Status
Solidago rugosa Rubus flagellaris Potentilla simplex Polytrichum commune	Total Cover:	5 15 20 85 125	NO NO NO NO YES	FAC FACU FACU UPL
Woody Vine Stratum				
Plot Size: 30 Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover OBL Species:	of: <u>0</u>	Multiply by: x 1 = 0	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species FAC Species:	: <u>12</u> <u>17</u>	x 2 = 24 x 3 = 51	
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species: UPL Species: Column Totals:	<u>85</u>	x 4 = 332 $x 5 = 425$ $832 (B)$ $= B/A = 4.22$	
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	/egetation Prese	ent? □ Yes [☑ No
Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



	1 02304									
SOIL										
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the ir	ndicator o	r confirm the	absence of indicators.)	1	
Depth	Matrix		Red	dox Fe	atures					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Texture	Remarks	
0-2	10YR 3/4	100					(ORGANIC		
2-6	10YR 4/6	100					FINE	SANDY LOAM		
20	10111 1/0	100					1	. CANADA EGANN		
0.40	40VD 5/0	400					FINE	CANDVIOAM		
6-18	10YR 5/6	100					FINE	SANDY LOAM		
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Gra	ains. ² Location: PL=	=Pore Lining, M=Matrix	
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:	
☐ Histosol (/	A1)		□ P	olyval	ue Below	Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)	
☐ Histic Epip	pedon (A2)		N	ILRA 1	149B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)	
☐ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149	9B)	Peat or Peat (S3) (LRR K, L, R)	
	Sulfide (A4)		_			. , .	(LRR K, L)	· — ·	e (S7) (LRR K, L, M)	
	Layers (A5)			-	Gleyed Ma		, , –,		elow Surface (S8) (LRR K, L)	
_	Below Dark Surfa	ace (A1	-							
_	k Surface (A12)	(, (,	, D R	_	nese Masses (F12) (LRR K, L, R)					
_	icky Mineral (S1)		_	_						
_	eyed Matrix (S4)			•		ırface (F7)			oodplain Soils (F19) (MLRA 149B)	
			□ F	euox	Depressio	ns (Fo)			ic (TA6) (MLRA 144A, 145, 149B)	
☐ Sandy Re								_	Material (F21)	
	Matrix (S6)							☐ Very Shallov	w Dark Surface (TF12)	
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed o	or problematic.		
Restrictive Lay	er Present?		res ☑ No	<u> </u>	Inknown					
								Hydric Soil Prese	ent? ☐ Yes ☑ No	
Remarks:										
T to manto										
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:				
Wetland Qualit	y:		Moderate	Low			Isolated Wet	tland?	No Unknown	
General Comm	ents:									





S



WETLAND DETERMINATION FORM - North	central and Northeast Region					
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line					
Project/Site: NED Milepost: 135228.3 County	: Hampshire Date: 06/26/2015					
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: PL-E-W002-PFO					
Investigators: SE Quad Name: Plainfield Towns	nip: Plainfield					
Logbook No.: 1E Logbook Pg.: 58 Tract: 919						
Landform (hillslope, terrace, etc.): Stream fringe Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 1					
Subregion (LRR): Middle Atlantic Lat: 42.524535	Long: -72.902413 Datum: NAD83					
Soil Map Unit Name: Pillsbury-Peacham-Wonsqueak assocition, undulating, extremely	stony NWI Classification: Not mapped					
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)					
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? 🔽 No	Are "Normal" Circumstances present? ✓ Yes No					
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No						
SUMMARY OF FINDINGS - Attach site map showing sampling point	nt locations, transects, important features, etc.					
Hydrophytic Vegetation Present? ✓ Yes □ No	, , , , , , , , , , , , , , , , , , ,					
Hydric Soil Present? ✓ Yes ☐ No	Is the Sampled Area					
Wetland Hydrology Present?	within a Wetland? ☑ Yes ☐ No					
Field Wetland Classification: PFO						
Remarks:						
Tomano.						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)					
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)					
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)					
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)					
☐ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)					
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)					
Sediment Deposits (B2) Oxidized Rhizospheres along Liv						
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Coomerchie Decition (D2)					
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	Challey Aguitard (D2)					
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Missatana anno bis Delis (DA)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	✓ Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present?						
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ✓ Yes □ No					
Saturation Present? Yes V No Depth (inches): (includes capillary fringe)	E les 🗆 No					
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	nspections), if available):					
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name	% Cover Dominant Indicator Status					
Betula alleghaniensis	65 YES FAC					
Acer rubrum Tsuga canadensis	20 NO FAC 55 YES FACU					
Total Cov	er: 140					



Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:		ı	I			
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
		70 0010.	20	maradia. Granda			
	Total Cover:	l	l	I			
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:	ı		ı			
Dominance Test Worksheet:	Prevalence In	dex Worksheet:					
Number of Dominant Species	Total % Cover	of:	Multiply by:				
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>				
	FAC Species:	<u>85</u>	x 3 = <u>255</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species	: <u>55</u>	x 4 = <u>220</u>				
	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals	: <u>140 (A)</u>	<u>475 (B)</u>				
		Prevalence Index	= B/A = <u>3.39</u>				
Hydrophytic Vegetation Indicators:							
☐ 1 - Rapid Test for Hydrophytic Vegetation							
2 - Dominance Test is > 50%							
3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Vegetation Present? ✓ Yes ☐ No						
data in Nontaino of on a coparate choosy							
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
Remarks: SURFACE ROOT SYSTEMS							
Nemarks. Soft ACE ROOT STOTEING							



	(1 0200+													
SOIL														
Profile Descrip		the d				ndicator o	r confirm t	he absen	ce of indicators.)	I				
Depth (inches)	Matrix		Redox Features					Texture		Remarks				
(IIIOIIC3)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texture				nano		
0-2	10YR 2/2	100						ORGA	NIC					
2-8	10YR 4/2	98	10YR 4/4	2	С	М		SILTL	OAM					
8-14	10YR 5/1	94	10YR 4/4	3 3	CC	M		SILT L	OAM					
			7.5YR 3/3	3		M								
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. ² Location: PL=Pore Lining, M=Matrix														
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :														
☐ Histosol (/	A1)		□ P	olyvalı	ue Below :	Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR	K, L, ML	.RA 149B)		
☐ Histic Epipedon (A2)							Coast Prairie Redox (A16) (LRR K, L, R)							
■ Black Hist	ic (A3)		□ ⊤	hin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)	☐ 5 cm Mucky	Peat or Pe	at (S3) (LRR K, L, R)		
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRF	≀ K, L, M	1)		
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surfac	e (S8) (I	LRR K, L)		
☐ Depleted	Below Dark Surfa	ace (A1	I1) 🗹 D	eplete	d Matrix (I	F3)			☐ Thin Dark St	urface (S9)	(LRR K,	L)		
☐ Thick Dar	k Surface (A12)		□ R	edox [Dark Surfa	ace (F6)			☐ Iron-Mangar	ese Masse	s (F12)	(LRR K, L, R)		
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	Piedmont Floodplain Soils (F19) (MLRA 149B)				
☐ Sandy Gle									c (TA6) (ML	_RA 144	A, 145, 149B)			
☐ Sandy Re	dox (S5)								☐ Red Parent	Material (F21)				
☐ Stripped N	Matrix (S6)								□ Very Shallov	v Dark Surf	ace (TF1	12)		
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	rks)			
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	ed or prob	lematic.					
Restrictive Lay	er Present?	<u> </u>	Yes □ No	 П U	nknown			•						
ROCK	or r roodine.	Ľ.		_ ~					Hydric Soil Prese	nt2 [7	Voc	□ No		
14									riyanc son i rese	<u>V</u>	Yes	□ NO		
Remarks:														
Remarks.														
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:								
Wetland Qualit	y: High	√ 1	Moderate	Low			Isolated '	Wetland?	☐ Yes 🗹	No 🔲	Unkno	own		
General Comm	ents:													





NE



WETLAND DETERMINATION FORM - Northcentral and Northeast Region								
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Tra	ansmission Line							
Project/Site: NED Milepost: 135327.2 County:	Hampshire Date: 06/26/2015							
Applicant/Owner: Kinder Morgan State: M.	A Sampling Point: PL-E-W002-UPL							
Investigators: SE Quad Name: Plainfield Township:	Plainfield							
Logbook No.: 1E Logbook Pg.: 56 Tract: 919								
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave ☑ Convex ☐ None Slope%.: 2							
Subregion (LRR): Middle Atlantic Lat: 42.524557	Long: -72.902045 Datum: NAD83							
Soil Map Unit Name: Pillsbury-Peacham-Wonsqueak assocition, undulating, extremely stor	ny NWI Classification: Not mapped							
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No								
SUMMARY OF FINDINGS - Attach site map showing sampling point to	ocations, transects, important features, etc.							
Hydrophytic Vegetation Present? ☐ Yes ☑ No	· · · · · · · · · · · · · · · · · · ·							
Hydric Soil Present?	s the Sampled Area □ Yes ☑ No							
Wetland Hydrology Present? ☐ Yes ☑ No	vithin a Wetland?							
Field Wetland Classification: UPLAND PLOT								
Remarks:								
HYDROLOGY	Secondary Indicators (2 or more required)							
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)							
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)							
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	Drainage Patterns (B10)							
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)							
☐ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)							
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)							
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living I	ng Roots (C3) Saturation Visible on Aerial imagery (C9)							
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)							
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	(C6) Geomorphic Position (D2)							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)							
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)							
□ Sparsely Vegetated Concave Surface (B8) □ FAC-Neutral Test (D5)								
Field Observations:								
Surface Water Present? ☐ Yes 📝 No Depth (inches):								
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?							
Saturation Present?	☐ Yes ☑ No							
(includes capillary fringe)								
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspe	ctions), if available):							
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name	% Cover Dominant Indicator Status							
Tsuga canadensis	80 YES FACU							
Betula alleghaniensis Populus grandidentata	6 NO FAC 25 YES FACU							
Picea glauca	12 NO FACU							
Total Cover:	123							



1 Tovidence, IXI 02004				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:	ı	ı	I			
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:	l	I	I			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:					
Number of Dominant Species	Total % Cover	of:	Multiply by:				
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>				
Species Across All Strata: 2 (B)	FAC Species:	<u>6</u>	x 3 = <u>18</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species	: <u>117</u>	x 4 = <u>468</u>				
That Are OBL, I ACW, OF I AC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	<u>123 (A)</u>	<u>486 (B)</u>				
		Prevalence Index	= B/A = 3.95				
Hydrophytic Vegetation Indicators:							
☐ 1 - Rapid Test for Hydrophytic Vegetation							
☐ 2 - Dominance Test is > 50%							
☐ 3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☐ Yes ☑ No						
data in Remarks or on a separate sheet)	7	.					
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹Indicators of hydric soil and wetland hydrology must be							
present, unless disturbed or problematic.							
Remarks:							



Providence, R	(1 02904								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	confirm the	absence of indicators.)	
Depth	Matrix		-		atures			•	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Texture	Remarks
0-4	7.5YR 3/2	100					(ORGANIC	
4-8	10YR 2/1	100					VERY FI	NE SANDY LOAM	
8-12	10YR 4/4	100					FINE	SANDY LOAM	
12-18	2.5Y 4/4	97	2.5Y 5/6	3	С	M	FINE	SANDY LOAM	
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated Gra	ains. ² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		IV	ILRA 1	49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		П Т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149	9B) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified L	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔲 🗅	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Dark	k Surface (A12)		□ R	edox [Dark Surfa	ace (F6)		☐ Iron-Mangan	iese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	icky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)								v Dark Surface (TF12)
	ace (S7) (LRR R	. MLRA	(149B)						in in Remarks)
_			and wetland hydro	ology n	nust he nr	esent unle	es disturbed o		,
Restrictive Lay					nknown				
Restrictive Lay	er Fresent?	U '	es V 140	⊔ °	TIKHOWH			Hydric Soil Prese	nt? ☐ Yes ☑ No
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wet	tland?	No 🔲 Unknown
General Comm	ents:								





SE



Centerline
Applicant/Owner: Kinder Morgam State: MA Sampling Point: PL-M-W009-PEM Investigators: CM Quad Name: Plainfield Township: Plainfield Logbook No.: 4 Logbook Pg.: 55 Tract: 898 Landform (hillslope, terrace, etc.): Depression Local Relief:
Investigators: CM
Logbook No.: 4 Logbook Pg.: 55 Tract: 898 Landform (hillslope, terrace, etc.): Depression Local Relief:
Landform (hillslope, terrace, etc.): Depression
Subregion (LRR): Middle Atlantic
Soll Map Unit Name: Peru-Marlow association, rolling, extremely stony NWI Classification: Not mapped Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? No Are "Normal" Circumstances present? Yes No Are Vegetation Soil or Hydrology naturally problematic? No Are "Normal" Circumstances present? Yes No Are Vegetation Present? No Are "Normal" Circumstances present? Yes No SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? No Wetland Hydrology Present? Yes No Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (minimum of one required: check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) Surface Water Table (A2) Aquatic Fauna (B13) Dry-Season Water Table (C2) Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Staturation Visible on Aerial imagery (C9) Sediment Deposits (B2) Your Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) In Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) In Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8)
Are climatic / hydrologic conditions on the site typical for this time of year?:
Are Vegetation
Are Vegetation
Are Vegetation
Hydrophytic Vegetation Present? Yes
Hydrophytic Vegetation Present? Yes
Hydric Soil Present?
Wetland Hydrology Present?
Field Wetland Classification: PEM Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Check all that apply) Secondary Indicators (2 or more required) Secondary Indicators (B10) Secondary Indicators (B10) Surface Soil Cracks (B6) Secondary Indicators (B10) Secondary Indicators (B10) Secondary Indicators (B10) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Secondary Indicat
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Driling Roots (C3) Aguatic Pauna (B13) Saturation (X3) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Secondary Indicators (2 or more required) Surface Soil Cracks (B6) Drainage Patterns (B10) Mass Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) ☑ Surface Water (A1) ☑ Water-Stained Leaves (B9) ☑ High Water Table (A2) ☑ Aquatic Fauna (B13) ☑ Saturation (A3) ☑ Marl Deposits (B15) ☐ Dry-Season Water Table (C2) ☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Crayfish Burrows (C8) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) ☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6) ✓ Surface Water (A1) ✓ Water-Stained Leaves (B9) Drainage Patterns (B10) ✓ High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) ✓ Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) ✓ Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) ✓ Sediment Deposits (B2) Ø Oxidized Rhizospheres along Living Roots (C3) Ø Saturation Visible on Aerial imagery (C9) ✓ Drift Deposits (B3) Ø Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) ✓ Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) ✓ Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) ✓ Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) ✓ Sparsely Vegetated Concave Surface (B8) Ø FAC-Neutral Test (D5)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Marl Deposits (B15) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Iron Deposits (B5) Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial imagery (C9) Stunted or Stressed Plants (D1) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5)
Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial imagery (C9) Saturation Visible on Aerial imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
✓ Stiriace Water (A1) ✓ Water-Grained Leaves (B3) ☐ Moss Trim Lines (B16) ✓ High Water Table (A2) ☐ Aquatic Fauna (B13) ☐ Dry-Season Water Table (C2) ✓ Saturation (A3) ☐ Marl Deposits (B15) ☐ Crayfish Burrows (C8) ☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Crayfish Burrows (C8) ☐ Sediment Deposits (B2) ✓ Oxidized Rhizospheres along Living Roots (C3) ✓ Saturation Visible on Aerial imagery (C9) ☐ Drift Deposits (B3) ✓ Presence of Reduced Iron (C4) ☐ Stunted or Stressed Plants (D1) ☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Geomorphic Position (D2) ☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Shallow Aquitard (D3) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Microtopographic Relief (D4) ☐ Sparsely Vegetated Concave Surface (B8) ✓ FAC-Neutral Test (D5)
Saturation (A3)
Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Crayfish Burrows (C8) ☐ Sediment Deposits (B2) ☑ Oxidized Rhizospheres along Living Roots (C3) ☑ Saturation Visible on Aerial imagery (C9) ☐ Drift Deposits (B3) ☑ Presence of Reduced Iron (C4) ☐ Stunted or Stressed Plants (D1) ☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Geomorphic Position (D2) ☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Shallow Aquitard (D3) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Microtopographic Relief (D4) ☐ Sparsely Vegetated Concave Surface (B8) ☑ FAC-Neutral Test (D5)
□ Sediment Deposits (B2) □ Oxidized Rhizospheres along Living Roots (C3) □ Saturation Visible on Aerial imagery (C9) □ Drift Deposits (B3) □ Presence of Reduced Iron (C4) □ Stunted or Stressed Plants (D1) □ Algal Mat or Crust (B4) □ Recent Iron Reduction in Tilled Soils (C6) □ Geomorphic Position (D2) □ Iron Deposits (B5) □ Thin Muck Surface (C7) □ Shallow Aquitard (D3) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Microtopographic Relief (D4) □ Sparsely Vegetated Concave Surface (B8) □ FAC-Neutral Test (D5)
□ Drift Deposits (B3) ☑ Presence of Reduced Iron (C4) ☐ Stunted or Stressed Plants (D1) □ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Geomorphic Position (D2) □ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Shallow Aquitard (D3) □ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Microtopographic Relief (D4) □ Sparsely Vegetated Concave Surface (B8) ☑ FAC-Neutral Test (D5)
Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Recent Iron Reduction in Tilled Soils (C6) Recent Iron Reduction in Tilled Soils (C6) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Shallow Aquitard (D3) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Microtopographic Relief (D4) ☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Microtopographic Relief (D4) ☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)
☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? ✓ Yes No Depth (inches): 3
Water Table Present? ✓ Yes No Depth (inches): 0 Wetland Hydrology Present?
Saturation Present? Yes No Depth (inches): 0
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):
VEGETATION
Tree Stratum
Plot Size: 30
Scientific Name
Ulmus americana 10 YES FACW
Acer rubrum 10 YES FAC Betula alleghaniensis 10 YES FAC
Total Cover: 30



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fagus grandifolia Betula alleghaniensis		20 10	YES YES	FACU FAC
Detala allegriarilerisis	Total Cover:	30	ILS	TAC
Herb Stratum				
Plot Size: 5	1		ı	I
Scientific Name		% Cover	Dominant	Indicator Status
Carex lupulina Polygonum arifolium		15 40	YES YES	OBL OBL
Impatiens capensis		10	NO	FACW
	Total Cover:	65		
Woody Vine Stratum				
Plot Size: 30	1		ı	1
Scientific Name		% Cover	Dominant	Indicator Status
	7.10			
	Total Cover:			
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)	Total % Cover of	of:	Multiply by:	
	OBL Species:	<u>55</u>	x 1 = <u>55</u>	
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species:		x 2 = <u>40</u>	
	FAC Species:	<u>30</u>	x 3 = <u>90</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 86 (A/B)	FACU Species:		x 4 = <u>80</u>	
	UPL Species:	<u>0</u>	x 5 = 0	
	Column Totals:	<u>125 (A)</u>	<u>265 (B)</u>	
	F	Prevalence Index =	= B/A = <u>2.12</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	t? ☑ Yes [□ No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	1			



Providence, R	1 02904								
SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the ir	ndicator o	r confirm the absen	nce of indicators.)
Depth	Matrix				atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-4	10YR 2/1	95	10YR 3/6	5	С	PL	SILT L	OAM	
0-4	101K 2/1	95	1011 3/0	5		FL	SILT	.OAW	
4-12	10YR 4/2	30	10YR 5/1 10YR 5/6	60 10	D C	M M	LOAMY COA	RSE SAND	
			10110 0/0	10					
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL:	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
Histosol (A	A1)		□ P	olvval	ue Below	Surface (S	8) (LRR R,	☐ 2 cm Muck ((A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILRA 1		- Canada (C	0) (2 ,	_	e Redox (A16) (LRR K, L, R)
				hin Da	rk Curfoo	, (SO) (LB	D D MI DA 140D)	_	
☐ Black Hist							R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_	•	•	` ,	(LRR K, L)		e (S7) (LRR K, L, M)
	_ayers (A5)		_	-	Gleyed Ma			☐ Polyvalue B	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	I1) 🗹 D	eplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		☐ R	edox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont FI	loodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□R	edox	Depressio	ns (F8)		☐ Mesic Spodi	ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallov	w Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	A 149B)						ain in Remarks)
_			·	ology r	nuat ha nr	ocont unl	an disturbed or prob	_ ` ` `	
		lalion	and welland hydro		•	esem, um	ess disturbed or prob	nematic.	
Restrictive Lay	er Present?		Yes ☑ No	п г	Inknown				
								Hydric Soil Prese	ent? ☑ Yes ☐ No
Remarks:							-		
December of		!	Ati- Diit-	0 -					
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetland?	Yes 🗖	No Unknown
General Comm	ente:								
General Comm	ents.								





SW



WETLAND DETERMINATION FORM North of	nutual and Northeast Design
WETLAND DETERMINATION FORM - Northce	entral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ ☐	Fransmission Line
Project/Site: NED Milepost: 141353.7 County:	Hampshire Date: 07/03/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: PL-M-W009-PFO
Investigators: CM Quad Name: Plainfield Township	o: Plainfield
Logbook No.: 4 Logbook Pg.: 54 Tract: 898	
Landform (hillslope, terrace, etc.): Depression Local Relief:	Concave Convex None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.527482	Long: -72.880041 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☑ Soil ☐ or Hydrology ☐ naturally problematic? ☐ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations transacts important features etc
Hydrophytic Vegetation Present?	iocations, transects, important leatures, etc.
	Is the Sampled Area
Hydric Soil Present?	within a Wetland? ✓ Yes □ No
Field Wetland Classification: PFO	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	g Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soi	ls (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☑ Yes ☐ No Depth (inches): 1	
Water Table Present? ✓ Yes ☐ No Depth (inches): 0	Wetland Hydrology Present?
Saturation Present?	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	pections), if available);
Transante (2000) 200 Transante Para (0.100), gage, memoring 100, au mai prio ce, pro noue map	
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Acer rubrum	40 YES FAC
Betula alleghaniensis Betula papyrifera	30 YES FAC 20 YES FACU
Total Cover.	
100.000	



Providence, RI 02904				ALCOM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum		10	NO VEO	FAC
Fagus grandifolia Betula alleghaniensis		55 10	YES NO	FACU FAC
-	Total Cover:	75	I	
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Impatiens capensis		10	YES	FACW
Parathelypteris noveboracensis		10	YES	FAC
	Total Cover:	20		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence In	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species	s: <u>10</u>	x 2 = <u>20</u>	
Species Across All Strata: 6 (B)	FAC Species:	<u>100</u>	x 3 = <u>300</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)	FACU Species	: <u>75</u>	x 4 = <u>300</u>	
That Are OBE, I AGW, OF I AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals	: <u>185 (A)</u>	620 (B)	
		Prevalence Index	$= B/A = \underline{3.35}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
☐ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic '	Vegetation Presei	nt? ☑ Yes	□ No
data in Remarks or on a separate sheet)	.,,,,		🛅 100	
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Depth (inches) Matrix Redox Features Texture Remarks	KS
(inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remark	KS
Color (moist) % Color (moist) % Type* Loc²	KS
0-4 10YR 2/1 95 10YR 3/6 5 C PL LOAM	
4-12 10YR 4/2 30 10YR 5/1 60 D M LOAMY COARSE SAND 10YR5/6 10 C M	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. ² Location: PL=Pore Lining, M=Matrix	(
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soil	ls³:
☐ Histosol (A1) ☐ Polyvalue Below Surface (S8) (LRR R, ☐ 2 cm Muck (A10) (LRR K, L, MLRA	149B)
Histic Epipedon (A2) MLRA 149B) □ Coast Prairie Redox (A16) (LRR K,	L, R)
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) ☐ 5 cm Mucky Peat or Peat (S3) (LRF	R K, L, R)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (LRR K, L) ☐ Dark Surface (S7) (LRR K, L, M)	
☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2) ☐ Polyvalue Below Surface (S8) (LRR	R K, L)
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L)	
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRI	R K, L, R)
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (M	•
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 1	·
☐ Sandy Redox (S5) ☐ Red Parent Material (F21)	. ,
☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12)	
□ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks)	
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Remarks: Hydric Soil Present? ✓ Yes □	No
Description of Habitat Characteristics, Aquatic Diversity or General Comments:	
Wetland Quality: High	1
General Comments:	





EAST



WETLAND DETERMINATION FORM - Northe	central and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 141290.0 County	Hampshire Date: 07/03/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: PL-M-W009-UPL
Investigators: CM Quad Name: Plainfield Townsh	ip: Plainfield
Logbook No.: 4 Logbook Pg.: 56 Tract: 898	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.527559	Long: -72.880301 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling poir	t locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No	William & Wolland
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Liv	ing Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	_
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? Yes 🗹 No Depth (inches):	Wetland Hydrology Present? ☐ Yes ☑ No
Saturation Present?	☐ Tes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Fagus grandifolia Betula alleghaniensis	70 YES FACU 20 YES FAC
Acer saccharum Total Cov	10 NO FACU er: 100



Trovidence, Nr 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Acer pensylvanicum Fagus grandifolia		5 5 40	NO NO YES	FAC FACU FACU
r agas grandirolia	Total Cover:	50	120	17.00
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Parathelypteris noveboracensis		15	YES	FAC
	Total Cover:	15		•
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover of	of:	Multiply by:	
Παι ΛΙΘ ODE, Ι ΛΟΨ, ΟΙ Ι'ΑΟ. = <u>ν· ν</u>	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
	FAC Species:	<u>40</u>	x 3 = <u>120</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species:	<u>125</u>	x 4 = <u>500</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>165 (A)</u>	620 (B)	
	F	Prevalence Index	= B/A = 3.76	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Prese	nt? ☐ Yes ☑	Ĭ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	1			



COUL	02004											
SOIL				_								
•		the d				ndicator o	r confirm t	he absen	ce of indicators.)			
Depth (inches)	Matrix	%		dox Fe		12		Text	ure		Rer	marks
	Color (moist)		Color (moist)	%	Type ¹	Loc ²						
0-1	7.5YR 2.5/1	100						ORGA	NIC			
1-12	7.5YR 4/6	70	7.5YR 5/4	30	С	M		LOAMY	SAND			
12-16	7.5YR 5/8	90	7.5YR 4/4	10	С	М		LOAMY	SAND			
		<u> </u>	n, RM=Reduced				or Coated	Grains.	² Location: PL=	Pore Linin	y, M=M	atrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)			Indicators for Pr	oblematic	Hydric	Soils ³ :
☐ Histosol (A	A1)					Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR	K, L, ML	-RA 149B)
☐ Histic Epip	pedon (A2)		IV	ILRA 1	496)				☐ Coast Prairie	e Redox (A	16) (LRF	₹ K, L, R)
■ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)	5 cm Mucky	Peat or Pe	at (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRF	K, L, M	i)
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surfac	e (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	l1) 🔲 🗅	eplete	d Matrix (I	F3)			☐ Thin Dark Su	urface (S9)	(LRR K,	, L)
☐ Thick Dar	k Surface (A12)		☐ R	edox [Dark Surfa	ace (F6)			☐ Iron-Mangan	ese Masse	s (F12)	(LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain Sc	ils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	ledox I	Depressio	ns (F8)			☐ Mesic Spodi	c (TA6) (MI	-RA 144	A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F2	<u>?</u> 1)	
☐ Stripped N	Matrix (S6)								□ Very Shallov	V Dark Surf	ace (TF	12)
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	rks)	
³ Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	ed or prob	lematic.			
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown							
									Hydric Soil Prese	nt?	Yes	☑ No
Remarks:							'					
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: High		Moderate	Low			Isolated	Wetland?	☐ Yes ☐	No 🔲	Unkn	own
			_									
General Comm	ents:											





WEST



\A/F	T. A	ND	DET		4151 A T	1011	-ODM	NI a satis a			-I NI -		-4 D -			
VVE	ILA	טא	DEI	EKI	/IINA I	ION	FORM -	Northc	ent	rai and	a NC	ortnea	St Ke	gion		
☑ Centerline ☐ Re-R	oute		Acce	ss Roa	ad 🗆	Ancill	lary Facility		Trans	smission	Line		Other			
Project/Site: NED					Milepost	1417	793.6	County:		Hamps	shire			Date:	07/03/20	15
Applicant/Owner: Kinder Mo	rgan							State:	MA		Samp	oling Po	int: P	L-M-W	010-PFO	
Investigators: CM		Q	uad N	ame:	Plainfield	t		Townsh	ip:	Plainfi	eld					
Logbook No.: 4		Logbo	ook Pg	.: 60		Tra	ct: 898									
Landform (hillslope, terrace,	etc.):		Depres	ssion	•		Local R	Relief:	 ✓ C	oncave		Convex		None	Slope%.:	2
Subregion (LRR): Middl	e Atlan	ntic			La	it: 42.5	527752		L	ong:	-72.87	8449			Datum: NA	\D83
Soil Map Unit Name: Pe	ru-Marl	low as	ssociat	tion, ro	lling, ext	remely	stony					NWI	Classifi	cation:	Not m	apped
Are climatic / hydrologic cond	litions o	on the	site ty	pical f	or this tir	ne of ye	ear?:	Yes		No (If no	o, expl	lain in Re	marks.)		
Are Vegetation Soil		or Hyd	drology	/ 🗖	signific	antly dis	sturbed?	☑ No	Ar	e "Norma	al" Circ	cumstand	es pre	sent?	✓ Yes	s 🔲 No
Are Vegetation 🗹 Soil		or Hyd	drology	/ 🗆	natural	ly proble	ematic?	☐ No								
CLIMANA DV OF FINIDII	100	A											•			1-
SUMMARY OF FINDII		- Att					g sampiii	ng poin	t ioc	ations	s, tra	nsects	, imp	ortan	t reatures	s, etc.
Hydrophytic Vegetation Pres	ent?		✓	Yes	_	lo			ls t	the San	npled	Area			-	
Hydric Soil Present?			⊻	Yes		lo				thin a V			✓ Y	es [□ No	
Wetland Hydrology Present?		DE0	✓	Yes		lo										
Field Wetland Classification:		PFO														
Remarks:																
HYDROLOGY																
Wetland Hydrology Indicate	ors:										5	Secondar	y Indica	ators (2	or more req	<u>uired)</u>
Primary Indicators (minimum	of one	e requ	iired; c	heck a	ll that ap	ply)						Surfa	ce Soil	Cracks	s (B6)	
✓ Surface Water (A1)				[√ Wat	er-Stain	ed Leaves ((B9)			5	✓ Drair	nage Pa	atterns	(B10)	
─ High Water Table (A2)				Ī	 □ Aqua	atic Fau	na (B13)					Moss	Trim L	ines (B	316)	
✓ Saturation (A3)				[☐ Marl	Deposi	ts (B15)					Dry-S	Season	Water	Table (C2)	
				[☐ Hyd	rogen S	ulfide Odor	(C1)				Cray	fish Bu	rrows (0	C8)	
☐ Sediment Deposits (B2)				[Oxio	lized Rh	izospheres	along Livi	ng Ro	oots (C3)		☐ Satu	ration V	isible o	n Aerial ima	gery (C9)
☐ Drift Deposits (B3)				[√ Pres	ence of	Reduced Ir	ron (C4)				Stun	ted or S	Stresse	d Plants (D1))
☐ Algal Mat or Crust (B4)				I	Rec	ent Iron	Reduction i	in Tilled So	oils (C	26)		Geor	norphic	Position	on (D2)	
☐ Iron Deposits (B5)				[Thin	Muck S	Surface (C7))				Shall	ow Aqı	uitard (E	03)	
☐ Inundation Visible on A	erial Im	agery	/ (B7)	I	Othe	er (Expla	ain in Rema	rks)			5	✓ Micro	otopogr	aphic R	Relief (D4)	
☐ Sparsely Vegetated Con	ncave S	Surfac	ce (B8))								☐ FAC	Neutra	l Test (D5)	
Field Observations:																
Surface Water Present?	☑ '	Yes	□ 1	No	Depth (in	ches):	1									
Water Table Present?	☑ `	Yes	□ 1	No	Depth (in	ches):	0			Wetlan	nd Hyd	Irology F	resent	i?		
Saturation Present? (includes capillary fringe)	Ø	Yes		No	Depth (in	ches):	0							☑	Yes □	l No
Remarks (Describe Recorded	Data ((strea	m gag	e, mor	nitorina w	ell, aeri	al photos n	revious in	specti	ions). if a	ıvailah	le):				
(((3-3	-,		,	р , р					,-				
VEGETATION																
VEGETATION																
Tree Stratum																
Plot Size: 30									1	a		1			1	. 0:
Scientific Name									+	% Co			Domin	ant		tor Status
Betula alleghaniensis Tsuga canadensis Acer rubrum										15 80 5)		NO YES NO		F	FAC ACU FAC
- :- 51 / 60/ 61/							7	Total Cove	er:	10		I	0		'	



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fagus grandifolia Tsuga canadensis Alnus glutinosa Fraxinus pennsylvanica	Total Cover:	5 10 5 5 25	YES YES YES YES	FACU FACU FACW FACW
Herb Stratum				
Plot Size: 5				
Scientific Name	ı	% Cover	Dominant	Indicator Status
		% Cover	Dominant NO	FACW
Impatiens capensis Osmunda claytoniana Dryopteris intermedia Parathelypteris noveboracensis		15 5 30	YES NO YES	FAC FAC FAC FAC
	Total Cover:	60		
Woody Vine Stratum				
Plot Size: 30			ı	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL_FACW_or FAC: 4 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species	: <u>20</u>	x 2 = <u>40</u>	
	FAC Species:	<u>70</u>	x 3 = <u>210</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 57 (A/B)	FACU Species:	<u>95</u>	x 4 = <u>380</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>185 (A)</u>	630 (B)	
	1	Prevalence Index =	= B/A = <u>3.41</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	egetation Preser	nt? ☑ Yes [□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				

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SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to	docum	ent the in	ndicator o	r confirm the ab	sence of indicators.)	
Depth	Matrix		Red	dox Fe	atures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		exture	Remarks
0-3	10YR 2/2	100					OF	RGANIC	
3-12	10Y 4/1	40	N7 10B 6/2	50 10	DС	M M	LOAMY	FINE SAND	
1Type: C-Cond	contration D_D	plotion	n, RM=Reduced	Matrix	CS-C0V	orod Sano	Lor Coatod Grain	s 21 ocation: DL-	Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	•	to all LRR's, unle				Tor Coaled Grain		roblematic Hydric Soils ³ :
		cable t					8) (LRR R,		A10) (LRR K, L, MLRA 149B)
Histosol (A	,			ILRA 1		ourrace (c	O) (LIXIX IX,		e Redox (A16) (LRR K, L, R)
☐ Black Hist			пτ	hin Da	rk Surface	e (S9) (I R	R R, MLRA 149B	=	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_				(LRR K, L)		e (S7) (LRR K, L, M)
	_ayers (A5)		_	-	Gleyed Ma		(LIXIX IX, L)	_	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	d Matrix (I			= '	urface (S9) (LRR K, L)
	Surface (A12)	200 (71)			Dark Surfa				nese Masses (F12) (LRR K, L, R)
	cky Mineral (S1)		_			urface (F7)		_	podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	-	Depressio				c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	. , ,		<u></u>	(GUUX I	Depressio	113 (1 0)		= '	
									Material (F21) v Dark Surface (TF12)
		MID/	\ 140P\						in in Remarks)
_	ace (S7) (LRR R		·						iii ii Remarks)
			and wetland hydro		-	esent, unit	ess disturbed or p	orobiematic.	
Restrictive Lay	er Present?	☑ ′	Yes No	□ ∪	nknown				
ROCKY								Hydric Soil Prese	ent? ☑ Yes ☐ No
12									
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: 🔲 High	√ 1	Moderate	Low			Isolated Wetlan	nd? 🔲 Yes 🔲	No 🗹 Unknown
General Comm	ents:								
	011101								





SW



WETLAND DETERMINATION FORM - Northcentral and Northeast Region											
			J								
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	Transi	smission Line	☐ Other								
Project/Site: NED Milepost: 141907.6	County:	Hampshire	Date:	07/03/2015							
Applicant/Owner: Kinder Morgan	State: MA	Samp	oling Point: PL-M-W0	10-UPL							
Investigators: CM Quad Name: Plainfield T	Γownship:	Plainfield									
Logbook No.: 4 Logbook Pg.: 62 Tract: 898											
Landform (hillslope, terrace, etc.): Slope - mid Local Reli	ef: Co	oncave 🗹	Convex None	Slope%.: 1							
Subregion (LRR): Middle Atlantic Lat: 42.527674	Lo	ong: -72.87	7999	Datum: NAD83							
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony			NWI Classification:	Not mapped							
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes 🔲 I	No (If no, expl	ain in Remarks.)								
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No Are	e "Normal" Circ	cumstances present?	✓ Yes ☐ No							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑] No										
				_							
SUMMARY OF FINDINGS - Attach site map showing sampling	point loca	ations, trai	nsects, important	features, etc.							
Hydrophytic Vegetation Present? ☐ Yes ☑ No	le ti	he Sampled	Aroa								
Hydric Soil Present? ☐ Yes ☑ No		hin a Wetlan		No							
Wetland Hydrology Present? ☐ Yes ☑ No											
Field Wetland Classification: UPLAND PLOT											
Remarks:											
HYDROLOGY											
Wetland Hydrology Indicators:		<u>s</u>	Secondary Indicators (2 of	or more required)							
Primary Indicators (minimum of one required; check all that apply)			☐ Surface Soil Cracks								
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9	9)		□ Drainage Patterns (E)	310)							
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines (B1	6)							
☐ Saturation (A3) ☐ Marl Deposits (B15)			☐ Dry-Season Water T	able (C2)							
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C	1)		☐ Crayfish Burrows (C	8)							
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres ald	ong Living Roo	ots (C3)	Saturation Visible or	Aerial imagery (C9)							
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	(C4)		Stunted or Stressed	Plants (D1)							
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in T	Filled Soils (C6	6)	Geomorphic Position	n (D2)							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)			Shallow Aquitard (D3	3)							
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks	s)		☐ Microtopographic Re								
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D	5)							
Field Observations:											
Surface Water Present?											
Water Table Present? ☐ Yes ☑ No Depth (inches):		Wetland Hyd	rology Present?								
Saturation Present?				Yes ✓ No							
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, prev	vious inspectio	ons), if availabl	le):								
VEGETATION											
Tree Stratum											
Plot Size: 30	· · ·										
Scientific Name		% Cover	Dominant	Indicator Status							
Betula alleghaniensis Fagus grandifolia		10 30	NO YES	FAC FACU							
Tsuga canadensis		40	YES	FACU							
Acer saccharum Tot	al Cover:	20 100	YES	FACU							

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1 1001000, 101 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fagus grandifolia Tsuga canadensis		5 5	YES YES	FACU FACU
roaga dariadoriolo	Total Cover:	10	120	17.00
11.1.0				
Herb Stratum				
Plot Size: 5	1	24.2	1	l
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Woody Vine Stratum	Total Cover.			
Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
- Scientific Name		78 COVEI	Dominant	mulcator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>100</u>	x 4 = <u>400</u>	
That Ale OBE, FAOW, OF FAO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>110 (A)</u>	430 (B)	
	F	Prevalence Index	= B/A = 3.91	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	∐ No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



SOIL										
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	r confirm t	he absen	ce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures			Textu	Ire	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		ı exil	A1 C	iveniaivs
0-1	10YR 2/1	100						SILT LO	MAC	
1-14	7.5YR 5/6	70	10YR 5/6	30	С	M		SANDY	LOAM	
14.40	40VD 2/4	00	7. EVD. 4/6	10		N4		CANDY	LOAM	
14-18	10YR 3/4	90	7.5YR 4/6	10	С	M		SANDY	LOAM	
¹Type: C=Cond	centration D=De	nletion	, RM=Reduced I	Matrix	CS=Cov	ered Sand	or Coated	Grains	²l ocation: Pl =	Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	<u> </u>	o all LRR's, unle							roblematic Hydric Soils³:
☐ Histosol (A						-	8) (LRR R,		_	A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILRA 1		(-	-, (=: :: : :,		_	e Redox (A16) (LRR K, L, R)
☐ Black Hist			ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)	,		e (S7) (LRR K, L, M)
	_ayers (A5)		_	•	Gleyed Ma	` '	. ,			elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1		-	d Matrix (I					urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		_ R	edox [Dark Surfa	ace (F6)			☐ Iron-Mangan	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□R	edox [Depressio	ns (F8)			☐ Mesic Spodi	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)								□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						☐ Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology m	nust be pr	esent, unle	ess disturbe	d or prob	lematic.	
Restrictive Lay	er Present?		res ☑ No	□ U	nknown					
_								!	Hydric Soil Prese	ent? ☐ Yes ☑ No
Remarks:										
Description of I	Habitat Characte	ristics.	Aquatic Diversity	or Ge	neral Com	nments:				
, , , ,		,	,							
Wetland Qualit	y: High		Moderate	Low			Isolated \	Wetland?	☐ Yes ☐	No 🔽 Unknown
General Comm	ents:									
										ļ





NORTH



WE	TLAND	DET	ERM	IINATIO	ON F	ORM - I	Northc	entr	al and	Nor	rtheast	t Regior	1	
☑ Centerline ☐ Re-R	oute	Acces	ss Road	d 🗖	Ancilla	ry Facility		Trans	mission Li	ine	☐ Oth	ner		
Project/Site: NED			N	/lilepost:	14342	27.3	County:		Franklin			Date	: 07/07/201	15
Applicant/Owner: Kinder Mo	rgan						State:	MA	S	ampli	ing Poin	: AS-M-W	/001-PFO	
Investigators: CM	(Quad Na	ame: A	Ashfield			Townshi	p:	Ashfield					
Logbook No.: 4M	Logb	ook Pg.	.: 80		Trac	t: 339	•							
Landform (hillslope, terrace,	etc.):	Stream	n fringe	floodplair	1	Local Re	elief:	7 Cc	oncave [Convex	☐ None	Slope%.:	1
Subregion (LRR): Middl	e Atlantic			Lat:	42.52	28630		Lo	ng: -7:	2.872	505		Datum: NA	.D83
Soil Map Unit Name: Ru	mney fine s	andy lo	am, 0 t	o 3 percei	nt slope	es, frequent	tly flooded				NWI CI	assification:	Not ma	apped
Are climatic / hydrologic cond	itions on th	e site ty	pical fo	or this time	of yea	ır?: ✓	1 Yes		No (If no,	expla	in in Rem	arks.)		
Are Vegetation Soil	or Hy	/drology		significan	itly dist	urbed?	√ No	Are	"Normal"	' Circu	umstances	s present?	✓ Yes	No
Are Vegetation Soil	or Hy	/drology	,	naturally	probler	matic?	— √ No							
SUMMARY OF FINDI					wing	samplir	ng point	loca	ations,	tran	sects, i	importan	it features	s, etc.
Hydrophytic Vegetation Pres	ent?	✓	Yes	□ No				ls ti	he Samp	oled A	Area _			
Hydric Soil Present?		☑	Yes	□ No					nin a We			☑ Yes I	□ No	
Wetland Hydrology Present?		✓	Yes	☐ No										
Field Wetland Classification:	PFO													
Remarks:														
HYDROLOGY														
Wetland Hydrology Indicate	ors:									Se	econdary	Indicators (2	2 or more req	uired)
Primary Indicators (minimum	of one req	uired; cl	neck all	I that appl	y)						Surface	e Soil Crack	s (B6)	
☐ Surface Water (A1)] Water-	-Staine	d Leaves (F	B9)			\checkmark	[Draina	ge Patterns	(B10)	
☐ High Water Table (A2)] Aquati	c Faun	a (B13)					Moss T	rim Lines (E	316)	
✓ Saturation (A3)				Marl D	eposits	s (B15)					Dry-Se	ason Water	Table (C2)	
☐ Water Marks (B1)] Hydro	gen Su	lfide Odor ((C1)				Crayfis	h Burrows ((C8)	
☐ Sediment Deposits (B2)				Oxidiz	ed Rhiz	zospheres a	along Livir	ng Roo	ots (C3)		Saturat	tion Visible	on Aerial ima	gery (C9)
☐ Drift Deposits (B3)			v	Prese	nce of F	Reduced Iro	on (C4)				Stunted	d or Stresse	ed Plants (D1))
☐ Algal Mat or Crust (B4)				Recen	t Iron F	Reduction ir	n Tilled So	ils (C6	6)	✓		rphic Positi		
☐ Iron Deposits (B5)				Thin M	luck Su	ırface (C7)					-	v Aquitard (•	
☐ Inundation Visible on A	rial Imager	y (B7)		Other	(Explai	n in Remar	ks)			✓	_	pographic f		
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)								✓] FAC-N	eutral Test	(D5)	
Field Observations:														
Surface Water Present?	☐ Yes	V N	10 D	Depth (inch	nes):									
Water Table Present?	☐ Yes	V N	No C	Depth (inch	nes):				Wetland	Hydr	ology Pre		7 Voc □	No
Saturation Present? (includes capillary fringe)	▼ Yes	□ N	10 C	Depth (inch	nes):	10						<u> V</u>	I Yes □	NO
Remarks (Describe Recorded	Data (strea	am gage	e, moni	toring wel	I, aerial	l photos, pr	evious ins	pectio	ons), if ava	ailable	e):			
VEGETATION														
Tree Stratum														
Plot Size: 30														
Scientific Name									% Cove	er	D	ominant	Indicat	or Status
Abies balsamea Picea glauca									30 40			YES YES		ACU
·						Т	otal Cove	r: '	70		1		1	



Sapling/Shrub Stratum				1 10 10 10 10 10
. •				
Plot Size: 15	1		ı	I
Scientific Name		% Cover	Dominant	Indicator Status
Vaccinium corymbosum Abies balsamea		20 5	YES NO	FACW FAC
Prunus serotina		5	NO	FACU
Spiraea alba Acer rubrum		15 5	YES NO	FACW FAC
Alnus glutinosa		10	NO	FACW
indera benzoin	Total Cover:	15 75	YES	FACW
	Total Cover.	75		
lerb Stratum Plot Size: 5				
Scientific Name	1	% Cover	Dominant	Indicator Status
Solidago gigantea		15	YES	FACW
Phalaris arundinacea		20	YES	FACW
ysimachia terrestris	Total Cavari	15	YES	OBL
Voody Vine Stratum	Total Cover:	50		
Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
Fragaria virginiana		10	YES	FACU
	Total Cover:	10	1	ı
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 7 (A)	OBL Species:	<u>15</u>	x 1 = <u>15</u>	
Total Number of Dominant	FACW Species:	: <u>95</u>	x 2 = <u>190</u>	
Species Across All Strata: 9 (B)	FAC Species:	<u>40</u>	x 3 = <u>120</u>	
Percent of Dominant Species	FACU Species:	<u>55</u>	x 4 = <u>220</u>	
That Are OBL, FACW, or FAC: 78 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	_ 205 (A)	<u> </u>	
		Prevalence Index		
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 4 - Morphological Adaptations¹ (Provide supporting	Hydronhytic V	egetation Prese	ent? ☑ Yes [7 No
data in Remarks or on a separate sheet)	nydropnytic v	egetation Frese	ant: V Tes L	J NO
Problematic Hydrophytic Vegetation¹ (Explain)				
I				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	confirm the abse	nce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		Tex	ture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Tex	iui G	iveniaivs
0-2	10YR 2/1	100					ORG	ANIC	
2-12	10YR 4/2	30	2.5YR 4/1 10YR 4/6	60 10	D C	M M	FINE SAN	DY LOAM	
40.40	10)/D 1/0		0.5)/D.4/4	00			1044474004	ND05 04ND	
12-18	10YR 4/2	30	2.5YR 4/1 10YR 4/6	60 10	D C	M M	LOAMY COA	ARSE SAND	
¹Type: C=Cond	centration D-De	nletion	RM-Reduced I	Matrix	CS-Cov	ered Sand	or Coated Grains.	2l ocation: Pl -	Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·		o all LRR's, unle				or coated Grains.		roblematic Hydric Soils³:
☐ Histosol (A		ouble t				-	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILRA 1		ouridoo (O	o) (Ertit 1t,		e Redox (A16) (LRR K, L, R)
☐ Black Hist			Пт	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)					neral (F1)	•		e (S7) (LRR K, L, M)
	_ayers (A5)			-	Gleyed Ma		, _,		elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1		-	d Matrix (I			_	urface (S9) (LRR K, L)
	k Surface (A12)	,		-	Dark Surfa	•		_	nese Masses (F12) (LRR K, L, R)
_	ıcky Mineral (S1)					ırface (F7)		_	podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	•	Depressio	,			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)		_		•	` ,			Material (F21)
☐ Stripped N	Matrix (S6)							_	v Dark Surface (TF12)
	ace (S7) (LRR R	. MLR/	A 149B)					_	ain in Remarks)
_			•	oloav n	oust be pro	esent unle	ess disturbed or prol		,
Restrictive Lay					nknown				
nestrictive Lay	er i resent:	ш	163 <u>V</u> 110		TIKITOWIT			Hydric Soil Prese	unt? ☑ Voc ☐ No
								Tryunc don't rese	ent? ☑ Yes ☐ No
Remarks:									
remand.									
Description of I	Habitat Characta	riotico	Aguatia Divaraitu	or Co	noral Com	monto			
Description of i	nabilal Characle	ristics,	Aquatic Diversity	or Ge	nerai Con	imenis:			
Wetland Qualit	y: 🗹 High	_ ,	Moderate	l ow			Isolated Wetland?	?	No ☐ Unknown
Welland Quant	y. <u>[v]</u> Tilgii	ы.	vioderate	LOW			isolated Wetland	. 🔲 ies 🚺	NO D CHRIOWII
General Comm	ents:								





SE



WE	TLAND	DET	ERN	IINATI	ON F	ORM -	Northc	ent	ral an	d No	ortheas	t Regi	on		
☑ Centerline ☐ Re-Ro	oute 🔲	Acces	ss Roa	d 🗖	Ancill	ary Facility		Tran	smission	Line	☐ Ot	her			
Project/Site: NED			ľ	Milepost:	1433	372.1	County:		Frankl	in		Da	ate:	07/07/201	5
Applicant/Owner: Kinder Moi	gan						State:	MA		Sam	pling Poir	nt: AS-M	1-W00	1-PSS	
Investigators: CM	(Quad Na	ame: /	Ashfield			Townshi	p:	Ashfie	ld					
Logbook No.: 4M	Logb	ook Pg	.: 81		Tra	ct: 339	'								
Landform (hillslope, terrace, e	tc.):	Stream	n fringe)		Local R	Relief:	7 C	oncave		Convex	☐ No	ne S	Slope%.:	1
Subregion (LRR): Middle	Atlantic			Lat:	42.5	528591		L	ong:	-72.87	72703		[Datum: NAI	D83
Soil Map Unit Name: Run	nney fine s	andy lo	am, 0 t	to 3 perce	nt slop	es, frequer	ntly flooded	I			NWI C	lassification	on:	Not ma	pped
Are climatic / hydrologic condi	tions on th	e site ty	pical fo	or this time	e of ye	ar?:	Z Yes		No (If no	o, exp	lain in Ren	narks.)			
Are Vegetation Soil	☐ or Hy	/drology	/ □	significa	ntly dis	sturbed?	☑ No	Ar	e "Norma	al" Cir	cumstance	es present	?	√ Yes	☐ No
l	_ `	/drology	_	naturally	proble	ematic?	_ No								
_							_								
SUMMARY OF FINDIN	GS - At	tach s	site m	nap sho	wing	g sampli	ng poin	t loc	ations	s, tra	nsects,	import	ant f	features	, etc.
Hydrophytic Vegetation Prese	nt?	\checkmark	Yes	☐ No	1			lo i	tha Can	nnlad	l Aron				
Hydric Soil Present?		$\overline{\checkmark}$	Yes	☐ No	1			wit	the San thin a V	Vetlai	nd?	 ✓ Yes		No	
Wetland Hydrology Present?		$\overline{\mathbf{A}}$	Yes	☐ No	1										
Field Wetland Classification:	PSS														
Remarks:															
HYDROLOGY															
Wetland Hydrology Indicato	rs:									5	Secondary	Indicators	s (2 o	r more requ	<u>iired)</u>
Primary Indicators (minimum o	of one requ	uired; cl	heck al	ll that app	y)					[Surfac	ce Soil Cra	acks (B6)	
✓ Surface Water (A1)				☐ Water	-Stain	ed Leaves ((B9)			[☐ Draina	age Patter	ns (B	10)	
✓ High Water Table (A2)				☐ Aquat	ic Fau	na (B13)				[Moss	Trim Lines	s (B16	6)	
✓ Saturation (A3)				☐ Marl □	Deposi	ts (B15)				[☐ Dry-S	eason Wa	iter Ta	able (C2)	
				☐ Hydro	gen Si	ulfide Odor	(C1)			[Crayfi	sh Burrow	/s (C8	3)	
☐ Sediment Deposits (B2)			5	✓ Oxidiz	ed Rh	izospheres	along Livir	ng Ro	oots (C3)	[☐ Satura	ation Visib	le on	Aerial imag	jery (C9)
☐ Drift Deposits (B3)			5	✓ Prese	nce of	Reduced Ir	on (C4)			[Stunte	ed or Stres	ssed F	Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron	Reduction i	in Tilled Sc	oils (C	26)	E	√ Geom	orphic Po	sition	(D2)	
☐ Iron Deposits (B5)				☐ Thin N	/luck S	Surface (C7))			[Shallo	w Aquitar	d (D3)	
☐ Inundation Visible on Ae	rial Imager	y (B7)		Other	(Expla	ain in Rema	rks)			[☐ Microt	opograph	ic Rel	ief (D4)	
☐ Sparsely Vegetated Con	cave Surfa	ace (B8)								[✓ FAC-N	Neutral Te	st (D5	5)	
Field Observations:															
Surface Water Present?	✓ Yes	ΠМ	No [Depth (inc	hes):	2									
Water Table Present?	✓ Yes			Depth (inc	,	0			Wetlan	nd Hvo	drology Pi	resent?			
Saturation Present?	✓ Yes	_		Depth (inc	•	0				,			\checkmark	Yes 🗆	No
(includes capillary fringe)															
Remarks (Describe Recorded	Data (strea	am gage	e, mon	itoring we	ll, aeria	al photos, p	revious ins	specti	ons), if a	ıvailab	ole):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Co	over	0	Oominant		Indicato	or Status
						7	Total Cove	r:							



Providence, RI 02904				ALCOM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Alnus incana		30 20	YES YES	FACW FACW
Spiraea alba Alnus glutinosa		20	YES	FACW
	Total Cover:	70		•
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Phalaris arundinacea		35	YES	FACW
Carex stricta Eutrochium fistulosum		20 15	YES NO	OBL FACW
Scirpus atrovirens		10	NO	OBL
	Total Cover:	80		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, of FAC.	OBL Species:	<u>30</u>	x 1 = <u>30</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	s: <u>120</u>	$x 2 = \underline{240}$	
Species / 101000 / III Olialai	FAC Species:	<u>15</u>	x 3 = <u>45</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species	: <u>0</u>	x 4 = 0	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>165 (A)</u>	<u>315 (B)</u>	
		Prevalence Index	= B/A = <u>1.91</u>	
Hydrophytic Vegetation Indicators:				
☑ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Prese	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, F	1 02904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	nce of indicators.)	1
Depth	Matrix		-		atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	ture	Remarks
0-9	10YR 2/1	95	10YR 4/6	5	C	PL	SILT I	OAM	
0-9	101K 2/1	95	1011 4/6	3		PL PL	SILT	LOAW	
9-14	5Y 6/1	40	2.5Y 5/2 10YR 4/6	55 5	D C	M M	FINE SAN	DY LOAM	
¹ Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	d or Coated Grains.	² Location: PL=	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (/	A1)		□ P	olyvalı	ue Below	Surface (S	88) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		N	ILRA 1	149B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
☐ Black Hist	ic (A3)		пπ	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)		L	oamv l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed Ma		, ,		elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	ed Matrix (urface (S9) (LRR K, L)
	k Surface (A12)			-	Dark Surfa	•		_	nese Masses (F12) (LRR K, L, R)
	icky Mineral (S1)		_			urface (F7)		_	, , , , , , , , , , , , , , , , , , , ,
	eyed Matrix (S4)	,	_	-	Depressio				oodplain Soils (F19) (MLRA 149B) c (TA6) (MLRA 144A, 145, 149B)
			·	redux i	Depressio	115 (1 0)		_ :	
								_	Material (F21)
= ''	Matrix (S6)							_ '	v Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetland	? ☐ Yes ☑	No Unknown
General Comm	ents:								





NW



WETLAND DETERMINATION FORM - Northce	entral and North	east Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ T	ransmission Line] Other	
Project/Site: NED Milepost: 143497.5 County:	Franklin	Date:	07/07/2015
Applicant/Owner: Kinder Morgan State: 1	MA Sampling	Point: AS-M-W00	11-UPL
Investigators: CM Quad Name: Ashfield Township			
Logbook No.: 4M Logbook Pg.: 82 Tract: 339			
Landform (hillslope, terrace, etc.): Floodplain terrace Local Relief:	Concave	vex None	Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.528662	Long: -72.872248	3 1	Datum: NAD83
Soil Map Unit Name: Peacham muck, 0 to 3 percent slopes, extremely stony	N	IWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain ir	n Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	— Are "Normal" Circums	stances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No			
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations transe	cts important	features etc
Hydrophytic Vegetation Present? ☐ Yes ☑ No	ioodiiono, iranoo	oto, important	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Are	ea □ Yes ☑	No
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland?	□ les v	NO
Field Wetland Classification: UPLAND PLOT			
Remarks:			
Keniaiks.			
HYDROLOGY			
Wetland Hydrology Indicators:	Secon	ndary Indicators (2 o	r more required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		Orainage Patterns (B	10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	□ <i>N</i>	Moss Trim Lines (B16	6)
☐ Saturation (A3) ☐ Marl Deposits (B15)	-	Ory-Season Water Ta	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	_	Crayfish Burrows (C8	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	g 1100is (00) —	Saturation Visible on	
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	=	Stunted or Stressed I	, ,
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soil	- (CC)	Geomorphic Position	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3	•
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		Microtopographic Rel	
Sparsely Vegetated Concave Surface (B8)	□ -	FAC-Neutral Test (D	o)
Field Observations:			
Surface Water Present? ☐ Yes ☑ No Depth (inches):			
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrolog		Vaa 🗹 Na
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)		П	Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	ections), if available):		
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Tsuga canadensis	40	YES	FACU
Acer saccharum Picea glauca	20 25	YES YES	FACU FACU
Abies balsamea	15	NO	FAC
Total Cover:	100		

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Dryopteris campyloptera		5	YES	FACU
	Total Cover:	5	'	'
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>15</u>	x 3 = <u>45</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	90	x 4 = <u>360</u>	
macrae obe, mon, or me.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>105 (A)</u>	<u>405 (B)</u>	
	F	Prevalence Index :	= B/A = 3.86	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, F	RI 02904											
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm th	ne absen	ce of indicators.)			
Depth	Matrix		dox Fe									
(inches)	Color (moist) %		Color (moist)	%	Type ¹ Loc ²		Texture			Remark	S	
0-3	2.5Y 2.5/4	100					ORGANIC					
3-4	2.5Y 2.5/1	100					ORGANIC					
4-5	5YR 3/2	20	5YR 7/1	80	С	М		LOA	MM			
5-12	7.5YR 5/8	70	7.5YR 4/4	30	С	М		LOA	M			
12-18	10YR 6/6	50	10YR 3/3	50	С	М	LC	AMY FII	NE SAND			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining,	, M=Matrix	
Hydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)			Indicators for Pr	oblematic H	lydric Soil	s³:
☐ Histosol (A	A1) pedon (A2)		_	Polyvalı /ILRA 1		Surface (S	8) (LRR R,		2 cm Muck (
■ Black Hist	tic (A3)		□ 1	hin Da	rk Surfac	e (S9) (LRI	R R, MLRA	149B)	5 cm Mucky	Peat or Pea	t (S3) (LRR	K, L, R)
☐ Hydrogen	Sulfide (A4)			.oamy	Mucky Mi	neral (F1) ((LRR K, L)		☐ Dark Surface	(S7) (LRR	K, L, M)	
☐ Stratified I	Layers (A5)			.oamy	Gleyed M	atrix (F2)			☐ Polyvalue Be	low Surface	(S8) (LRR	K, L)
□ Depleted	Below Dark Surfa	ace (A1	l1) 🔲 🖸	Peplete	d Matrix (F3)			☐ Thin Dark Su	ırface (S9) (I	LRR K, L)	
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R)								R K, L, R)				
☐ Sandy Mu	ucky Mineral (S1))		Peplete	d Dark Su	urface (F7)			☐ Piedmont Flo	odplain Soil	s (F19) (ML	_RA 149B)
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B							45, 149B)					
							☐ Red Parent I	Material (F21	1)			
Stripped Matrix (S6)							☐ Very Shallow Dark Surface (TF12)					
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Remark	(S)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	d or prob	lematic.			
Restrictive Lay	/er Present?		Yes √ No		nknown			· ·				
	, or a resource		100 💽 110		THAT OWN				Hydric Soil Prese	nt?	Yes ☑	No
Remarks:												
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Con	nments:						
Wetland Qualit	ty: High	_ r	Moderate	Low			Isolated V	Vetland?	☐ Yes ☐	No 🗖	Unknown	
General Comm	nents:											





Ν



WETLAND DETERMINATION FORM - North	ncent	tral and No	ortheast Region					
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐] Trar	nsmission Line	Other					
Project/Site: NED Milepost: 145756.0 Count	y:	Franklin	Date:	07/08/2015				
Applicant/Owner: Kinder Morgan State:	MA	Samp	oling Point: AS-M-W	004-PFO				
Investigators: CM Quad Name: Ashfield Towns	ship:	Ashfield						
Logbook No.: 4M Logbook Pg.: 98 Tract: 11968								
Landform (hillslope, terrace, etc.): Depression Local Relief:	V	Concave	Convex None	Slope%.: 1				
Subregion (LRR): Middle Atlantic Lat: 42.529767	l	Long: -72.86	4003	Datum: NAD83				
Soil Map Unit Name: Peru fine sandy loam, 8 to 15 percent slopes, very stony			NWI Classification:	Not mapped				
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes		No (If no, expl	lain in Remarks.)					
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ N	о — о А	re "Normal" Circ	cumstances present?	✓ Yes □ No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No			·					
The vegetation Soil of Flydrology hatdraily problematic: No	J							
SUMMARY OF FINDINGS - Attach site map showing sampling po	int lo	cations, tra	nsects, important	features, etc.				
Hydrophytic Vegetation Present? ✓ Yes ☐ No								
Hydric Soil Present? ☑ Yes ☐ No	ls wi	the Sampled ithin a Wetlar	lArea od? ☑ Yes □] No				
Wetland Hydrology Present? ✓ Yes ☐ No	•••							
Field Wetland Classification: PFO								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:		<u> </u>	Secondary Indicators (2	or more required)				
Primary Indicators (minimum of one required; check all that apply)			☐ Surface Soil Cracks	(B6)				
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9)	Drainage Patterns (B10)							
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)							
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)							
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)								
Sediment Deposits (B2)								
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	,							
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	_							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		Microtopographic Relief (D4)						
□ Sparsely Vegetated Concave Surface (B8) □ FAC-Neutral Test (D5)								
Field Observations:								
Surface Water Present?								
Water Table Present? ☑ Yes ☐ No Depth (inches): 0		Wetland Hyd	Irology Present?	_				
Saturation Present?			✓	Yes □ No				
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	inspect	tions), if availab	le):					
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name		% Cover	Dominant	Indicator Status				
Betula alleghaniensis Acer rubrum		40 40	YES YES	FAC FAC				
Abies balsamea Tsuga canadensis		15 15	NO NO	FAC FACU				
Total Co	ver:	110	1					



Providence, RI 02904				A_COM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus americana		10 10	NO NO	FACU FAC
Abies balsamea Tsuga canadensis		20	YES	FACU
Hamamelis virginiana Acer rubrum		15 5	YES NO	FACU FAC
Acer rubrum	Total Cover:	60	INO	FAC
	Total Cover.			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Dryopteris intermedia Impatiens capensis		5 70	NO YES	FAC FACW
Impations superiors	Total Cover:	75	120	17.000
Woody Vine Stratum	Total Coroll			
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
- Colorado Halife		/0 GOVEI	Dominant	mulcator Status
	 Total Cover:		I	I
Position Total World Land				
Dominance Test Worksheet:		lex Worksheet:	AA Ida I	
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover		Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species		x 2 = <u>140</u>	
	FAC Species:	<u>115</u>	x 3 = <u>345</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)	FACU Species:		x 4 = 240	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	245 (A)	<u>725 (B)</u>	
		Prevalence Index	$= B/A = \underline{2.96}$	
Hydrophytic Vegetation Indicators:				
☑ 1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
✓ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	egetation Prese	nt? ✓ Yes [□ No
data in Remarks or on a separate sheet)	7			
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



1 TOVIGETICE, I	02004																	
SOIL																		
Profile Descrip	tion: (Describe	the d	epth need	led to	docum	ent the ir	ndicator o	r confirm	he abser	nce o	f indica	tors.)						
Depth	Matrix			Re	dox Fe	atures			-							_		
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Text	ure					F	≺em	narks	
0-25	2.5Y 2.5/1	100							ORGA	ANIC								
¹Type: C=Cond	centration, D=De	epletio	n, RM=Re	duced	Matrix,	CS=Cov	ered Sanc	L I or Coated	Grains.	2	_ocation	l : PL=	Pore	Lining	. M	 =Ма	trix	
	licators: (Appli		-								icators							3-
Histosol (A		oubio	to an Entre	_			•	8) (LRR R		П	2 cm M				-			
_ `	pedon (A2)				/ILRA 1		ourrace (c	O) (LIXIX IX			Coast I							
	` ,				hin Do	rk Curfoo	- (SO) (LB	DD MID/	140P)	_								•
☐ Black Hist				_				R R, MLRA	1490)			-						K, L, R)
	Sulfide (A4)			_	-	-		(LRR K, L)			Dark S							<i>(</i> 1)
_	_ayers (A5)	200 (A	11)	_	-	Gleyed Ma					Polyva							(, L)
:	Below Dark Surfa	A) 90k	11)	_	-	d Matrix (•				Thin Da						-	K I D)
	k Surface (A12)					Dark Surfa						_						K, L, R)
	icky Mineral (S1)	'		_	•		ırface (F7)											RA 149B)
_	eyed Matrix (S4)			☐ F	keaox I	Depressio	ns (F8)					-	•			144/	۱, 14	5, 149B)
☐ Sandy Re											Red Pa						0)	
	Matrix (S6)										Very S					TF1	2)	
☐ Dark Surfa	ace (S7) (LRR R	, MLR	A 149B)								Other (Expla	in in R	Remar	ks)			
3Indicators of h	nydrophytic vege	tation	and wetlan	d hydro	ology m	nust be pr	esent, unle	ess disturb	ed or prob	olema	tic.							
Restrictive Lay	er Present?		Yes 🗹	No	□ U	nknown												
										Hydr	ic Soil I	Prese	nt?	\checkmark	Ye	s		No
Remarks:														-				
Description of I	Habitat Characte	riction	Agustia D	ivereit	, or Co	noral Cam	amonto:											
Description of t	Habitat Characte	iiislics,	Aqualic D	iversity	or Ge	nerai Con	intents.											
Wetland Qualit		_	Madarata	_	Law			laalatad	\\/atland0	, F	7 Vaa	. 🗖	Na	_	11.	ممادم		
welland Qualit	y: ☑ High		Moderate		Low			isolated	Wetland?	Ĺ	Yes	√	No		UI	nkno	WII	
General Comm	ents:																	





NW



WETLAND DETERMINATION FORM - Northce	entral and Nor	theast Region	
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ T	ransmission Line	☐ Other	
Project/Site: NED Milepost: 145808.6 County:	Franklin	Date:	07/08/2015
Applicant/Owner: Kinder Morgan State: N	MA Sampl	ing Point: AS-M-W00	04-UPL
Investigators: CM Quad Name: Ashfield Township:	: Ashfield	<u> </u>	
Logbook No.: 4M Logbook Pg.: 100 Tract: 11968			
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave 🗹 C	Convex None	Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.529702	Long: -72.863	788	Datum: NAD83
Soil Map Unit Name: Peru fine sandy loam, 8 to 15 percent slopes, very stony		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, expla	in in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circu	ımstances present?	☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No			
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations, tran	sects, important	features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	Todationo, trait	ooto, iiiportaiit	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled		No
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland	d? Lies E	NO
Field Wetland Classification: UPLAND PLOT			
Remarks:			
remans.			
HYDROLOGY			
Wetland Hydrology Indicators:	<u>Se</u>	econdary Indicators (2 o	r more required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks ((B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		Drainage Patterns (B	10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines (B1	6)
☐ Saturation (A3) ☐ Marl Deposits (B15)		Dry-Season Water Ta	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8	3)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	g Roots (C3)	Saturation Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	s (C6)	Geomorphic Position	(D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			
☐ Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D	5)
Field Observations:			
Surface Water Present? ☐ Yes 🔽 No Depth (inches):			
Water Table Present?	Wetland Hydr	ology Present?	
Saturation Present?	·		Yes ☑ No
(includes capillary fringe)			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	ections), if available):	
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Acer rubrum	10	NO	FAC
Acer saccharum Tsuga canadensis	20 60	YES YES	FACU FACU
Betula alleghaniensis	10	NO I	FAC
Total Cover:	100		



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Tsuga canadensis Acer pensylvanicum		10 10	NO NO	FACU FACU
Acci pensylvanicam	Total Cover:	20	140	17100
Herb Stratum				
Plot Size: 5	ı		1	1
Scientific Name		% Cover	Dominant	Indicator Status
Dryopteris campyloptera		10	NO	FACU
	Total Cover:	10		
Woody Vine Stratum				
Plot Size: 30	1		ı	ſ
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 2 (B)	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species That Are OBL FACW or FAC: 0 (A/B)	FACU Species:	<u>110</u>	x 4 = <u>440</u>	
That Are OBL, FACW, or FAC: 0 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	130 (A)	500 (B)	
	F	Prevalence Index	= B/A = <u>3.85</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? ☐ Yes ဩ	∕i No
data in Remarks or on a separate sheet)	ilyaropilyar v	ogotation i 1000.	<u> 163 </u>	_ 140
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



	(1 02004										11 6 1 7 1 1 1
SOIL											
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the in	dicator o	r confirm th	ne absen	ce of indicators.)		
Depth	Matrix		Re	dox Fe	atures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure		Remarks
0-3	2.5YR 2.5/1	100						SILT L	OAM		
3-4	2.5YR 7/1	100						LOA	N		
3-4	2.51K //1	100						LOA	IVI		
4-12	2.5YR 4/6	100						LOAMY	SAND		
12-18	2.5YR 4/4	50	2.5YR 4/8	50	С	М		LOAMY	SAND		
¹Type: C=Cond	centration, D=De	epletion	ı ı, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated (Grains.	² Location: PL=	Pore Lining	a, M=Matrix
		•	o all LRR's, unle						Indicators for Pr		
		cable t	•			•	0) (1 DD D				•
Histosol (,			'olyvalı /ILRA 1		Surface (S	8) (LRR R,		_		K, L, MLRA 149B)
☐ Histic Epi	pedon (A2)				,				_		16) (LRR K, L, R)
■ Black Hist	tic (A3)		□ 1	hin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)	5 cm Mucky	Peat or Pea	at (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			.oamy	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRR	. K, L, M)
☐ Stratified	Layers (A5)			.oamy	Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surfac	e (S8) (LRR K, L)
■ Depleted	Below Dark Surfa	ace (A1	11) 🔲 🗆	eplete	d Matrix (I	F3)			☐ Thin Dark Su	ırface (S9)	(LRR K, L)
☐ Thick Dar	k Surface (A12)		□ F	Redox I	Dark Surfa	ace (F6)			☐ Iron-Mangan	ese Masses	s (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))		Deplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	odplain So	oils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		_	•	Depressio					•	RA 144A, 145, 149B)
☐ Sandy Re			<u> </u>	(OGOX)	20p100010	(1 0)					•
									Red Parent I		
	Matrix (S6)								☐ Very Shallov		
☐ Dark Surf	ace (S7) (LRR R	, MLR	A 149B)						Other (Expla	in in Remar	rks)
3Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed	d or prob	lematic.		
Restrictive Lay	er Present?		res ☑ No		nknown						
									Hydric Soil Prese	nt?	Yes ☑ No
									•	_	
Remarks:											
Remarks.											
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Com	nments:					
Wetland Qualit	ty: 🔲 High		Moderate	Low			Isolated V	Vetland?	☐ Yes ☐	No 🔲	Unknown
General Comm	ents:										





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WETLAND DETERMINATION FORM - Northce	ntral and Northeast Re	gion
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ ☐	ransmission Line	
Project/Site: NED Milepost: 147421.7 County:	Franklin	Date: 07/09/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: A	S-M-W005-PFO
Investigators: CM Quad Name: Ashfield Township		
Logbook No.: 4M Logbook Pg.: 110 Tract: 26881		
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave	None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.530572	Long: -72.857920	Datum: NAD83
Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely stony	NWI Classifi	cation: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances pres	sent? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	·	
Are vegetation con or rightnoisy naturally problematic: no		
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No		
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area ☑ Ƴ Ƴ	es □ No
Wetland Hydrology Present? ☑ Yes ☐ No	within a Wetland:	
Field Wetland Classification: PFO		
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indica	ators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil	Cracks (B6)
	— ✓ Drainage Pa	atterns (B10)
✓ Surface Water (A1)	☐ Moss Trim L	ines (B16)
✓ Saturation (A3)	☐ Dry-Season	Water Table (C2)
Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Bu	rows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres along Livin	Roots (C3) Saturation V	isible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	<u> </u>	Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soi	Geomorphic	Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aqu	itard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopogr	aphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutra	Test (D5)
_ : : :		
Field Observations:		
Surface Water Present?	Wattan d Hadralama Danasan	•
Water Table Present? ✓ Yes ☐ No Depth (inches): 0	Wetland Hydrology Present	 ☑ Yes □ No
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)		
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	ections), if available):	
VEGETATION		
Tree Stratum		
Plot Size: 30		
Scientific Name	% Cover Domina	ant Indicator Status
Malus sp.	20 NA	NONE
Fraxin'us pennsylvanica Prunus serotina	40 YES 10 NO	FACW FACU
Acer rubrum	40 YES	FAC
Total Cover	110	



	% Cover	Dominant	Indicator Status
	5	YES	FACU
	5 5	YES YES	FAC FACW
Total Cover:	15		1
1	% Cover	Dominant	Indicator Status
			FAC
	60	YES	FACW
	10	NO	FACW FACW
T 1 1 0		NO	FACW
Total Cover:	95		
I	0/ 0	Doreitanet	Indiagte: Oted
	% Cover	Dominant	Indicator Status
Total Cavar			
1			
		N.A. Jahr I I	
			
1			
		, ,	
1	Prevalence Index	= B/A = <u>2.42</u>	
			_
Hydrophytic V	egetation Prese	nt? ☑ Yes [□ No
	Total Cover: Total Cover: Prevalence Ind Total % Cover of OBL Species: FACW Species: FACU Species: UPL Species: Column Totals:	% Cover 15 % Cover 10 60 10 10 5	S YES YES Total Cover: 15

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



Providence, R	1 02904									
SOIL										
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm t	he absen	ce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				·	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure	Remarks
0-6	7.5YR 4/1	70	5YR 6/1 7.5YR 5/6	20 10	D C	M M		COARSE	SAND	30% SILTS
¹Type: C=Cond	entration, D=De	epletion	n, RM=Reduced	∟ Matrix,	CS=Cov	ered Sand	l or Coated	Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	icators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A	A1)		ПР	olyvalı	ue Below	Surface (S	8) (LRR R,		☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	,			1LŔA 1	49B)	,	, ,		_ `	Redox (A16) (LRR K, L, R)
☐ Black Hist			Пт	hin Da	rk Surfac	e (S9) (LR	R R, MLRA	149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_				(LRR K, L)	,		e (S7) (LRR K, L, M)
	ayers (A5)		_	-	Gleyed M		(=, =)			elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1			d Matrix (_ ′	ırface (S9) (LRR K, L)
	Surface (A12)	,			Dark Surfa	•			_	ese Masses (F12) (LRR K, L, R)
	cky Mineral (S1))				urface (F7)			_	podplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)		_		Depressio				_	c (TA6) (MLRA 144A, 145, 149B)
✓ Sandy Re			_			- (- /			_ '	Material (F21)
☐ Stripped N									_	/ Dark Surface (TF12)
	ace (S7) (LRR R	. MLRA	A 149B)						_	in in Remarks)
_			and wetland hydro	ology n	nuet he nr	esent unla	ace dieturhe	d or prob	_	,
Restrictive Lay			<u>_</u>		nknown					
•	ei Freseiit?	N.	res 🔲 No	□ U	TIKHOWH				Undria Cail Draca	
ROCK									Hydric Soil Prese	nt? ☑ Yes ☐ No
6										
Remarks:										
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:				
AS-M-SH001 L	OCATED IN PFO)								
Wetland Quality	y: 🗹 High		Moderate	Low			Isolated	Wetland?	☐ Yes 🗹	No Unknown
General Comm	ents:									





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WETLAND DETERMINATION FORM - North	central and Northeast Region
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 147385.8 Count	y: Franklin Date: 07/09/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: AS-M-W005-PSS
Investigators: CM Quad Name: Ashfield Towns	hip: Ashfield
Logbook No.: 4M Logbook Pg.: 111 Tract: 26881	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.530168	Long: -72.857954 Datum: NAD83
Soil Map Unit Name: Ashfield fine sandy loam, 8 to 15 percent slopes, very stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, explain in Remarks.)
Are Vegetation ☑ Soil ☐ or Hydrology ☐ significantly disturbed? ☐ No	Are "Normal" Circumstances present?
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling poi	nt locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No	
Hydric Soil Present? ✓ Yes ☐ No	Is the Sampled Area
Wetland Hydrology Present?	William a Westand
Field Wetland Classification: PSS	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☑ Oxidized Rhizospheres along Li	ving Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	☑ Yes ☐ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	nspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Total Co	/er:



Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Prunus virginiana Fraxinus pennsylvanica Spiraea alba Salix interior		20 15 5 40 15	YES NO NO YES NO	FAC FACU FACW FACW FACW
	Total Cover:	95	1	ı
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Rubus allegheniensis Euthamia caroliniana Solidago rugosa Woodwardia virginica Solidago gigantea	Total Cover:	10 10 15 5 15	NO NO YES NO YES	FACU FAC FAC OBL FACW
Voody Vine Stratum	Total Cover.			
Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
Solonino Namo		70 00001	Dominant	maicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>5</u>	x 1 = <u>5</u>	
Total Number of Dominant	FACW Species:	. <u>75</u>	x 2 = <u>150</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>45</u>	x 3 = <u>135</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>25</u>	x 4 = <u>100</u>	
That Ale ODE, I AGW, OF I AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>150 (A)</u>	390 (B)	
	F	Prevalence Index	= B/A = 2.60	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
√ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Prese	nt? ☑ Yes [] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
present, unless disturbed or problematic.				



COUL												
SOIL												
-	-	the d				ndicator o	r confirm t	he absen	ce of indicators.)			
Depth (inches)	Matrix				atures			Text	ıre		Rer	marks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²						
0-4	10YR 2/1	100						SILT L	OAM			
4-8	10YR 4/2	90	10YR 4/6	10	С	PL		SANDY	LOAM			
8-14	7.5YR 5/1	60	7.5YR 5/4	40	С	М		LOAMY	SAND			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	g, M=M	atrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)			Indicators for Pr	oblematic	Hydric	Soils ³ :
☐ Histosol (/	A1)		□Р	olyvalı	ue Below :	Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR	K, L, MI	_RA 149B)
☐ Histic Epip	pedon (A2)		_ N	ILRA 1	49B)				☐ Coast Prairie	Redox (A	16) (LRF	₹ K, L, R)
☐ Black Hist	ic (A3)		пτ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)	5 cm Mucky	Peat or Pe	at (S3) ((LRR K, L, R)
	Sulfide (A4)		_			. , .	(LRR K, L)	•	☐ Dark Surface		. , ,	•
	Layers (A5)		_	•	Gleyed Ma	` '	. ,		☐ Polyvalue Be			
	Below Dark Surfa	ace (A1		-	d Matrix (I				☐ Thin Dark Su		. , .	•
☐ Thick Dar	k Surface (A12)			•	Dark Surfa	•			_		•	(LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)					ırface (F7)			_) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		_ R	edox I	Depressio	ns (F8)			☐ Mesic Spodi	c (TA6) (MI	_RA 144	IA, 145, 149B)
☐ Sandy Re	dox (S5)		_						Red Parent I			
☐ Stripped N	Matrix (S6)								☐ Very Shallov		•	12)
	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla			,
_			and wetland hydro	ology n	nust he nr	esent unle	es disturb	ed or prob	_		-,	
								54 01 P100	iomatio.			
Restrictive Lay	er Fresent?	☑ `	Yes 🔲 No	U U	nknown				Undela Call Desas			
ROCK									Hydric Soil Prese	nt? ✓	Yes	□ No
14												
Remarks:												
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
AS-M-SH002 L	OCATED IN PSS	3										
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated	Wetland?	☐ Yes 🗹	No 🔲	Unkn	own
General Comm	ents:											
Ocheral Comm	onio.											





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WETLAND DETERMINATION FORM - Northo	entral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 147322.4 County:	Franklin Date: 07/09/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: AS-M-W005-UPL
Investigators: CM Quad Name: Ashfield Townsh	ip: Ashfield
Logbook No.: 4M Logbook Pg.: 112 Tract: 26881	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.530407	Long: -72.858254 Datum: NAD83
Soil Map Unit Name: Ashfield fine sandy loam, 8 to 15 percent slopes, very stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling poin	t locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	, , , , , , , , , , , , , , , , , , ,
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland? ☐ Yes ☑ No
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres along Livi	
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	_
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present?	Wetland Hydrology Present? ☐ Yes ☑ No
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Tes ☑ NO
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Prunus serotina	10 NO FACU
Acer saccharum Acer rubrum	60 YES FACU 10 NO FAC
Total Cove	



Sapling/Shrub Stratum Plot Size: 15 Scientific Name Acer rubrum Prunus serotina Fraxinus americana Rosa multiflora Total Cover Herb Stratum Plot Size: 5 Scientific Name Rubus allegheniensis Thelypteris noveboracensis Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B) FACU Species	% Cove 20 10 15: 45 % Cove : e Index Worksh ever of: ess: 0	er Do	minant NO YES YES NO minant YES YES YES minant	Indicator Status FAC FACU FACU FACU FACU FACU Indicator Status FACU FAC FAC FACW Indicator Status
Scientific Name Acer rubrum Prunus serotina Fraxinus americana Rosa multiflora Total Cover Herb Stratum Plot Size: 5 Scientific Name Rubus allegheniensis Thelypteris noveboracensis Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 6 (B) Percent of Dominant Species FACIJ Species Percent of Dominant Species FACIJ Species	5 15 15 5 15 5 15 5 15	er Do	MO YES YES NO ominant YES YES YES	FAC FACU FACU Indicator Status FACU FAC FACW
Acer rubrum Prunus serotina Fraxinus americana Rosa multiflora Total Cover Herb Stratum Plot Size: 5 Scientific Name Rubus allegheniensis Thelypteris noveboracensis Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: Pack Species Percent of Dominant Species FACI Species PACI Species FACI Species	5 15 15 5 15 5 15 5 15	er Do	MO YES YES NO ominant YES YES YES	FAC FACU FACU Indicator Status FACU FAC FACW
Prunus serotina Fraxinus americana Rosa multiflora Total Cover Herb Stratum Plot Size: 5 Scientific Name Rubus allegheniensis Thelypteris noveboracensis Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: Prevalence Total Species FACU Species Percent of Dominant Species FACU Species FACU Species Percent of Dominant Species FACU Species FACU Species FACU Species	15 15 5 5 5 15 5 15 1	er Do	Pominant PYES PYES PYES	FACU FACU FACU Indicator Status FACU FAC FACW
Rosa multiflora Total Cover Herb Stratum Plot Size: 5 Scientific Name Rubus allegheniensis Thelypteris noveboracensis Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species FACU Species Percent of Dominant Species FACU Species FACU Species FACU Species FACU Species FACU Species	% Cove 20 10 15 15 16 16 16 16 16 16	er Do	ominant YES YES YES	Indicator Status FACU FAC FACW
Herb Stratum Plot Size: 5 Scientific Name Rubus allegheniensis Thelypteris noveboracensis Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: FACW Species Percent of Dominant Species FACIL Species FACIL Species FACIL Species	% Cove 20 10 15: 45 % Cove : e Index Worksh ever of: ess: 0	er Do	YES YES YES	FACU FAC FACW
Plot Size: 5 Scientific Name Rubus allegheniensis Thelypteris noveboracensis Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species FACU Species Percent of Dominant Species FACU Species FACU Species FACU Species FACU Species	20 10 15 : 45 % Cove	er Do	YES YES YES	FACU FAC FACW
Scientific Name Rubus allegheniensis Thelypteris noveboracensis Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: FACW Species Percent of Dominant Species FACU Species FACU Species FACU Species FACU Species	20 10 15 : 45 % Cove	er Do	YES YES YES	FACU FAC FACW
Rubus allegheniensis Thelypteris noveboracensis Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Pack Species FACU Species FACU Species FACU Species FACU Species	20 10 15 : 45 % Cove	er Do	YES YES YES	FACU FAC FACW
Thelypteris noveboracensis Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Pack Species FACU Species FACU Species FACU Species FACU Species	10 15 : 45 % Cove : e Index Worksh ever of: es: 0	er Do	YES YES	FAC FACW
Impatiens capensis Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Prevalence OBL Specie FACW Species FACW Species FAC Species Percent of Dominant Species FACU Species FACU Species FACU Species	% Cove	er Do	YES	FACW
Total Cover Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: FACW Species Percent of Dominant Species FACIL Species	% Cove	er Do	'	
Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Prevalence Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 6 (B) Percent of Dominant Species FACU Species FACU Species FACU Species	% Cove	eet:	ominant	Indicator Status
Plot Size: 30 Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Pack Species Percent of Dominant Species FACU Species FACU Species	: Index Worksh ver of:	eet:	ominant	Indicator Status
Scientific Name Total Cover Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species FACU Species FACU Species	: Index Worksh ver of:	eet:	ominant	Indicator Status
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species FACW Species	: Index Worksh ver of:	eet:		
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species FACU Species FACU Species FACU Species	e Index Worksh ver of: es: <u>0</u>			
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species FACU Species FACU Species FACU Species	e Index Worksh ver of: es: <u>0</u>			
Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: 6 (B) Total % Co OBL Species FACW Species FACW Species FACU Species	ver of: es: <u>0</u>			
That Are OBL, FACW, or FAC: 2 (A) OBL Speci Total Number of Dominant Species Across All Strata: Percent of Dominant Species FACU Speci FACU Species	es: <u>0</u>	Multiply	u by:	
Total Number of Dominant Species Across All Strata: 6 (B) FACW Species FACU Species FACU Species		Multiply x 1 =	y by. O	
Species Across All Strata: 6 (B) FAC Species Percent of Dominant Species FACU Species	cies: <u>15</u>	x 1 = x 2 =	<u>u</u> 30	
Percent of Dominant Species FACU Spe		x 3 =	<u>30</u> <u>75</u>	
		x 4 =	<u>75</u> 500	
UPL Specie		x 5 =	<u>0</u>	
Column To			<u>o</u> 605 (B)	
Column 10				
	Prevalence i	Index = B/A =	3.67	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0			_	
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophy	tic Vegetation F	Present?] Yes ☑	No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



OC!												
SOIL												
-		the d	·			dicator o	r confirm t	he absen	ce of indicators.)			
Depth (inches)	Matrix				atures			Text	ıre		Rer	marks
(11101103)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		TOXII				Harks
0-7	10YR 3/3	85	10YR 4/2	15	С	М		SANDY	LOAM			
7-14	10YR 5/4	90	10YR 6/3	10	D	М		SANDY	LOAM			
14-16	10YR 4/4	100						LOAMY	SAND			
¹Tvpe: C=Cond	L centration. D=De	L epletion	l n, RM=Reduced I	Matrix.	CS=Cov	ered Sand	l or Coated	Grains.	² Location: PL=	Pore Linin	a. M=M	atrix
		<u> </u>	o all LRR's, unle						Indicators for Pr			
		ouble t					·0\ / DD D				•	
Histosol (A	•			illRA 1		Surface (S	88) (LRR R,		2 cm Muck (
	pedon (A2)					(00) (1.0)	D D 141 D 4	4.40D)	Coast Prairie			•
☐ Black Hist							R R, MLRA	149B)				LRR K, L, R)
	Sulfide (A4)		_	•	•	. ,	(LRR K, L)		☐ Dark Surface	. , .		•
	Layers (A5)		· 	-	Gleyed Ma				Polyvalue Be			•
	Below Dark Surfa	ace (A1	_	•	d Matrix (I	•			Thin Dark Su		•	-
_	k Surface (A12)		· 		Dark Surfa							(LRR K, L, R)
_	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	odplain So	oils (F19) (MLRA 149B)
	eyed Matrix (S4)		□ R	ledox I	Depressio	ns (F8)				(TA6) (M	LRA 144	A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	/laterial (F	21)	
☐ Stripped N	Matrix (S6)								□ Very Shallow	Dark Surf	ace (TF	12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	ırks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	d or prob	lematic.			
Restrictive Lay	er Present?	Ø '	res ☐ No	□ ∪	nknown							
ROCK									Hydric Soil Prese	nt? 🗆	Yes	☑ No
16									-	_		
Remarks:												
rtomanto.												
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: High		Moderate	Low			Isolated \	Wetland?	☐ Yes ☐	No 🗆	Unkn	own
General Comm	ents:											





Ν



WETLAND DETERMINATION FORM - Northcer	ntral and Northeast Region
 ☑ Centerline	ansmission Line
Project/Site: NED Milepost: 148986.1 County:	Franklin Date: 07/10/2015
Applicant/Owner: Kinder Morgan State: M	
Investigators: CM Quad Name: Ashfield Township:	Ashfield
Logbook No.: 4M Logbook Pg.: 118 Tract: 26881	
Landform (hillslope, terrace, etc.): Depression Local Relief:	Concave Convex None Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.531436	Long: -72.852234 Datum: NAD83
Soil Map Unit Name: Ashfield fine sandy loam, 3 to 8 percent slopes, very stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	
Hydric Soil Present?	s the Sampled Area
Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetland?
Field Wetland Classification: PFO	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
✓ Saturation (A3)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
Sediment Deposits (B2)	Roots (C3) Saturation Visible on Aerial imagery (C9)
□ Drift Deposits (B3) □ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	(C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	▼ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches): 1	
Water Table Present? ✓ Yes ✓ No Depth (inches): 0	Wetland Hydrology Present? ☑ Yes □ No
Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspe	ections), if available):
Ground water seep	
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Acer saccharum	30 YES FACU
Prunus serotina Acer rubrum	10 NO FACU 45 YES FAC
Fraxinus nigra	10 NO FACW
Total Cover:	95



T TOVIDENCE, TRI 02304				
Sapling/Shrub Stratum				
Plot Size: 15		<u></u>		
Scientific Name		% Cover	Dominant	Indicator Status
Prunus serotina Fraxinus pennsylvanica Pinus strobus		5 20 5	YES YES YES	FACU FACW FACU
Third dissass	Total Cover:	30	120	17100
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Impatiens capensis Onoclea sensibilis Dryopteris intermedia		5 10 15	NO YES YES	FACW FACW FAC
	Total Cover:	30	ı	ı
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species	: <u>45</u>	x 2 = <u>90</u>	
Species Across All Strata: (B)	FAC Species:	<u>60</u>	x 3 = <u>180</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 57 (A/B)	FACU Species:	<u>50</u>	x 4 = <u>200</u>	
That Are Obl., FACW, OF FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>155 (A)</u>	470 (B)	
		Prevalence Index :	= B/A = <u>3.03</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
✓ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	/egetation Preser	nt? ☑ Yes [] No
data in Remarks or on a separate sheet)	nyaropnyar i	ogotation i rocci	<u>F</u> 163 <u>L</u>	1 110
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: UPLAND SPECIES PRESENT IN PLOT DUE TO PROXIMI	TY OF LINE			
Tremand. Of EMB of Edico Frederic Int Lot Boe for North	TT OF EINE			



Providence, R	1 02904									
SOIL										
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm t	ne absen	ce of indicators.)	
Depth	Matrix				atures				,	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	_	Textu	ure	Remarks
0.2	` ′		Color (molety	,,,	.,,,,			ODCA	NIC	
0-3	10YR 2/2	100						ORGA	INIC	
3-10	10YR 3/3	30	10YR 4/1 10YR 4/4	60 10	D C	M M		SILT LO	OAM	10" rocky cobble refusal
			1018 4/4	10		IVI				
Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining, M=Matrix
lvdric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pi	roblematic Hydric Soils ³ :
	`		•			,	88) (LRR R,			A10) (LRR K, L, MLRA 149B)
_ `	•			ILRA 1		ourrace (c	oo) (LIXIX IX,			
	pedon (A2)					(00) (10			_	Redox (A16) (LRR K, L, R)
☐ Black Hist							R R, MLRA	149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			oamy	Mucky Mii	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRR K, L, M)
Stratified L	_ayers (A5)			oamy	Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	l1) 🗹 🖸	eplete	ed Matrix (F3)			☐ Thin Dark Su	urface (S9) (LRR K, L)
Thick Dark	k Surface (A12)		☐ F	Redox I	Dark Surfa	ace (F6)			☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	icky Mineral (S1)			eplete	d Dark Su	urface (F7)			☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)				c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)								□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Remarks)
			and wetland hydro	ology n	nuct ho pr	ocont unl	oce dieturbo	d or prob		,
0 Remarks:										
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:				
Wetland Qualit	y: High	V N	Moderate	Low			Isolated \	Wetland?	☐ Yes ☑	No 🔲 Unknown
Seneral Comm	ents:									





NE



WETLAND DETERMINATION FORM - No	orthcentral and Northeast Region
	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 148989.8 C	County: Franklin Date: 07/10/2015
Applicant/Owner: Kinder Morgan S	State: MA Sampling Point: AS-M-W006-UPL
Investigators: CM Quad Name: Ashfield T	ownship: Ashfield
Logbook No.: 4M Logbook Pg.: 120 Tract: 26881	
Landform (hillslope, terrace, etc.): Slope - mid Local Relie	ef: Concave 🗹 Convex 🔲 None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.531331	Long: -72.852193 Datum: NAD83
Soil Map Unit Name: Ashfield fine sandy loam, 8 to 15 percent slopes, very stony	y NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ✓	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	· · · · · · · · · · · · · · · · · · ·
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland? ☐ Yes ☑ No
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1	
Sediment Deposits (B2) Oxidized Rhizospheres alo	
Drift Deposits (B3) Presence of Reduced Iron	<u> </u>
Algal Mat or Crust (B4) Recent Iron Reduction in T	_
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	<u> </u>
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ☑ No
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ TeS ☑ NO
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previ	ious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Acer rubrum	10 NO FAC
Pinus strobus Acer saccharum	35 YES FACU 50 YES FACU
Tota	al Cover: 95



1 Tovidence, Ki 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Abies balsamea Fagus grandifolia Fraxinus americana Pinus strobus		10 40 5 5	NO YES NO NO	FAC FACU FACU FACU
	Total Cover:	60		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Dryopteris campyloptera		25	YES	FACU
Vaccinium angustifolium	Total Cover:	5 30	NO	FACU
Woody Vine Stratum	Total Cover.	30		
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
Scientific Name		70 COVEI	Dominant	maicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 0 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	s: <u>45</u>	x 2 = <u>90</u>	
Specific Follows Fill Strate.	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	: <u>165</u>	x 4 = <u>660</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	230 (A)	810 (B)	
	l	Prevalence Index :	= B/A = 3.52	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	egetation Preser	nt? ☐ Yes ☑	∐ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	1			



Providence, R	RI 02904										_		~ ~ ~ ~
SOIL													
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm t	he absen	ce of indicators.)				
Depth	Matrix		Re	dox Fe	atures								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		Text	ure		Rer	marks	
0-4	7.5YR 4/3	80	7.5YR 5/6	20	С	М		LOA	M				
4-8	7.5YR 5/6	90	7.5YR 4/3	10	С	М		LOA	M				
8-18	7.5YR 5/4	50	7.5YR 6/3	50	С	М		SANDY	LOAM				
1Typo: C-Cond	contration D_D	polotion	, RM=Reduced	Matrix	CS-Cov	orod Sand	or Coatod	Grains	² Location: PL=	-Poro Lining			
	· · · · · · · · · · · · · · · · · · ·	•	o all LRR's, unle				or Coaled	Grains.	Indicators for P				
Histosol (A	A1) pedon (A2)		□ F N	olyvalu ILRA 1 Thin Da	ue Below (149B) ark Surface	Surface (S e (S9) (LRI	8) (LRR R, R R, MLRA		2 cm Muck (Coast Prairie 5 cm Mucky	A10) (LRR e Redox (A1 Peat or Pea	K, L, ML 16) (LRF at (S3) (_RA 149 R K, L, F LRR K,	9B) ₹)
	, ,			-	-		(LRR K, L)						
	Layers (A5)	(A1		-	Gleyed Ma				Polyvalue B				L)
	Below Dark Surfa k Surface (A12)	ace (A	_		ed Matrix (-			☐ Thin Dark S	` '		•	. I. D.)
_	ıcky Mineral (S1)				Dark Surfa				☐ Iron-Mangar☐ Piedmont Fl				•
_	eyed Matrix (S4)		_	•	Depressio	ırface (F7)				•	` '	, ,	•
☐ Sandy Re			Ш.	redox i	Depressio	113 (1 0)			☐ Mesic Spodi☐ Red Parent	, , ,		A, 145,	1490)
	Matrix (S6)										•	12\	
_ ''	ace (S7) (LRR R	MI D/	\ 140B\						☐ Very Shallov ☐ Other (Expla			12)	
_			and wetland hydro	.la.m.r.m			oo diatuuda		_	ani in ixema	K3)		
Restrictive Lay	ver Present?	□ \	Yes ☑ No	U U	Inknown								
									Hydric Soil Prese	ent?	Yes	☑ N	lo
Remarks:													
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:							
Wetland Qualit	y: High	_ n	Moderate	Low			Isolated	Wetland?	☐ Yes ☐	No 🔲	Unkn	own	
General Comm	ents:												





NE



WE	TLAND	DET	ERN	IINATI	ON F	ORM -	Northce	entral	and No	ortheas	t Region	1	
☑ Centerline ☐ Re-R	oute _	Acces	ss Roa	d 🔲	Ancilla	ary Facility		Transmis	sion Line	☐ Oth	ner		
Project/Site: NED			1	Milepost:	1525	57.5	County:	Fra	anklin		Date:	07/12/201	15
Applicant/Owner: Kinder Mo	rgan						State:	MA	Sam	pling Poin	t: AS-M-W	008-PFO	
Investigators: CM	(Quad Na	ame: /	Ashfield			Township	o: As	shfield				
Logbook No.: 4M	Logi	ook Pg	.: 131		Trac	t: 347	•						
Landform (hillslope, terrace,	etc.):	Depres	ssion	'		Local R	Relief: ✓	7 Conca	ave 🔲	Convex	☐ None	Slope%.:	1
Subregion (LRR): Middl	e Atlantic			Lat	: 42.5	33033		Long:	-72.83	39159		Datum: NA	D83
Soil Map Unit Name: Pill	sbury stony	y sandy	loam,	0 to 5 per	cent slo	pes, extre	mely stony			NWI CI	assification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	or this tim	e of yea	ar?:	Yes	□ No	(If no, exp	lain in Rem	arks.)		
Are Vegetation Soil	or Hy	/drology	,	significa	ntly dist	turbed?	☑ No	Are "N	ormal" Cir	cumstance	s present?	☑ Yes	☐ No
Are Vegetation Soil	or Hy	drology	,	naturally	proble	matic?	— ✓ No						
 			_										
SUMMARY OF FINDI	NGS - At	tach s	site n	nap sh	owing	sampli	ng point	location	ons, tra	nsects,	importan	t features	, etc.
Hydrophytic Vegetation Prese	ent?	$\overline{\mathbf{A}}$	Yes	□ No)			le tha	Sampled	1 Area			
Hydric Soil Present?		\checkmark	Yes	☐ No)				a Wetla		☑ Yes [□ No	
Wetland Hydrology Present?		$\overline{\mathbf{V}}$	Yes	□ No)								
Field Wetland Classification:	PFO												
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicate	ors:								į	Secondary	Indicators (2	or more requ	uired)
Primary Indicators (minimum	of one req	uired; cl	heck al	ll that app	oly)				I	Surfac	e Soil Crack	s (B6)	
☐ Surface Water (A1)			5	✓ Wate	r-Staine	ed Leaves ((B9)		I	□ Draina	ge Patterns	(B10)	
☑ High Water Table (A2)				☐ Aqua	tic Faur	na (B13)			I	☐ Moss	Γrim Lines (Ε	316)	
✓ Saturation (A3)				Marl	Deposit	s (B15)			I	☐ Dry-Se	ason Water	Table (C2)	
■ Water Marks (B1)] Hydro	ogen Su	ılfide Odor	(C1)		I	☐ Crayfis	h Burrows (C8)	
☐ Sediment Deposits (B2)				Oxidi	zed Rhi	zospheres	along Livin	g Roots (_(C3) I	☐ Satura	tion Visible o	on Aerial ima	gery (C9)
☐ Drift Deposits (B3)			5	⊘ Prese	ence of	Reduced Ir	ron (C4)		I	Stunte	d or Stresse	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Rece	nt Iron I	Reduction i	n Tilled So	ils (C6)	l		orphic Position	, ,	
☐ Iron Deposits (B5)				Thin	Muck S	urface (C7))		l	☐ Shallo	w Aquitard ([D3)	
☐ Inundation Visible on A	erial Imagei	y (B7)		Othe	(Expla	in in Rema	rks)		[✓ Microto	pographic F	Relief (D4)	
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)							[✓ FAC-N	eutral Test (D5)	
Field Observations:													
Surface Water Present?	☐ Yes	✓ N	lo [Depth (inc	ches):								
Water Table Present?	✓ Yes	□ N	lo [Depth (inc	ches):	4		We	tland Hy	drology Pr		(V □	Na
Saturation Present? (includes capillary fringe)	√ Yes	□ ¹	No [Depth (ind	ches):	0					<u>v</u>] Yes □	NO
Remarks (Describe Recorded	Data (stre	am gage	e, mon	itoring we	ell, aeria	al photos, p	revious ins	pections)	, if availab	ole):			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name								9	% Cover	D	ominant	Indicat	or Status
Betula alleghaniensis Betula papyrifera Prunus serotina									60 15 10		YES NO NO	F/	ACU ACU
						٦	Total Cover	: '	85	'		•	



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Tsuga canadensis Acer pensylvanicum Abies balsamea	Total Cover:	30 20 5 10 65	YES YES NO NO	FAC FACU FACU FAC
Herb Stratum				
Plot Size: 5				
	ı	0/ Cayor	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	Indicator Status
Thelypteris noveboracensis Maianthemum canadense Dryopteris carthusiana Maianthemum racemosum		30 5 15 10	YES NO YES NO	FAC FACU FACW FACU
	Total Cover:	60		
Woody Vine Stratum				
Plot Size: 30	1		1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>15</u>	x 2 = <u>30</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>130</u>	x 3 = <u>390</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)	FACU Species:	<u>65</u>	x 4 = <u>260</u>	
That Are OBL, I AGW, OF I AC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	210 (A)	680 (B)	
	1	Prevalence Index	= B/A = <u>3.24</u>	
Hydrophytic Vegetation Indicators:				
☐ 3 - Prevalence Index is ≤ 3.0	Herden aberta A	/	-40 F7 V F	7 No.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydropnytic V	egetation Preser	nt? ☑ Yes [」 No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, R	(1 02904											-	-
SOIL													
Profile Descrip	tion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	r confirm th	e absenc	e of indicators.)				
Depth	Matrix		·		atures								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		Textur	re		Re	marks	
0-1	2.5Y 2.5/1	100						ORGAN	IIC .				
1-5	2.5Y 3/1	95	10YR 4/6	5	С	PL		SILT LO)AM				
5-14	2.5Y 5/2	35	2.5Y 6/1 10YR 5/6	60 5	D C	M M	,	SANDY L	OAM		20%	6 SILT	
¹Type: C=Cond	entration D-De	enletion	 n, RM=Reduced I	Matrix	CS-Cov	ered Sand	or Coated 6	Grains	² Location: PL=	Pore Linin	a M–M	atriy	
	· · · · · · · · · · · · · · · · · · ·	<u> </u>	o all LRR's, unle				Tor Coaled C		Indicators for Pr				
Histosol (A		oubio t	□ P		ue Below :	-	8) (LRR R,		2 cm Muck (410) (LRR	K, L, MI	_RA 14	9B)
■ Black Hist	ic (A3)		□т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 1	149B)	5 cm Mucky	Peat or Pe	at (S3)	LRR K	, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1) ((LRR K, L)		☐ Dark Surface	(S7) (LRF	R K, L, N	1)	
☐ Stratified I	_ayers (A5)			oamy	Gleyed Ma	atrix (F2)			☐ Polyvalue Be	low Surfac	e (S8) (LRR K	, L)
☐ Depleted I	Below Dark Surfa	ace (A1	(1) 🔲 D	eplete	d Matrix (I	F3)		I	☐ Thin Dark Su	ırface (S9)	(LRR K	, L)	
☐ Thick Darl	k Surface (A12)		 R	edox [Dark Surfa	ace (F6)		I	☐ Iron-Mangan	ese Masse	s (F12)	(LRR Ł	(, L, R)
☐ Sandy Mu	ıcky Mineral (S1))		eplete	d Dark Su	ırface (F7)		ļ	☐ Piedmont Flo	odplain So	oils (F19) (MLR	A 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox I	Depressio	ns (F8)		I	☐ Mesic Spodie	(TA6) (MI	_RA 144	IA, 145	, 149B)
☐ Sandy Re	dox (S5)								Red Parent I	Material (F	21)		
☐ Stripped N	Matrix (S6)								□ Very Shallow	Dark Surf	ace (TF	12)	
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	rks)		
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed	d or proble	ematic.				
Restrictive Lay	er Present?		∕es ☑ No	<u> </u>	Inknown			н	lydric Soil Prese	nt? 🔽	Yes	<u> </u>	No
Description of l	Habitat Characto	rictics	Aquatic Diversity	or Go	noral Com	amonte:							
Description of t	Habitat Characte	iisiics,	Aqualic Diversity	oi Ge	nerai Con	imenis.							
Wetland Qualit	y: High		Moderate 🗸	Low			Isolated W	Vetland?	☐ Yes ☐	No 🔽	Unkn	own	
General Comm	ents:												





W



WETLAND DETERMINATION FORM - Northco	entral and No	ortheast Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line	Other	
Project/Site: NED Milepost: 152659.2 County:	Franklin	Date:	07/12/2015
Applicant/Owner: Kinder Morgan State:	MA Sam	pling Point: AS-M-W0	08-UPL
Investigators: CM Quad Name: Ashfield Township	o: Ashfield	-	 -
Logbook No.: 4M Logbook Pg.: 130 Tract: 344			_
Landform (hillslope, terrace, etc.): Hilltop Local Relief:	☐ Concave	Convex None	Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.533188	Long: -72.83	38813	Datum: NAD83
Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely stony		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, exp	plain in Remarks.)	_
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Cir	rcumstances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No			
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations tra	insects important	features etc
Hydrophytic Vegetation Present? ☐ Yes ☑ No	. iocations, tra	insects, important	Teatures, etc.
	Is the Sample	d Area □ Yes ☑	No
Hydric Soil Present? ☐ Yes ☑ No Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetla	nd? □ Yes ☑	NO
Field Wetland Classification: UPLAND PLOT			
Remarks:			
Remarks.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (2 of	or more required)
Primary Indicators (minimum of one required; check all that apply)		☐ Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		□ Drainage Patterns (E	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines (B1	6)
☐ Saturation (A3) ☐ Marl Deposits (B15)		□ Dry-Season Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (Ca	8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livin	g Roots (C3)	Saturation Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		☐ Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soil	ils (C6)	☐ Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			elief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D	5)
Field Observations:			
Surface Water Present?			
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hy	drology Present?	
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)			Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous ins	pections), if availab	ole):	
Distressed roots	•	,	
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Tsuga canadensis	10	NO	FACU
Acer rubrum Fagus grandifolia	25 25	YES YES	FAC FACU
Betula alleghaniensis	25	YES	FAC
Total Cover	: 85		



Sapling/Shrub Stratum Plot Size: 15 Scientific Name Abies balsamea Acer pensylvanicum Fagus grandifolia Tsuga canadensis				
Scientific Name Abies balsamea Acer pensylvanicum Fagus grandifolia				
Abies balsamea Acer pensylvanicum Fagus grandifolia				
Acer pensylvanicum Fagus grandifolia		% Cover	Dominant	Indicator Status
		10 10 15	YES YES YES	FAC FACU FACU
. Suga sunausnois		15	YES	FACU
	Total Cover:	50	'	
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Maianthemum racemosum		15	YES	FACU
Maianthemum canadense		15 5	YES NO	FACU FAC
Lycopodium clavatum	Total Cover:	35	NO	TAC
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
Colonialo Ivallic		/o COVEI	Dominant	mulcator Status
	Total Cover:		I	
D				
Dominance Test Worksheet:		lex Worksheet:	8.4 (10) 1 1	
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of		Multiply by:	
Total Number of Dominant	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Species Across All Strata: 9 (B)	FACW Species		x 2 = <u>0</u>	
Percent of Dominant Species	FAC Species:	<u>65</u>	x 3 = <u>195</u>	
That Are OBL, FACW, or FAC: 33 (A/B)	FACU Species:		x 4 = 420	
	UPL Species:	<u>0</u>	$x 5 = \underline{0}$	
	Column Totals:	. ,	<u>615 (B)</u>	
	F	Prevalence Index	= B/A = <u>3.62</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? 🗌 Yes 🛭	☑ No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
present, unless disturbed or problematic.				



T TOVIGETICE, I	02304											C 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
SOIL												
Profile Descrip	otion: (Describe	the d	epth needed to o	locum	ent the in	dicator o	r confirm tl	he absen	ce of indicators.)			
Depth (inches)	Matrix		Redox Features					Texture		Remarks		
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		rexture			IVE	IIdiks
0-3	7.5YR 2.5/1	100						ORGA	NIC			
3-4	5YR 5/1	90	5YR 7/1	5	С	М		LOA	М			
			5YR 4/4	5	С	М						
4-10	5YR 4/6	100						LOA	M		Rock	k at 10"
1Type: C-Cond	contration D-De	nlotion	PM-Roduced	Motrix		orod Sono	l or Cooted	Croins	21 agation: DI -	Doro Linin	~ \	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. ² Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :												
_		cable t	_			•			Indicators for Pr		•	
☐ Histosol (A	A1)			olyvalı 1LRA 1		Surface (S	88) (LRR R,		2 cm Muck (410) (LRR	K, L, MI	∟RA 149B)
☐ Histic Epip	pedon (A2)				.02)				☐ Coast Prairie	Redox (A	16) (LRF	₹ K, L, R)
■ Black Hist	ic (A3)		П Т	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)	5 cm Mucky	Peat or Pe	at (S3) ((LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRF	≀ K, L, N	1)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surfac	e (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	I1) 🔲 🗅	eplete	d Matrix (I	F3)			☐ Thin Dark Su	ırface (S9)	(LRR K	, L)
☐ Thick Darl	k Surface (A12)		□ R	edox [Dark Surfa	ce (F6)			☐ Iron-Mangan	ese Masse	s (F12)	(LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	odplain So	oils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)			edox I	Depressio	ns (F8)			☐ Mesic Spodi	c (TA6) (MI	_RA 144	4A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F	21)	
☐ Stripped N	Matrix (S6)								☐ Very Shallov	Dark Surf	ace (TF	12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla			•
_			and wetland hydro	ology n	nust he nr	esent unla	es disturbe	d or prob	_		-,	
					· ·			u or prob	iornatio.			
Restrictive Lay	er Present?	✓ `	Yes No	U U	nknown					_		_
ROCK									Hydric Soil Prese	nt?	Yes	☑ No
10												
Remarks:												
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	ments:						
Wetland Qualit	y: 🔲 High		Moderate	Low			Isolated \	Netland?	☐ Yes ☐	No 🗆	Unkn	iown
General Comm	ents:											





Ν



☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Transmission Line ☐ Other								
Project/Site: NED Milepost: 152957.7 County: Franklin Date: 07/12/2015								
Applicant/Owner: Kinder Morgan State: MA Sampling Point: AS-M-W009-PFO								
Investigators: CM Quad Name: Ashfield Township: Ashfield								
Logbook No.: 4M Logbook Pg.: 134 Tract: 344								
Landform (hillslope, terrace, etc.): Depression Local Relief: ☑ Concave ☐ Convex ☐ None Slope%.: 2	—							
Subregion (LRR): Middle Atlantic Lat: 42.533348 Long: -72.837727 Datum: NAD83								
Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely stony NWI Classification: Not mapped								
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.)	_							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No Are "Normal" Circumstances present? ☑ Yes ☐ 1	No							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No								
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present?								
Hydric Soil Present?								
Wetland Hydrology Present? ✓ Yes ☐ No								
Field Wetland Classification: PFO								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators: Secondary Indicators (2 or more required)								
Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6)								
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9) ✓ Drainage Patterns (B10)								
☐ High Water Table (A2) ☐ Aquatic Fauna (B13) ☐ Moss Trim Lines (B16)								
✓ Saturation (A3) ☐ Marl Deposits (B15) ☐ Dry-Season Water Table (C2)								
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Crayfish Burrows (C8)								
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Saturation Visible on Aerial imagery (C9)	∌)							
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) ☐ Stunted or Stressed Plants (D1)								
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Geomorphic Position (D2)								
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Shallow Aquitard (D3)								
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Microtopographic Relief (D4)								
☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)								
Field Observations:								
Surface Water Present? ✓ Yes ☐ No Depth (inches): 2								
Water Table Present? ✓ Yes ☐ No Depth (inches): 0 Wetland Hydrology Present?								
Saturation Present? Yes No Depth (inches): 0								
(includes capillary fringe)								
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):								



Providence, RI 02904				- 1	ALCOM!				
VEGETATION									
Tree Stratum									
Plot Size: 30									
Scientific Name			% Cover	Dominant	Indicator Status				
Ulmus americana			30	YES	FACW				
Ulmus rubra Betula alleghaniensis			10 10	NO NO	FAC FAC				
Acer rubrum Fraxinus nigra			30 20	YES YES	FAC FACW				
Traxinus riigra		Total Cover:	100	123	I ACW				
Sapling/Shrub Stratum									
Plot Size: 15									
Scientific Name			% Cover	Dominant	Indicator Status				
Acer rubrum			10	NO	FAC				
Ulmus americana Vaccinium corymbosum			20 10	YES NO	FACW FACW				
Tsuga canadensis Ulmus rubra			10 10	NO NO	FACU FAC				
Abies balsamea			15	YES	FAC				
		Total Cover:	75	'	•				
Herb Stratum									
Plot Size: 5									
Scientific Name			% Cover	Dominant	Indicator Status				
Impatiens capensis Veratrum viride			40 15	YES YES	FACW FACW				
Onoclea sensibilis			15 10	NO NO	FACW				
		Total Cover:	65	ı	I				
Woody Vine Stratum									
Plot Size: 30									
Scientific Name			% Cover	Dominant	Indicator Status				
		Total Cover:							
Dominance Test Worksheet:		Prevalence Index Worksheet:							
Number of Dominant Species		Total % Cover	of: Multiply by:						
That Are OBL, FACW, or FAC: 7 (A)	!	OBL Species:	<u>0</u>	x 1 = <u>0</u>					
Total Number of Dominant		FACW Species	:: <u>145</u>	x 2 = <u>290</u>					
Species Across All Strata: 7 (B	L	FAC Species:	<u>85</u>	x 3 = 255					
Percent of Dominant Species	(A (D)	FACU Species		x 4 = 40					
That Are OBL, FACW, or FAC: 100	(<u>A/B)</u>	UPL Species:	0	x 5 = <u>0</u>					
		Column Totals:	-	585 (B)					
			Prevalence Index :						
Hydrophytic Vegetation Indicators:									
✓ 1 - Rapid Test for Hydrophytic Vegetatio	n								
✓ 2 - Dominance Test is > 50%	•								
_									
3 - Prevalence Index is ≤ 3.0		Hydrophytic Vegetation Present? ☑ Yes ☐ No							
4 - Morphological Adaptations¹ (Provide data in Remarks or on a separate sheet		Hydropnytic	egetation Preser	nt? ☑ Yes [」 No				
Droblomotic Hudsonbutte Versette 1/5	valoin)								
Problematic Hydrophytic Vegetation¹ (Ex									
¹ Indicators of hydric soil and wetland hydrolog present, unless disturbed or problematic.	yy must be								
Remarks:		1							



Providence, F	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the al	bsence of indicators.)	
Depth	Matrix				atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Texture	Remarks
0-14	2.5Y 3/1	90	10YR 4/6	10	C	PL	CAN	NDY LOAM	
0-14	2.51 3/1	90	101K 4/6	10		PL PL	SAI	NDT LOAW	
14-22	7.5YR 4/2	40	5YR 6/2	60	D	M	LOAMY	COARSE SAND	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	d or Coated Grain	ns. ² Location: PL:	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)					Surface (S	88) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		N	ILRA 1	149B)			☐ Coast Prairi	e Redox (A16) (LRR K, L, R)
☐ Black Hist	tic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LR	R R, MLRA 1498	B)	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)		_	-	Gleyed Ma		(2, 2)		elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (Δ1	_	-	ed Matrix (
_ ·	k Surface (A12)	A00 (A	· –	-		•			urface (S9) (LRR K, L)
	, ,		_		Dark Surfa			_	nese Masses (F12) (LRR K, L, R)
	ıcky Mineral (S1)		_	-		urface (F7)		_	oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		□ F	Redox	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
☐ Stripped I	Matrix (S6)							☐ Very Shallov	w Dark Surface (TF12)
□ Dark Surf	ace (S7) (LRR R	, MLR	A 149B)					Other (Expla	ain in Remarks)
³ Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unl	ess disturbed or	problematic.	
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: 🔲 High	V	Moderate	Low			Isolated Wetla	and? ☐ Yes ☑	No Unknown
General Comm	onte:								
General Comin	ients.								







WETLAND DETERMINATION FORM - North	centr	ral and	d No	rtheast R	Region		
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐] Trans	smission	Line	☐ Other			
Project/Site: NED Milepost: 153108.9 Count	y:	Frankli	in		Date:	07/13/2015	
Applicant/Owner: Kinder Morgan State:	MA		Samp	ling Point:	AS-M-W0	09-UPL	
Investigators: CM MN Quad Name: Ashfield Towns	ship:	Ashfiel	ld				
Logbook No.: 4M Logbook Pg.: 141 Tract: 344							
Landform (hillslope, terrace, etc.): Hilltop Local Relief:	☐ C	oncave	V	Convex	None	Slope%.:	5
Subregion (LRR): Middle Atlantic Lat: 42.533559	Lo	ong: -	-72.837	7210		Datum: NAD	83
Soil Map Unit Name: Tunbridge-Lyman complex, 8 to 15 percent slopes, very rocky				NWI Class	ification:	Not map	ped
Are climatic / hydrologic conditions on the site typical for this time of year?:		No (If no	o, expla	ain in Remark	s.)		
Are Vegetation Soil or Hydrology significantly disturbed? No	o Are	e "Norma	al" Circ	umstances pi	resent?	✓ Yes	☐ No
Are Vegetation Soil or Hydrology naturally problematic? No	0						
SUMMARY OF FINDINGS - Attach site map showing sampling poi	int loc	ations	tran	sects im	nortant	features	etc
Hydrophytic Vegetation Present? ☐ Yes ☑ No		ationio	,	100010, 1111	portant	Toutur 00,	
Hydric Soil Present? ☐ Yes ☑ No		he San			Yes ✓	Í No	
Wetland Hydrology Present? ☐ Yes ☑ No	wit	hin a W	/etlan	d? □	162 1	NO	
Field Wetland Classification: UPLAND PLOT							
Remarks:							
Tomano.							
HYDROLOGY							
Wetland Hydrology Indicators:			<u>S</u>	econdary Ind	icators (2 d	or more requi	red)
Primary Indicators (minimum of one required; check all that apply)] Surface S	oil Cracks	(B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)] Drainage	Patterns (E	310)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)				Moss Trim	Lines (B1	6)	
☐ Saturation (A3) ☐ Marl Deposits (B15)				Dry-Seaso	on Water T	able (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	1) Crayfish Burrows (C8)						
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Li	ong Living Roots (C3) Saturation Visible on Aerial imagery (C9)				ery (C9)		
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	n (C4) Stunted or Stressed Plants (D1)						
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Occurrent in Desiring (DO)						
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	s) Microtopographic Relief (D4)						
☐ Sparsely Vegetated Concave Surface (B8)				FAC-Neut	ral Test (D	95)	
Field Observations:							
Surface Water Present?							
Water Table Present?		Wotlan	d Hvdi	rology Prese	nt?		
Saturation Present?		Wetlan	u riyui	lology i rese		Yes ☑	No
(includes capillary fringe)							
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	inspection	ons), if a	vailable	e):			
VECETATION							
VEGETATION Tree Stratum							
Plot Size: 30							
Scientific Name		% Co	over	Dom	inant	Indicator	Status
Betula papyrifera		10		NO		FAC	
Fagus grandifolia		50)	YE	S	FAC	U
Acer rubrum Prunus serotina		20 10		YE NO		FAC FAC	
Total Co	ver:	90)				



Providence, RI 02904						
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Picea glauca Betula alleghaniensis		20 10	YES NO	FACU FAC		
Fagus grandifolia		25	YES	FACU		
	Total Cover:	55				
Herb Stratum						
Plot Size: 5						
Scientific Name		% Cover	Dominant	Indicator Status		
Lycopodium lagopus		5	NO	FACU		
Maianthemum canadense Lycopodium clavatum		20 10	YES YES	FACU FAC		
Pteridium aquilinum		5	NO	FACU		
	Total Cover:	40				
Woody Vine Stratum						
Plot Size: 30	i	ı	1	1		
Scientific Name		% Cover	Dominant	Indicator Status		
	_					
	Total Cover:					
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:				
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover	of:	Multiply by:			
	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>			
	FAC Species:	<u>40</u>	x 3 = <u>120</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)	FACU Species		x 4 = <u>580</u>			
	UPL Species:	<u>0</u>	x 5 = <u>0</u>			
	Column Totals	: <u>185 (A)</u>	<u>700 (B)</u>			
		Prevalence Index	= B/A = <u>3.78</u>			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
2 - Dominance Test is > 50%						
3 - Prevalence Index is ≤ 3.0						
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic Vegetation Present?					
data in Nemarks of on a separate sheety						
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Remarks:						



Providence, F	1 02904								
SOIL									
Profile Descrip	otion: (Describe	e the de	epth needed to d	docum	ent the ir	ndicator o	confirm the abser	nce of indicators.)	
Depth	Matrix		-		atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-1	10YR 2/1	100	,		71		ORGA	VNIC	
0-1	101K 2/1	100					ORGA	AINIC	
1-2	7.5YR 5/1	50	7.5YR 3/1 7.5YR 4/4	40 10	C	M M	LOAM		
			7.511(4/4	10					
2-10	7.5YR 5/4	100					LOA	AM	
10-18	10YR 4/4	90	10YR 5/4	10	С	М	LOA	AM	
1Type: C-Con	ontrotion D-D	oplotion	PM-Poduood	Motrix		orod Sand	or Coated Grains.	21 postion: DI	-Doro Lining M-Matrix
		•	-				or Coaled Grains.		=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils³:
Histosol (A	A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		IV	ILINA	1430)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	tic (A3)		□ т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1) (LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1		eplete	d Matrix (F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		R	Redox [oark Surfa	ace (F6)		_	nese Masses (F12) (LRR K, L, R)
	ıcky Mineral (S1))	_					_ `	podplain Soils (F19) (MLRA 149B)
									Material (F21)
	Matrix (S6)								v Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
³ Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	er Present?	_ \	res ☑ No	□ ∪	Inknown				
								Hydric Soil Prese	ent? ☐ Yes ☑ No
								•	
Remarks:									
Remarks.									
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	ty: 🔲 High		Moderate	Low			Isolated Wetland?	Yes 🔲	No 🔲 Unknown
0 10									
General Comm									
AS-M-W010 S	HARED UPLANI	O PLOT	Ī						







WETLAND DETERMINATION FORM - Northcentral and Northeast Region							
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Tran	nsmission Line						
Project/Site: NED Milepost: 153296.2 County:	Franklin Date: 07/13/2015						
Applicant/Owner: Kinder Morgan State: MA	Sampling Point: AS-M-W010-PFO						
Investigators: CM MN Quad Name: Ashfield Township:	Ashfield						
Logbook No.: 4M Logbook Pg.: 140 Tract: 344							
	Concave Convex None Slope%.: 2						
Subregion (LRR): Middle Atlantic Lat: 42.533521 L	Long: -72.836493 Datum: NAD83						
Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely stony	NWI Classification: Not mapped						
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No A	Are "Normal" Circumstances present?						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No							
SUMMARY OF FINDINGS - Attach site map showing sampling point lo	cations, transects, important features, etc.						
Hydrophytic Vegetation Present? ✓ Yes ☐ No							
Hydric Soil Present? IVes II No	the Sampled Area						
Will Wetland Hydrology Present? ✓ Yes ☐ No	ithin a Wetland?						
Field Wetland Classification: PFO							
Remarks:							
Tenung.							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)						
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)						
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)						
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)							
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)						
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)						
□ Sediment Deposits (B2) □ Oxidized Rhizospheres along Living R	ing Roots (C3) Saturation Visible on Aerial imagery (C9)						
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)						
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (0	Soils (C6) Geomorphic Position (D2)						
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)						
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present?							
Water Table Present?	Wetland Hydrology Present? ✓ Yes □ No						
Saturation Present? ✓ Yes ☐ No Depth (inches): 10 (includes capillary fringe)	E 163 E 160						
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspect	tions), if available):						
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name	% Cover Dominant Indicator Status						
Acer rubrum	25 YES FAC						
Betula alleghaniensis Fraxinus pennsylvanica	30 YES FAC 15 NO FACW						
Tsuga canadensis	30 YES FACU						
Total Cover:	100						



Providence, Ri 02904						
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Betula alleghaniensis Tsuga canadensis		5 15	YES YES	FAC FACU		
rsuga cariadensis	Total Cover:	20	123	1 700		
W 1 0						
Herb Stratum						
Plot Size: 5	I			1		
Scientific Name		% Cover	Dominant	Indicator Status		
Thelypteris noveboracensis Onoclea sensibilis		30 5	YES NO	FAC FACW		
Dryopteris intermedia	T	20	YES	FAC		
	Total Cover:	55				
Woody Vine Stratum						
Plot Size: 30	1			1		
Scientific Name		% Cover	Dominant	Indicator Status		
	T + 10					
	Total Cover:					
Dominance Test Worksheet:	Prevalence Ind					
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)	Total % Cover of		Multiply by:			
	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species		x 2 = <u>40</u>			
Percent of Dominant Species	FAC Species:	<u>110</u>	x 3 = <u>330</u>			
That Are OBL, FACW, or FAC: 71 (A/B)	FACU Species:		x 4 = <u>180</u>			
	UPL Species:	<u>0</u>	x 5 = 0			
	Column Totals:	<u>175 (A)</u>	<u>550 (B)</u>			
	F	Prevalence Index =	= B/A = <u>3.14</u>			
Hydrophytic Vegetation Indicators:						
☑ 2 - Dominance Test is > 50%						
3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Vegetation Present? ☑ Yes ☐ No					
data in Remarks of on a separate sneet)						
Problematic Hydrophytic Vegetation¹ (Explain)						
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Remarks:						



	1 02304											6 1 1 1 1 1
SOIL												
Profile Descrip		the d				dicator o	r confirm the	e absen	ce of indicators.)			
Depth (inches)	Matrix		Red		atures			Textu	ıre	Pomoi		marks
(11101100)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		10/110				
0-1	7.5YR 2.5/1	100						ORGA	NIC			
1-3	7.5YR 3/1	100						SILT LO	DAM			
3-12	7.5YR 4/1	35	7.5YR 7/1	60	D	М	COAF	RSE SAN	NDY LOAM			
			7.5YR 4/4	5	С	М						
¹Tvpe: C=Cond	L centration. D=De	L epletion	l n, RM=Reduced I	Matrix.	CS=Cov	L ered Sand	L I or Coated G	Grains.	² Location: PL=	Pore Linin	a. M=M	 latrix
•••		•	o all LRR's, unle						Indicators for Pr			
		cable t				-	0) /I DD D				•	
Histosol (/	•			ILRA 1		Surface (S	8) (LRR R,		2 cm Muck (•
	pedon (A2)					(00) (I DI	D D M DA 4	4.40D)	Coast Prairie			·
☐ Black Hist			_			. , .	R R, MLRA 1	149B)	_ ′		. , ,	(LRR K, L, R)
	Sulfide (A4)		_	•	•	` '	(LRR K, L)		☐ Dark Surface	. , .		•
	Layers (A5)	/* :	-	-	Gleyed Ma				Polyvalue Be			
	Below Dark Surfa	ace (A1	_		d Matrix (,			Thin Dark Su	. ,	•	•
_	k Surface (A12)		_		Dark Surfa				_			(LRR K, L, R)
_	icky Mineral (S1)		_	•		ırface (F7)			☐ Piedmont Flo	oodplain So	ils (F19	9) (MLRA 149B)
	eyed Matrix (S4)		□ R	edox I	Depressio	ns (F8)			☐ Mesic Spodi	c (TA6) (MI	_RA 144	4A, 145, 149B)
☐ Sandy Re									☐ Red Parent I	Material (F2	21)	
☐ Stripped N	Matrix (S6)								□ Very Shallov	v Dark Surf	ace (TF	12)
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	rks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	logy n	nust be pr	esent, unle	ess disturbed	d or probl	ematic.			
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown							
								ı	Hydric Soil Prese	nt? ✓	Yes	□ No
Remarks:												
Description of	Habitat Characto	rictics	Aquatic Diversity	or Go	noral Com	monte:						
Description of	nabilal Characle	nsucs,	Aquatic Diversity	oi Ge	nerai Con	imenis.						
Watland Ovalit	uu 🗖 Iliada		Madarata 🗖				looloted \A	Vatland?	П Vaa П	No 🗖	مناملا	
wetiand Qualit	y: High	<u>√</u> 1	Moderate	LOW			Isolated W	vetiand?	☐ Yes ☐	NO 🔽	Unkn	own
General Comm	ents:											







WETLAND DETERMINATION FORM - Northcentral and Northeast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Transmission Line ☐ Other	
Project/Site: NED Milepost: 153861.2 County: Franklin Date: 07/13/2015	
Applicant/Owner: Kinder Morgan State: MA Sampling Point: AS-M-W011-PFO	_
Investigators: CM JW Quad Name: Ashfield Township: Ashfield	_
Logbook No.: 2015-5 Logbook Pg.: 6 Tract: 344	
Landform (hillslope, terrace, etc.): Depression Local Relief: ☑ Concave ☐ Convex ☐ None Slope%.: 1	—
Subregion (LRR): Middle Atlantic Lat: 42.533794 Long: -72.834430 Datum: NAD83	
Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely stony NWI Classification: Not mapped	
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No Are "Normal" Circumstances present? ☑ Yes ☐ N	No
Are Vegetation Soil □ or Hydrology □ naturally problematic? □ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.	
Hydrophytic Vegetation Present? ✓ Yes ☐ No	
Hydric Soil Present?	
Wetland Hydrology Present? ✓ Yes □ No	
Field Wetland Classification: PFO	
Remarks:	_
HYDROLOGY	
Wetland Hydrology Indicators: Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6)	
□ Surface Water (A1) □ Water-Stained Leaves (B9) □ Drainage Patterns (B10)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13) ☐ Moss Trim Lines (B16)	
✓ Saturation (A3)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Saturation Visible on Aerial imagery (C9)	
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) ☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Shallow Aquitard (D3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☑ Microtopographic Relief (D4)	
☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)	
Field Observations.	
Field Observations:	
Surface Water Present?	
Water Table Present? ✓ Yes ☐ No Depth (inches): 1 Wetland Hydrology Present? Yes ☐ No Yes ☐ No	
Saturation Present?	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):	



Providence, RI 02904			- 1	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus pennsylvanica		10	NO VEO	FACW
Tsuga canadensis Prunus serotina		40 15	YES NO	FACU FACU
Acer rubrum Betula alleghaniensis		20 15	YES NO	FAC FAC
	Total Cover:	100	1	1
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Taxus canadensis		40	YES	FACU
Acer rubrum Viburnum lantanoides		10 10	NO NO	FAC FACU
Kalmia latifolia		20	YES	FACU
	Total Cover:	80		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			•
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:		dex Worksheet:	AA Ida I	
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)	Total % Cover		Multiply by:	
Total Number of Dominant	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Species Across All Strata: 4 (B)	FACW Species		x 2 = <u>20</u>	
Percent of Dominant Species	FAC Species: FACU Species	<u>45</u>	x 3 = 135 x 4 = 500	
That Are OBL, FACW, or FAC: 25 (A/B)	UPL Species:	: <u>125</u> <u>0</u>	x 5 = 0	
	Column Totals:	<u>u</u> 180 (A)	655 (B)	
		Prevalence Index	= B/A = <u>3.64</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	egetation Prese	nt? ☑ Yes [□ No
☑ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	1			



Providence, F	1 02904										1 1 1 1	
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the ir	ndicator o	r confirm t	the absen	ce of indicators.)			
Depth	Matrix		Red	dox Fe	atures							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Textu	ıre		Remarks	
0-15	2.5Y 2.5/1	100						ORGA	NIC			
15-20	2.5Y 6/1	60	2.5Y 3/1 10YR 4/6	35 5	C	M M	F	INE SAND	DY LOAM			
47. 0.0			211 2 1						a: 5.	D	** **	
		•	, RM=Reduced I				or Coated	d Grains.	² Location: PL=			
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess otl	herwise n	oted.)			Indicators for Pr	oblematic I	lydric Soils	3:
☐ Histosol (A	A1)			olyval 1LRA 1		Surface (S	8) (LRR R,	.,	2 cm Muck (A10) (LRR K	, L, MLRA 1	49B)
✓ Histic Epip	pedon (A2)			ILIO (1430)				☐ Coast Prairie	Redox (A1	6) (LRR K, L	, R)
✓ Black Hist	ic (A3)		п т	hin Da	ark Surface	e (S9) (LR	R R, MLRA	A 149B)	5 cm Mucky	Peat or Pea	t (S3) (LRR I	K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRR	K, L, M)	
☐ Stratified	Layers (A5)			oamy	Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surface	(S8) (LRR I	<, L)
□ Depleted	Below Dark Surfa	ace (A1	1) 🔲 🗅	eplete	ed Matrix (F3)			☐ Thin Dark Su	ırface (S9) (LRR K, L)	
☐ Thick Dar	k Surface (A12)		☐ R	edox l	Dark Surfa	ace (F6)			☐ Iron-Mangan	ese Masses	(F12) (LRR	K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	ed Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain Soil	s (F19) (MLI	RA 149B)
☐ Sandy Gl	eyed Matrix (S4)		□R	edox	Depressio	ns (F8)			☐ Mesic Spodie	c (TA6) (MLF	RA 144A, 14	5, 149B)
☐ Sandy Real	dox (S5)								☐ Red Parent I	Material (F2	1)	
☐ Stripped I	Matrix (S6)								□ Very Shallow	/ Dark Surfa	ce (TF12)	
□ Dark Surf	ace (S7) (LRR R	, MLRA	(149B)						☐ Other (Expla	in in Remarl	(s)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	ed or probl	lematic.			
Restrictive Lay	ver Present?		∕es 📝 No	П	Jnknown							
				_ `				ŀ	Hydric Soil Prese	nt? ☑	Yes □	No
Remarks:												
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated	Wetland?	☐ Yes 🗹	No 🔲	Unknown	
General Comm	ents:											





SOUTH



WETLAND DETER	MINATION FORM - Northo	entral and No	rtheast Region			
✓ Centerline ☐ Re-Route ☐ Access R	oad Ancillary Facility	Transmission Line	Other			
Project/Site: NED	Milepost: 153919.8 County:	Franklin	Date:	07/13/2015		
Applicant/Owner: Kinder Morgan	State:	MA Samp	ling Point: AS-M-W0	11-UPL		
Investigators: CM JW Quad Name	Ashfield Townsh	ip: Ashfield				
Logbook No.: 2015-5 Logbook Pg.: 8	Tract: 341					
Landform (hillslope, terrace, etc.): Slope - toe	Local Relief:	☐ Concave ☑ (Convex None	Slope%.: 7		
Subregion (LRR): Middle Atlantic	Lat: 42.533867	Long: -72.834	1227	Datum: NAD83		
Soil Map Unit Name: Tunbridge-Lyman complex	x, 8 to 15 percent slopes, very rocky		NWI Classification:	Not mapped		
Are climatic / hydrologic conditions on the site typical	I for this time of year?: Yes	☐ No (If no, expla	ain in Remarks.)			
Are Vegetation ☐ Soil ☐ or Hydrology ☐	significantly disturbed? ✓ No	Are "Normal" Circ	umstances present?	☑ Yes ☐ No		
Are Vegetation ☐ Soil ☐ or Hydrology ☐	naturally problematic?					
SUMMARY OF FINDINGS - Attach site	map showing sampling poin	t locations, tran	sects, important	features, etc.		
Hydrophytic Vegetation Present?	s 🗹 No		_			
Hydric Soil Present?	s 🗹 No	Is the Sampled within a Wetlan	Area d? □ Yes ☑	No		
Wetland Hydrology Present?	s 🗹 No	manna monan	u .			
Field Wetland Classification: UPLAND PLOT						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:		<u>S</u>	econdary Indicators (2	or more required)		
Primary Indicators (minimum of one required; check	all that apply)		Surface Soil Cracks	(B6)		
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)		Drainage Patterns (E	310)		
☐ High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B1	(6)		
☐ Saturation (A3)	☐ Marl Deposits (B15)		Dry-Season Water T	able (C2)		
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C	8)		
☐ Sediment Deposits (B2)	Oxidized Rhizospheres along Livi	iving Roots (C3) Saturation Visible on Aerial imagery (C9)				
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	C4) Stunted or Stressed Plants (D1)				
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Se	d Soils (C6) Geomorphic Position (D2)				
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)				
☐ Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)					
☐ Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D	95)		
Field Observations:						
Surface Water Present? ☐ Yes ☑ No	Depth (inches):					
Water Table Present? ☐ Yes ☑ No	Depth (inches):	Wetland Hydi	rology Present?	Voc. 🗹 No.		
Saturation Present?	Depth (inches):		Ц	Yes ☑ No		
Remarks (Describe Recorded Data (stream gage, m	onitoring well, aerial photos, previous in	spections), if available	e):			
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
Betula alleghaniensis Tsuga canadensis Acer saccharum		10 50 15	NO YES YES	FAC FACU FACU		
	Total Cove	er: 75	•	,		



T TOVIGETICS, THE 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Kalmia latifolia		30	YES	FACU
Acer spicatum Taxus canadensis		5 15	NO YES	FACU FACU
Taxus canductions	Total Cover:	50	120	17.00
	Total Gover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		ı	ı
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
Scientific Name		78 Cover	Dominant	Indicator Status
	Total Course		l	
<u> </u>	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species That Are OBL_FACW_or FAC: 0 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species:	<u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species	FACU Species:	<u>115</u>	x 4 = <u>460</u>	
That Are OBL, FACW, or FAC: 0 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:		490 (B)	
		Prevalence Index :		
		revalence index :	= B/A = <u>3.92</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	∐ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
Nemains.				

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T TOVIGETICE, IN	1 02304																	1 1 1 1	
SOIL																			
Profile Descrip	tion: (Describe	the de	epth need	ed to d	docum	ent the in	ndicator o	r confirm	he absen	ice o	indica	ators.)						
Depth	Matrix			Red	dox Fe	atures			-							_			
(inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc ²		Text	ure					F	₹em	arks		
0-8	10YR 2/1	100							ORGA	ANIC			R	OCK I	REF	USA	L AT	8 INCHES	3
¹Type: C=Cond	entration, D=De	pletion	l n. RM=Red	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2[ocation	n: PL	 =Pore	Lining	ı, M:		trix		
	icators: (Applic	·	-								cators								
Black Hist Hydrogen Stratified L Depleted I Thick Dark	pedon (A2)		11)		ILRA 1 Thin Da oamy I oamy (Deplete Redox [49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa	e (S9) (LR neral (F1) atrix (F2) F3)	8) (LRR R R R, MLRA (LRR K, L)			Dark S Polyva Thin D Iron-M	Prairi Mucky Surfactalue B Dark S langal	e Red Peat e (S7) elow S surface nese M	ox (A1 or Pea (LRR Surface (S9) (6) (L at (S: K, L e (St (LRR s (F1	_RR 3) (L ., M) 8) (L R K, I 12) (l	K, L, .RR M .RR K L) LRR I	R) (, L, R)	
☐ Sandy Gle ☐ Sandy Re ☐ Stripped M				□ F	Redox [Depressio	ns (F8)				Mesic Red P Very S	arent	Mater	ial (F2	1)			5, 149B)	
	ace (S7) (LRR R	, MLRA	\ 149B)								Other						•		
_	ydrophytic veget	tation a	and wetlan	d hydro	ology m	nust be pr	esent, unle	ess disturb	ed or prob	 olema					,				
Restrictive Lay	er Present?	_ \	Yes 🗹	No	□ ∪	nknown				Hydr	ic Soil	Pres	ent?		Ye	s [I	No	
Remarks:	FF MATTER CO	MDDIC	ED THE C		=D N/C	T CATHE	ATED SC		III DED E	IEI D									
	Habitat Characte							OL ON BC	OLDER F	IELD	-								
,		,	1	,															
Wetland Qualit	y: High		Moderate		Low			Isolated	Wetland?] Ye	s 🗖	N o		Ur	nkno	wn		
General Comm	ents:																		





NE



Centerline Re-Route Access Road Ancillary Facility Transmission Line Other Project/Site: NED Milepost: 154200.2 County: Franklin Date: 07/14/2015 Applicant/Owner: Kinder Morgan State: MA Sampling Point: AS-M-W012-PFO Investigators: CM SB Quad Name: Ashfield Township: Ashfield Logbook No.: 2015-5 Logbook Pg.: 18 Tract: 341 Landform (hillslope, terrace, etc.): Depression Local Relief: Concave Convex None Slope%.: 1 Subregion (LRR): Middle Atlantic Lat: 42.533956 Long: -72.833191 Datum: NAD83 Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely stony NWI Classification: Not mapped Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? No Are "Normal" Circumstances present? Yes No Are "Normal" Circumstances present?
Applicant/Owner: Kinder Morgan State: MA Sampling Point: AS-M-W012-PFO Investigators: CM SB Quad Name: Ashfield Township: Ashfield Logbook No.: 2015-5 Logbook Pg.: 18 Tract: 341 Landform (hillslope, terrace, etc.): Depression Local Relief: Concave Convex None Slope%.: 1 Subregion (LRR): Middle Atlantic Lat: 42.533956 Long: -72.833191 Datum: NAD83 Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely stony NWI Classification: Not mapped Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? No Are "Normal" Circumstances present?
Investigators: CM SB
Logbook No.: 2015-5 Logbook Pg.: 18 Tract: 341 Landform (hillslope, terrace, etc.): Depression Local Relief:
Landform (hillslope, terrace, etc.): Depression Local Relief: Concave Convex None Slope%.: 1 Subregion (LRR): Middle Atlantic Lat: 42.533956 Long: -72.833191 Datum: NAD83 Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely stony NWI Classification: Not mapped Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? No Are "Normal" Circumstances present? Yes No
Subregion (LRR): Middle Atlantic Lat: 42.533956 Long: -72.833191 Datum: NAD83 Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely stony NWI Classification: Not mapped Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? No Are "Normal" Circumstances present? Yes No
Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely stony Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? No Are "Normal" Circumstances present? Yes No
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? No Are "Normal" Circumstances present? Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No Are "Normal" Circumstances present? ☑ Yes ☐ No
CUMMADY OF FINDINGS. Attack site was allowing a smaller waint baselines (managed investor) for two
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?
Hydric Soil Present?
Wetland Hydrology Present? ✓ Yes ☐ No
Field Wetland Classification: PFO
Remarks:
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6)
□ Surface Water (A1) □ Water-Stained Leaves (B9) □ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13) ☐ Moss Trim Lines (B16)
✓ Saturation (A3)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) ☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? ☐ Yes [7] No Depth (inches):
Water Table Present? ✓ Yes ☐ No Depth (inches): 10 Wetland Hydrology Present?
Saturation Present?
(includes capillary fringe)
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):



Providence, RI 02904				
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus nigra		25	YES	FACW
Betula alleghaniensis Acer rubrum		20 10	YES NO	FAC FAC
Fraxinus pennsylvanica Tsuga canadensis		10 20	NO YES	FACW FACU
i suga cariauerisis	Total Cover:	85	123	TACO
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Hamamelis virginiana		10	YES	FACU
Acer spicatum		10	YES	FACU
	Total Cover:	20		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Dryopteris intermedia		20	YES	FAC
CAREX SP Impatiens capensis		15 10	YES NO	FAC FACW
Woodwardia virginica		10	NO	OBL
Thelypteris palustris	T-4-1 O	15	YES	FACW
Aleash Wine Charleson	Total Cover:	70		
Noody Vine Stratum Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	mulcator Status
	 Total Cover:		l	
Dominance Test Worksheet:		dex Worksheet:		
			Multiply by	
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)	Total % Cover		Multiply by:	
Total Number of Deminent	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant Species Across All Strata: 8 (B)	FACW Species		x 2 = <u>120</u>	
Descent of Deminant Charles	FAC Species:	<u>65</u>	x 3 = <u>195</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 63 (A/B)	FACU Species:		x 4 = <u>160</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>175 (A)</u>	<u>485 (B)</u>	
	1	Prevalence Index	= B/A = 2.77	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)	.,,,,,	- - 3	🖭 100 [
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	1			



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SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	confirm the abse	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ture	Remarks
0-10	10YR2/1	100					ORG	ANIC	
10-16	5Y3/1	30	5Y5/2	70	D	М	LOAMY COA	ARSE SAND	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	-Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
Histosol (/	A1)		_ F	Polvvali	ue Below	Surface (S	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
	pedon (A2)			/ILRA 1		(-	-/(/	_	e Redox (A16) (LRR K, L, R)
☐ Black Hist				hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)					neral (F1) (•		e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed Ma		, ,		elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	d Matrix (urface (S9) (LRR K, L)
_ '	k Surface (A12)	•	· —	•	Dark Surfa	•			nese Masses (F12) (LRR K, L, R)
_	ıcky Mineral (S1)		_			ırface (F7)			podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	•	Depressio	, ,			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)		_		·			_	Material (F21)
☐ Stripped N	Matrix (S6)								v Dark Surface (TF12)
	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
_			•	ology n	nust he nr	esent unle	ess disturbed or prob		,
Remarks:							I		
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High	☑ 1	Moderate	Low			Isolated Wetland?	?	No 🔲 Unknown
General Comm	ents:								





SOUTH



WETLAND DETERMINATION FORM - North	central	and No	rtheast Regio	on
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmis	ssion Line	☐ Other	
Project/Site: NED Milepost: 154172.8 Count	y: Fr	ranklin	Da	te: 07/14/2015
Applicant/Owner: Kinder Morgan State:	MA	Samp	ling Point: AS-M-	W012-UPL
Investigators: CM SB Quad Name: Ashfield Towns	ship: As	shfield	<u> </u>	_
Logbook No.: 2015-5 Logbook Pg.: 19 Tract: 341				
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Conca	ave 🗹	Convex Nor	ne Slope%.: 15
Subregion (LRR): Middle Atlantic Lat: 42.533971	Long:	: -72.83	3298	Datum: NAD83
Soil Map Unit Name: Tunbridge-Lyman complex, 8 to 15 percent slopes, very rocky			NWI Classificatio	n: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	□ No	(If no, expl	ain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "N	Normal" Circ	umstances present?	Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No)			
SUMMARY OF FINDINGS - Attach site map showing sampling po	nt location	ions trai	sects imports	ent features etc
Hydrophytic Vegetation Present? ☐ Yes ☑ No	in iocati	ons, trai	isects, importe	The reactives, etc.
	Is the	Sampled	Area 🖂 🗸	□ No
Hydric Soil Present? ☐ Yes ☑ No Wetland Hydrology Present? ☐ Yes ☑ No	within	a Wetlan	d? ☐ Yes	☑ No
Field Wetland Classification: UPLAND PLOT				
Remarks:				
Keniars.				
HYDROLOGY				
Wetland Hydrology Indicators:		<u>s</u>	econdary Indicators	(2 or more required)
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cra	cks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)			Drainage Patterr	ns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines	(B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)			Dry-Season Wat	er Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			Crayfish Burrows	s (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along L	ving Roots	(C3)	Saturation Visible	e on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)			Stunted or Stress	sed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (C6)		Geomorphic Pos	ition (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)			Shallow Aquitaro	I (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			Microtopographic	Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Tes	et (D5)
Field Observations:				
Surface Water Present? ☐ Yes ☑ No Depth (inches):				
Water Table Present? ☐ Yes ✓ No Depth (inches):	We	etland Hyd	rology Present?	
Saturation Present?				☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	inspections)), if availahl	e):	
у-темпе (,	,,	-,.	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name	9	% Cover	Dominant	Indicator Status
Acer saccharum		30	YES	FACU
Tsuga canadensis Acer spicatum		40 10	YES NO	FACU FACU
Total Co	ver:	80		



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Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Taxus canadensis Tsuga canadensis		40 15	YES YES	FACU FACU
rsuga canadensis	Total Cover:	55	125	1 700
5 <u>-</u>				
Herb Stratum				
Plot Size: 5	ı		1	1
Scientific Name		% Cover	Dominant	Indicator Status
Polystichum acrostichoides	T 0	5	YES	FACU
W LV C	Total Cover:	5		
Woody Vine Stratum				
Plot Size: 30	ı	0/ 0	l 5	l 1 1 1 0 1 1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 0 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>140</u>	x 4 = <u>560</u>	
Hat Ale OBL, I AGW, OF I AC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>140 (A)</u>	<u>560 (B)</u>	
	1	Prevalence Index :	$= B/A = \underline{4.00}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☐ Yes ⊡	∑ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				

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SOIL																		
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the ir	ndicator o	r confirm	the absen	nce of	indicat	ors.)						
Depth	Matrix			Re	dox Fe	atures			-									
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Text	ure					Re	ema	rks	
0-6	7.5YR 4/4	100							ORGA	ANIC		E			FIELD		OCK	NIC LAYER KREFUSAL
¹Type: C=Cond	centration, D=De	epletion	n, RM=Red	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	²L	ocation:	PL=I	Pore	Lining	, M=N	Matr	ix	
Hydric Soil Ind	licators: (Appli	cable	to all LRR'	s, unle	ess oth	nerwise n	oted.)			Indi	cators f	or Pro	blen	natic	Hydri	c Sc	oils³	:
☐ Histosol (A	A1)						Surface (S	8) (LRR R	,		2 cm M	uck (A	10) (LRR Ł	<, L, N	ЛLR	A 14	19B)
☐ Histic Epip	pedon (A2)			IV.	/ILRA 1	49B)					Coast P	rairie	Redo)х (A1	6) (LR	RK	ί, L,	R)
■ Black Hist	ic (A3)			□ T	hin Da	rk Surface	e (S9) (LR	R R, MLRA	A 149B)		5 cm M	ucky F	Peat o	or Pea	ıt (S3)	(LR	≀R K	(, L, R)
☐ Hydrogen	Sulfide (A4)				.oamy l	Mucky Mir	neral (F1)	(LRR K, L)			Dark Su	ırface	(S7)	(LRR	K, L,	M)		
☐ Stratified I	_ayers (A5)				oamy (Gleyed Ma	atrix (F2)				Polyvalı	ue Be	ow S	urface	∍ (S8)	(LR	RK	, L)
☐ Depleted I	Below Dark Surfa	ace (A	11)		Peplete	d Matrix (F3)				Thin Da	rk Su	face	(S9) (LRR I	K, L))	
☐ Thick Darl	k Surface (A12)				Redox [Dark Surfa	ace (F6)				Iron-Ma	ngane	se M	asses	s (F12	.) (LF	RR F	<, L, R)
☐ Sandy Mu	icky Mineral (S1)				Peplete	d Dark Su	ırface (F7)				Piedmo	nt Flo	odpla	in Soi	ls (F1	9) (1	MLR	A 149B)
☐ Sandy Gle	eyed Matrix (S4)				Redox I	Depressio	ns (F8)				Mesic S	podic	(TA6) (ML	RA 14	14A,	145	i, 149B)
☐ Sandy Re	dox (S5)										Red Pa	rent M	lateri	al (F2	1)			
☐ Stripped N	Matrix (S6)										Very Sh	allow	Dark	Surfa	ice (TI	F12))	
☐ Dark Surfa	ace (S7) (LRR R	, MLR	4 149B)								Other (E	Explai	n in R	lemar	ks)			
3Indicators of h	nydrophytic vege	tation a	and wetlan	d hydro	ology n	nust be pr	esent, unle	ess disturb	ed or prob	lema	tic.							
Restrictive Lay	er Present?	V	Yes 🔲	No	□ ∪	nknown												
ROCK										Hydr	ic Soil P	reser	it?		Yes	√	<u> 1</u>	No
6																		
Remarks:																		
Description of I	Habitat Characte	ristics.	Aquatic D	iversity	or Ge	neral Com	nments:											
		,																
Wetland Qualit	y: High		Moderate		Low			Isolated	Wetland?	. [Yes		No		Unk	now	/n	
0 10																		
General Comm	ents:																	





WEST



WE	TLANI) DET	ERN	IINATI	ON F	ORM -	Northc	ent	ral an	d No	ortheas	t Regior	1	
☑ Centerline ☐ Re-R	oute [Acce	ss Roa	d 🔲	Ancill	ary Facility		Tran	smission	Line	☐ Otl	her		
Project/Site: NED			ı	Milepost:	1544	127.6	County:		Frankl	in		Date:	07/14/201	15
Applicant/Owner: Kinder Mo	rgan						State:	MA		Samp	oling Poin	t: AS-M-W	013-PEM	
Investigators: CM MN		Quad N	ame:	Ashfield			Townshi	p:	Ashfie	ld				
Logbook No.: 5M	Log	book Pg	.: 22		Tra	ct: 341								
Landform (hillslope, terrace,	etc.):	Depre	ssion	· ·		Local R	elief:	7 (Concave		Convex	☐ None	Slope%.:	0
Subregion (LRR): Middl	e Atlantic			Lat	42.5	34313		L	ong:	-72.83	32423		Datum: NA	D83
Soil Map Unit Name: Mil	Isite-Westr	ninster o	comple	x, 3 to 8 p	ercent	slopes, roc	ky				NWI C	lassification:	Not ma	apped
Are climatic / hydrologic cond	litions on tl	ne site t	pical f	or this tim	e of ye	ar?:	Yes		No (If no	о, ехр	lain in Rem	narks.)		-
Are Vegetation ✓ Soil	or H	ydrology	/ 🗆	significa	ntly dis	sturbed?	□ No	Α	re "Norma	al" Cir	cumstance	s present?	☑ Yes	☐ No
Are Vegetation	or H	ydrology	/ 🗆	naturally	proble	ematic?	✓ No							
SUMMARY OF FINDI	NGS - A	ttach	site n	nap sho	wing	g sampliı	ng point	lo	cations	s, tra	nsects,	importan	t features	, etc.
Hydrophytic Vegetation Prese	ent?	V	Yes	☐ No)									
Hydric Soil Present?		$\overline{\checkmark}$	Yes	☐ No)			ls wi	the San thin a V	npled Vetlar	l Area nd?	☑ Yes [□ No	
Wetland Hydrology Present?		\checkmark	Yes	☐ No)			***		·ctiai				
Field Wetland Classification:	PEN	1												
Remarks: TREE STR	RATUM RE	DUCE	TO 1	5'										
HYDROLOGY														
Wetland Hydrology Indicato	ors:									9	Secondary	Indicators (2	or more requ	uired)
Primary Indicators (minimum	of one rec	quired; c	heck a	ll that app	ly)					[Surfac	e Soil Crack	s (B6)	
✓ Surface Water (A1)			[☐ Water	-Stain	ed Leaves ((B9)			[☐ Draina	ge Patterns	(B10)	
─ High Water Table (A2)				_ 」 Aquat	ic Fau	na (B13)				[Moss	Trim Lines (E	316)	
✓ Saturation (A3)				Marl [Deposi	ts (B15)					☐ Dry-Se	eason Water	Table (C2)	
☐ Water Marks (B1)] Hydro	gen Si	ulfide Odor	(C1)				Crayfis	sh Burrows (C8)	
☐ Sediment Deposits (B2)			5	⊘ Oxidiz	zed Rh	izospheres	along Livir	ng Ro	oots (C3)		Satura	tion Visible of	on Aerial ima	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of	Reduced Ir	on (C4)				Stunte	d or Stresse	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recei	nt Iron	Reduction i	n Tilled So	ils (C	26)		Geom	orphic Position	on (D2)	
☐ Iron Deposits (B5)				Thin N	Muck S	Surface (C7))			<u> </u>	✓ Shallo	w Aquitard (I	D3)	
☐ Inundation Visible on A	erial Image	ry (B7)		Other	(Expla	ain in Rema	rks)				Microto	opographic F	Relief (D4)	
☐ Sparsely Vegetated Con	ncave Surf	ace (B8))							<u> </u>	√ FAC-N	leutral Test ([D5)	
Field Observations:														
Surface Water Present?	✓ Yes		l oV	Depth (inc	hes):	1								
Water Table Present?	✓ Yes		l oV	Depth (inc	hes):	0			Wetlan	d Hyd	drology Pr		í Voc □	No
Saturation Present? (includes capillary fringe)	✓ Yes	<u> </u>	No [Depth (inc	hes):	0						<u>V</u>] Yes □	NO
Remarks (Describe Recorded	l Data (stre	am gag	e, mon	itoring we	ll, aeria	al photos, p	revious ins	pect	ions), if a	vailab	le):			
VEGETATION														
Tree Stratum														
Plot Size: 30														
Scientific Name									% Co	over		ominant	Indicat	or Status
Fagus grandifolia Tsuga canadensis						_	F-4-1 0		10)		YES YES		/CU
						1	Fotal Cove	r:	20	J				



Providence, RI 02904				to the second second
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Spiraea alba -agus grandifolia Prunus serotina cer pensylvanicum		5 10 10 5	NO YES YES NO	FACW FACU FACU FACW
Fraxinus pennsylvanica	Total Cover:	10 40	YES	FACW
	Total Cover.	40		
Herb Stratum				
Plot Size: 5				1
Scientific Name		% Cover	Dominant	Indicator Status
Carex scoparia Scirpus cyperinus		10 10	NO NO	FACW OBL
Solidago gigantea Panicum capillare		25 25	YES YES	FACW FAC
-апсин саршаге	 Total Cover:	70	TES	FAC
Voody Vine Stratum	TOTAL COVEL			
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	indicator Status
	Total Cover:		I	
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of		Multiply by:	
	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species		x 2 = <u>100</u>	
Percent of Dominant Species	FAC Species:	<u>25</u>	x 3 = <u>75</u>	
That Are OBL, FACW, or FAC: 43 (A/B)	FACU Species:		x 4 = <u>180</u>	
	UPL Species:	<u>0</u>	$x 5 = \underline{0}$	
	Column Totals:	<u>130 (A)</u>	<u>365 (B)</u>	
	•	Prevalence Index	= B/A = <u>2.81</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				_
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Prese	nt? ☑ Yes [] No
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
,				



Providence, F	RI 02904										- 1	
SOIL												
Profile Descrip	otion: (Describe	e the d	enth needo	ed to	docum	ent the ir	ndicator o	r confirm th	e absen	ce of indicators.)		
Depth	Matrix				dox Fe							
(inches)	Color (moist)	%	Color (m		%	Type ¹	Loc²		Text	ure	Rei	marks
0-1	10YR 2/1	100							ORGA	NIC		
1-6	2.5Y 5/3	30	2.5Y 2.5 10YR 4		65 5	C	M PL	FIN	NE SAND	DY LOAM		
6-14	2.5Y 3/2	30	2.5Y 5 2.5Y 4		65 5	D C	M M		SILT L	OAM		
14-18	10YR 4/2	60	10YR 2 10YR 6		10 30	СС	M M	FIN	NE SAND	DY LOAM		
¹Type: C=Cond	centration, D=De	epletion	ı, RM=Red	duced	Matrix,	CS=Cov	ered Sand	or Coated C	Grains.	² Location: PL=	Pore Lining, M=M	atrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR'	s. unle	ess oth	nerwise n	oted.)			Indicators for Pr	oblematic Hydric	Soils3:
	,	ouble t		-			•	o) // DD D				
Histosol (/	,				оіуvаіі ЛLRA 1		Surrace (S	8) (LRR R,			A10) (LRR K, L, MI	•
Histic Epip	pedon (A2)					,				☐ Coast Prairie	e Redox (A16) (LRI	₹ K, L, R)
□ Black Hist	tic (A3)			□ 1	Thin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)	5 cm Mucky	Peat or Peat (S3) ((LRR K, L, R)
☐ Hydrogen	Sulfide (A4)				oamy I	Mucky Mii	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRR K, L, M	1)
☐ Stratified I	Layers (A5)				oamy (Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	11)		Deplete	d Matrix (F3)			☐ Thin Dark Su	urface (S9) (LRR K	1)
- '	k Surface (A12)	,	•	_	•	Dark Surfa	,				ese Masses (F12)	•
🗕 💄	ucky Mineral (S1)	١		_						_ `	, ,	,
I 🗕 🖫 🛅				_	•		urface (F7)				oodplain Soils (F19	
🗀 🖫 🛅	eyed Matrix (S4)				Redox I	Depressio	ns (F8)			☐ Mesic Spodi	c (TA6) (MLRA 144	⊦A, 145, 149B)
☐ Sandy Re	dox (S5)									☐ Red Parent I	Material (F21)	
☐ Stripped N	Matrix (S6)									□ Very Shallov	v Dark Surface (TF	12)
☐ Dark Surf	ace (S7) (LRR R	R, MLRA	\ 149B)							☐ Other (Expla	in in Remarks)	
3Indicators of h	nydrophytic vege	tation a	and wetland	d hydr	oloav n	nust be pr	esent. unle	ess disturbed	d or prob	lematic.		
Restrictive Lay						nknown						
Restrictive Lay	er Fresent:	□ `	Yes √	INO	□ ∪	IIKIIOWII				Hydric Soil Prese	nt? 🗹 Yes	□ No
Remarks:												
Description of	Habitat Characte	eristics,	Aquatic Div	versity	or Ge	neral Con	nments:					
Wetland Qualit	ty: High	<u> </u>	Moderate		Low			Isolated V	Vetland?	☑ Yes 🗖	No 🔲 Unkn	own
General Comm	ents:											







WETLAND DETERMINATION FORM - Northo	central and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 154454.3 County:	Franklin Date: 07/14/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: AS-M-W013-UPL
Investigators: CM MN Quad Name: Ashfield Townsh	ip: Ashfield
Logbook No.: 5M Logbook Pg.: 23 Tract: 341	
Landform (hillslope, terrace, etc.): Hilltop Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 4
Subregion (LRR): Middle Atlantic Lat: 42.534261	Long: -72.832309 Datum: NAD83
Soil Map Unit Name: Millsite-Westminster complex, 3 to 8 percent slopes, rocky	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling poin	at locations, transacts, important features, etc.
	it locations, transects, important leatures, etc.
	Is the Sampled Area
Hydric Soil Present?	within a Wetland? ☐ Yes ☑ No
Wetland Hydrology Present?	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	□ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livi	ing Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled So	oils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	
☐ Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutral Test (D5)
Field Observations:	T
Surface Water Present? ☐ Yes 🔽 No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	☐ Yes ☑ No
(includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections), if available):



Providence, RI 02904				
/EGETATION				
Free Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus pennsylvanica		10	NO	FACW
Acer rubrum Acer saccharum		15 15	YES YES	FAC FACU
Tsuga canadensis Fraxinus americana		20 10	YES NO	FACU FACU
Taxinas americana	 Total Cover:	70	110	17.00
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Abies balsamea		5	NO	FAC
Faxus canadensis Fagus grandifolia		20 10	YES NO	FACU FACU
rsuga canadensis		20	YES	FACU
Quercus alba		15	YES	FACU
	Total Cover:	70		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Dryopteris intermedia		5	YES	FAC
	Total Cover:	5		
Voody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Danisana Tari Wadabari				
Dominance Test Worksheet:	Prevalence Ind		N.A. alakira ka a ka a	
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover of OBL Species:		Multiply by: x 1 = 0	
Total Number of Dominant	·	<u>0</u>	_	
Species Across All Strata: 7 (B)	FACW Species		x 2 = <u>20</u>	
Percent of Dominant Species	FAC Species:	<u>25</u>	x 3 = <u>75</u>	
That Are OBL, FACW, or FAC: 29 (A/B)	FACU Species:		x 4 = <u>440</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>145 (A)</u>	<u>535 (B)</u>	
	F	Prevalence Index	= B/A = <u>3.69</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? 🗌 Yes 🛭	☑ No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Verentation (Fundam)				
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
· · · · · · · · · · · · · · · · · · ·				



i Tovidence, i	(1 0200+											
SOIL												
Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	Matrix		Red	dox Fe	atures			_				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure	Remarks		
0-2	10YR 2/1	100						ORGA	NIC			
2-7	7.5YR 4/4	100					SILT LOAM					
			I									
7-16	10YR 5/4	100						16" Rock refusal				
			I									
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. ² Location: PL=Pore Lining, M=Matrix												
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :												
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)												
Histic Epipedon (A2) Histic Epipedon (A2)												
☐ Histic Epipedon (A2) ☐ Coast Prairie Redox (A16) (LRR K, L, R) ☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)												
	Sulfide (A4)		_			neral (F1)		02)	_	e (S7) (LRR K, L, M)		
	Layers (A5)			-	Gleyed Ma				_	elow Surface (S8) (LRR K, L)		
	Below Dark Surfa	ace (A1	· 	-	d Matrix (I					urface (S9) (LRR K, L)		
- '	k Surface (A12)	000 (711	_	•	Dark Surfa	•			_	ese Masses (F12) (LRR K, L, R)		
	ucky Mineral (S1)	١				rface (F7)			_	podplain Soils (F19) (MLRA 149B)		
	eyed Matrix (S4)				Depression							
Sandy Re			□	euox i	Depression	115 (1 0)				C (TA6) (MLRA 144A, 145, 149B)		
									_	Material (F21)		
🗕 🖫 🗀 .	Matrix (S6)	MIDA	\ 4.40D\							Dark Surface (TF12)		
	ace (S7) (LRR R		·						_	in in Remarks)		
Indicators of f	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pre	esent, unle	ess disturb	ed or prob	lematic.			
Restrictive Lay	er Present?	V	res 🔲 No	□ U	Inknown							
ROCK									Hydric Soil Prese	nt? ☐ Yes ☑ No		
16												
Remarks:												
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	ments:						
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland? ☐ Yes ☐ No ☐ Unknown												
0 10												
General Comm	ients:											





NE



WET	LAND	DE1	ERN	IINAT	ION I	FORM -	Northc	entr	al an	d No	orthe	ast	Regio	า	
☑ Centerline ☐ Re-Rou	te 🔲	Acce	ss Roa	ad [] Ancil	lary Facility		Trans	mission	Line		Othe	r		
Project/Site: NED Milepost: 156046.1					County:	County: Franklin Date: 07/16/2015						15			
Applicant/Owner: Kinder Morg	an						State:	MA		Sam	pling F	Point:	AS-M-V	V014-PEM	
Investigators: CM SB	(Quad N	ame:	Ashfield			Townshi	p:	Ashfie	ld					
Logbook No.: 5M	Logb	ook Pg	j.: 33		Tra	nct: 358	·								
Landform (hillslope, terrace, etc	.):	Depre	ssion	'		Local R	Relief:	7 Co	oncave		Conve	ex [None	Slope%.:	1
Subregion (LRR): Middle	Atlantic			La	at: 42.	534837		Lo	ong:	-72.82	26455			Datum: NA	D83
Soil Map Unit Name: Wons	queak w	oody p	eat, 0 t	o 1 perc	ent slop	es					NV	VI Clas	sification	: Not m	apped
Are climatic / hydrologic conditi	ns on th	e site t	ypical f	or this ti	ne of ye	ear?:	7 Yes		No (If no	o, exp	lain in I	Remar	rks.)		
										No					
Are Vegetation ☐ Soil ☐		/drolog		natural	ly proble	ematic?	_ No								
, <u> </u>	- ,		_		, ,		_								
SUMMARY OF FINDING	S - At	tach	site n	nap sh	owing	g sampli	ng poin	t loc	ations	s, tra	nsec	ts, in	nportar	nt features	s, etc.
Hydrophytic Vegetation Presen	?		Yes	1	10			lo 4	ha Can	nnloc	l Aron				
Hydric Soil Present?			Yes	1	10			wit	he San hin a W	Vetla	i Area nd?	<u> </u>	Yes	□ No	
Wetland Hydrology Present?		<u> </u>	Yes	1	10										
Field Wetland Classification:	PEM														
Remarks: BEAVER DAM DOWNSTEAM HAS INUNDATED THE PEM WETLAND UPSTREAM															
HYDROLOGY															
Wetland Hydrology Indicators	:									<u> </u>	Second	dary In	dicators (2 or more req	uired)
Primary Indicators (minimum of	one req	uired; c	heck a	ll that ap	ply)					[☐ Su	rface	Soil Crack	ks (B6)	
☐ Surface Water (A1)			[☐ Wat	er-Stain	ed Leaves ((B9)	☐ Drainage Patterns (B10)							
─ High Water Table (A2)			[_ □ Aqu	atic Fau	ına (B13)		☐ Moss Trim Lines (B16)							
✓ Saturation (A3)			[☐ Mar	Deposi	its (B15)		☐ Dry-Season Water Table (C2)							
■ Water Marks (B1)			[√ Hyd	rogen S	Sulfide Odor	C1) Crayfish Burrows (C8)								
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Saturation Visible on Aer								on Aerial ima	gery (C9)						
☐ Drift Deposits (B3)			[Pres	sence of	f Reduced I	ron (C4)	on (C4) Stunted or Stressed Plants (D1))
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction i								Tilled Soils (C6)							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7))	Shallow Aquitard (D3)							
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema							rks)	<u> </u>							
☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)															
Field Observations															
Field Observations: Surface Water Present?	71 Voc		No I	Donth (in	oboo):	2									
	Yes	=		Depth (ir	,	2			Wetlen	.d U.,	drolom	, Droo	ont?		
	<u>∕</u> Yes	_		Depth (ir Dopth (ir	,	0			Wetlan	ій пус	irology	y Pres	_	∐ Yes □	No
(includes capillary fringe)	✓ Yes	ш	No I	Depth (ir	icries):	U							_	_	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):															
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Cc	over		Dor	minant	Indicat	or Status
Tsuga canadensis								\top	10	0		Υ	ES	F	ACU
						-	Total Cove	r:	10	0					



Providence, Ri 02904			1							
Sapling/Shrub Stratum										
Plot Size: 15										
Scientific Name		% Cover	Dominant	Indicator Status						
Prunus serotina		5	YES	FACU						
Acer rubrum		10	YES YES	FAC						
Spiraea alba	Total Cover:	5 20	TES	FACW						
	Total Cover.	20								
Herb Stratum										
Plot Size: 5										
Scientific Name		% Cover	Dominant	Indicator Status						
Carex lurida		5	NO	OBL						
Carex comosa Scirpus cyperinus		35 35	YES YES	OBL OBL						
Euthamia caroliniana		10	NO	FAC						
Typha latifolia		15	NO	OBL						
	Total Cover:	100								
Woody Vine Stratum										
Plot Size: 30										
Scientific Name		% Cover	Dominant	Indicator Status						
	Total Cover:		'	1						
Dominance Test Worksheet:	Prevalence Inde	ex Worksheet:								
Number of Dominant Species	Prevalence Index Worksheet: Total % Cover of: Multiply by:									
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	 <u>90</u>	x 1 = 90							
Total Number of Dominant	FACW Species:		x = 30 x = 10							
Species Across All Strata: 6 (B)	-									
Percent of Dominant Species	FAC Species:	<u>20</u>	x 3 = <u>60</u>							
That Are OBL, FACW, or FAC: 67 (A/B)	FACU Species:		x 4 = <u>60</u>							
	UPL Species:	<u>0</u>	x 5 = <u>0</u>							
	Column Totals:	<u>130 (A)</u>	220 (B)							
	P	Prevalence Index =	= B/A = 1.69							
Hydrophytic Vegetation Indicators:										
✓ 2 - Dominance Test is > 50%										
✓ 3 - Prevalence Index is ≤ 3.0										
☐ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ✓ Yes ☐ No									
data in Remarks or on a separate sheet)	nyaropnyao n		🖭 163 [_ NO						
☐ Problematic Hydrophytic Vegetation¹ (Explain)										
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.										
Remarks:										



Providence, R	1 02904								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	confirm the abs	ence of indicators.)	
Depth	Matrix		Red	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	exture	Remarks
0-4	7.5YR 2.5/2	100					ORG	GANIC	
4-8	7.5YR 3/3	95	7.5YR 4/4	5	С	PL	SILT	LOAM	
8-12	7.5YR 5/2	70	7.5YR 3/1	30	С	M	COARSE S	SANDY LOAM	
12-16	10YR 5/3	30	10YR 6/1	70	D	M	LOAMY CO	DARSE SAND	
1Type: C-Cond	entration D-De	nletion	PM-Paducad	Matrix	CS-Cov	ared Sand	or Coated Grains	2l ocation: Pl -	Pore Lining, M=Matrix
		•					or Coated Grains		
Histosol (A Histic Epip Black Hist Hydrogen Stratified L Depleted I Sandy Mu Sandy Gle Sandy Re Stripped M Dark Surfa JIndicators of h	bedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surface (A12) icky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	ace (A1 , MLRA tation a	1)	olyvalu ILRA 1 hin Da oamy I oamy I oamy I eeplete eedox I eeplete	ue Below (49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	Surface (S e (S9) (LRI neral (F1) (atrix (F2) F3) ace (F6) urface (F7) ns (F8)	8) (LRR R, R R, MLRA 149B) LRR K, L) ess disturbed or pr	2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark St Iron-Mangan Piedmont Flo Mesic Spodie Red Parent I Very Shallov Other (Expla	roblematic Hydric Soils³: A10) (LRR K, L, MLRA 149B) Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) Redox (S7) (LRR K, L, M) Relow Surface (S8) (LRR K, L) Rese Masses (F12) (LRR K, L, R) Rododplain Soils (F19) (MLRA 149B) Rodotplain Soils (MLRA 149B) Rodotplain
Remarks:									
Description of I BEAVER DAM	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetland	d? ☐ Yes ☑	No Unknown
General Comm	ents:								







WETLAND DETERMINATION FORM - Northcei	ntral and Northeast Region
│ ☑ Centerline	ransmission Line
Project/Site: NED Milepost: 156174.8 County:	Franklin Date: 07/16/2015
	MA Sampling Point: AS-M-W014-PFO
Investigators: CM SB Quad Name: Ashfield Township:	Ashfield
Logbook No.: 5M Logbook Pg.: 32 Tract: 358	
Landform (hillslope, terrace, etc.): Depression Local Relief:	Concave Convex None Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.535002	Long: -72.826003 Datum: NAD83
Soil Map Unit Name: Ashfield fine sandy loam, 3 to 8 percent slopes, very stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes ✓ Normal
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point I	agations transacts important features ato
Hydrophytic Vegetation Present? Yes No	ocations, transects, important reatures, etc.
li ii I	Is the Sampled Area
Hydric Soil Flesent?	within a Wetland? ✓ Yes ☐ No
Wetland Hydrology Present?	
Remarks:	
Iveniding.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9)	□ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
✓ Saturation (A3)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
	✓ Microtopographic Relief (D4)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Sparsony regulated conserve currence (55)	_
Field Observations:	
Surface Water Present?	
Water Table Present? ☑ Yes ☐ No Depth (inches): 0	Wetland Hydrology Present?
Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe)	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspe	ections), if available):
RED MAPLE-CONIFER PEAT BOG	
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Acer pensylvanicum	15 NO FACU
Betula alleghaniensis Acer rubrum	30 YES FAC 40 YES FAC
Tsuga canadensis	20 YES FACU
Total Cover:	105



Providence, RI 02904			- 1	AECON
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Betula alleghaniensis		15	YES	FAC
Acer rubrum Ilex verticillata		10 20	NO YES	FAC FACW
Fraxinus pennsylvanica		15	YES	FACW
Picea glauca	Total Cayers	10	NO	FACU
	Total Cover:	70		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Dryopteris intermedia		10	YES	FAC
	Total Cover:	10		
Voody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence In	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 6 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species	s: <u>35</u>	x 2 = <u>70</u>	
Species Across All Strata: 7 (B)	FAC Species:	<u>105</u>	x 3 = <u>315</u>	
Percent of Dominant Species That Are OBL_FACW_or FAC: 86 (A/B)	FACU Species	: <u>45</u>	x 4 = <u>180</u>	
That Are OBL, FACW, or FAC: 86 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals	: <u>185 (A)</u>	<u>565 (B)</u>	
		Prevalence Index	= B/A = 3.05	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic	Vegetation Prese	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)	riyaropriyac	vegetation i rese	nt: V 165 I	NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
venians.				



T TOVIGETICE, I	(1 02004								100000000000000000000000000000000000000
SOIL									
Profile Descrip		the d				ndicator o	r confirm the ab	sence of indicators.))
Depth (inches)	Matrix				atures		т	「exture	Remarks
(11101100)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		- Oxtor O	romano
0-12	5YR 3/2	90	10YR 4/6	10	С	PL	OF	RGANIC	
12-16	7.5YR 5/2	40	7.5YR 7/1	60	D	М	FINE S	ANDY LOAM	
16-18	10YR 7/3	40	10YR 6/1	60	D	М	SAN	DY LOAM	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grain	s. ² Location: PL:	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)		□ P	olyvalı	ue Below	Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
✓ Histic Epip	pedon (A2)		N	ILRA 1	49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B	3) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surfac	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1		eplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□R	edox [Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Fl	loodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	edox I	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							─ Very Shallov	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						ain in Remarks)
_			and wetland hydro	oloav n	nust be pr	esent. unle	ess disturbed or r		•
Restrictive Lay					nknown				
Nestrictive Lay	er Fresent!	ш	ies 🔽 No	υσ	TIKITOWIT			Undia Call Base	
								Hydric Soil Prese	ent? ☑ Yes ☐ No
D 1									
Remarks:									
PEAT BOG									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetla	nd? 🔲 Yes 🗹	∫ No ☐ Unknown
General Comm	ents:								







WE	TLAND) DET	ERN	IINATI	ON FORM -	Northce	entral ar	nd No	ortheast	Region		
☑ Centerline ☐ Re-R	oute _	Acce	ss Roa	d 🗖	Ancillary Facility	_ ¹	Transmissio	n Line	☐ Othe	er		
Project/Site: NED			ľ	Milepost:	156126.3	County:	Frank	din		Date:	07/16/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	oling Point:	AS-M-W	014-UPL	
Investigators: CM SB	(Quad N	ame: /	Ashfield		Township	: Ashfi	eld				
Logbook No.: 5M	Logi	oook Pg	.: 34		Tract: 358	•						
Landform (hillslope, terrace, e	etc.):	Hilltop		· ·	Local R	Relief:	Concave	$\overline{\mathbf{V}}$	Convex	None	Slope%.:	30
Subregion (LRR): Middl	e Atlantic			Lat:	42.534924		Long:	-72.82	6166		Datum: NAI	D83
Soil Map Unit Name: Asl	nfield fine s	andy lo	am, 3 t	o 8 percei	nt slopes, very sto	ony			NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	ne site ty	pical fo	or this time	e of year?:	⊘ Yes	☐ No (If r	no, exp	lain in Rema	arks.)		
Are Vegetation	or Hy	ydrology	/ 	significar	ntly disturbed?	☑ No	Are "Norm	nal" Cir	cumstances	present?	✓ Yes	■ No
Are Vegetation	or Hy	ydrology	/ □	naturally	problematic?	✓ No						
SUMMARY OF FINDIN	NGS - At	tach	site n	nap sho	wing sampli	ng point	location	s, tra	nsects, ir	mportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	√ No)							
Hydric Soil Present?			Yes	☑ No)		Is the Sa within a	mpled Wetlar	l Area nd? □	Yes ⊻	∐ No	
Wetland Hydrology Present?			Yes	√ No)		within a	roua				
Field Wetland Classification:	UPL	AND PL	.OT									
Remarks: TOP OF N	ARROW R	RIDGE L	INE									
HYDROLOGY												
Wetland Hydrology Indicato	ors:							5	Secondary Ir	ndicators (2	or more requ	uired)
Primary Indicators (minimum	of one req	uired; c	heck al	I that appl	l <u>y)</u>			[Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)				☐ Water	-Stained Leaves ((B9)		[☐ Drainag	e Patterns (B10)	
☐ High Water Table (A2)				_ Aquat	ic Fauna (B13)			[☐ Moss Tr	rim Lines (B	16)	
☐ Saturation (A3)				Marl D	Deposits (B15)			[☐ Dry-Sea	son Water	Table (C2)	
☐ Water Marks (B1)				Hydro	gen Sulfide Odor	(C1)		[Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizospheres	along Livin	g Roots (C3) [Saturation	on Visible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of Reduced I	ron (C4)		[Stunted	or Stressec	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction i	in Tilled Soi	ls (C6)		Geomor	phic Positio	n (D2)	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7))		[Aquitard (D	·	
☐ Inundation Visible on A	rial Imagei	ry (B7)		Other	(Explain in Rema	ırks)		[_ `	oographic R		
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)	1					[☐ FAC-Ne	eutral Test (I	D5)	
Field Observations:	_											
Surface Water Present?	☐ Yes	<u> </u>	No [Depth (inc	hes):							
Water Table Present?	☐ Yes	_		Depth (inc	•		Wetla	nd Hyd	drology Pres		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes		No [Depth (inc	hes):						ies 🖭	NO
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring we	ll, aerial photos, p	revious insp	pections), if	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Do	minant	Indicate	or Status
Tsuga canadensis Betula populifolia							7	30 70		/ES /ES		ACU AC
					-	Total Cover:	: 1	00				



Providence, Ri 02904			- 15	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer pensylvanicum Tsuga canadensis		10 15	YES YES	FACU FACU
rsuga cariaderisis	Total Cover:	25	11.5	TACO
Herb Stratum				
Plot Size: 5	1		1	ı
Scientific Name		% Cover	Dominant	Indicator Status
	T 0			
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30	1	24.2	1	
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>70</u>	x 3 = <u>210</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)	FACU Species:	<u>55</u>	x 4 = <u>220</u>	
That Ale OBE, I AOW, OI I AO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	125 (A)	430 (B)	
	F	Prevalence Index :	= B/A = 3.44	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	∐ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



	(1 02004										1
SOIL											
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm th	e absen	ce of indicators.)		
Depth	Matrix		Re	dox Fe	atures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Textu	ire		Remarks
0-5	2.5YR 3/2	100						ORGA	NIC		
5-6	7.5YR 6/2	100						LOA	Λ4		
5-6	7.518 6/2	100						LOA	IVI		
6-8	2.5YR 4/6	80	5YR 5/6	20	С	М		LOA	M		
8-10	10YR 5/6	60	7.5YR 5/8	40	С	М		SANDY	_OAM	Restr	ictive rock layer at 10"
¹Type: C=Con	l centration, D=De	enletion	RM-Reduced	Matrix	CS-Cov	ered Sand	or Coated G	Grains	² Location: PL=	Pore Lining	M-Matrix
		•	-				or Coaled C	Jianis.			
•	dicators: (Appli	cable t	o all LRR's, uni	ess otr	nerwise n	oted.)			Indicators for Pr	oblematic	Hydric Soils3:
Histosol (A1)			Polyvalı MLRA 1		Surface (S	8) (LRR R,		2 cm Muck (410) (LRR I	K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		יו	<u>.</u>	(00)				☐ Coast Prairie	Redox (A1	6) (LRR K, L, R)
☐ Black Hist	tic (A3)		□ ¹	Thin Da	rk Surface	e (S9) (LRI	R R, MLRA 1	149B)	☐ 5 cm Mucky	Peat or Pea	at (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1) ((LRR K, L)		☐ Dark Surface	(S7) (LRR	K, L, M)
☐ Stratified	Layers (A5)		П	oamy (Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surface	e (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	d Matrix (☐ Thin Dark Su		
	k Surface (A12)	400 (71)	_		-	•				` , ,	•
_	, ,		_		Dark Surfa						s (F12) (LRR K, L, R)
_	ucky Mineral (S1))	_			ırface (F7)			☐ Piedmont Flo	odplain Soi	ils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		□ F	Redox [Depressio	ns (F8)				c (TA6) (ML	RA 144A, 145, 149B)
☐ Sandy Re	edox (S5)								☐ Red Parent I	Material (F2	1)
☐ Stripped I	Matrix (S6)								□ Very Shallov	/ Dark Surfa	ace (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLR	A 149B)						Other (Expla	in in Remar	·ks)
	nydrophytic vege	tation a	and wetland hydr	ology m	nust he nr	esent unle	ess disturbed	or prob			•
							,	. с. р.сс.			
Restrictive Lay	er Present?	☑ ′	Yes ☐ No	□ ∪	nknown						
YES								!	Hydric Soil Prese	nt?	Yes ☑ No
10											
Remarks:											
Description of	Llabitat Charasta	riotico	Agustia Diversit		naral Cam						
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	nerai Con	iments:					
Wetland Qualit	ty: 🔲 High		Moderate	Low			Isolated W	/etland?	☐ Yes ☐	No 🔲	Unknown
General Comm	ente:										
General Comm	ients.										







WE	TLAND	DET	ERM	IINATIO	ON FORM - I	Northce	entral an	d No	rtheast R	egion		
☑ Centerline ☐ Re-R	oute _	Acce	ss Roa	d 🔲	Ancillary Facility	п т	ransmission	Line	☐ Other			
Project/Site: NED			N	/lilepost:	156992.0	County:	Frankl	in		Date:	07/20/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	ling Point:	AS-M-W	15-PFO	
Investigators: CM	(Quad N	ame: A	Ashfield		Township	: Ashfie	ld				
Logbook No.: 5M	Logk	ook Pg	.: 74		Tract: 358	'						
Landform (hillslope, terrace,	etc.):	Slope	- mid		Local R	elief: 🔽	Concave		Convex 🔲	None	Slope%.:	3
Subregion (LRR): Middl	e Atlantic			Lat:	42.535318		Long:	-72.822	2998		Datum: NAI	D83
Soil Map Unit Name: Asi	nfield fine s	andy lo	am, 3 to	o 8 percer	nt slopes, very sto	ny			NWI Classi	fication:	Not ma	pped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	or this time	e of year?:	Yes	☐ No (If no	o, expla	ain in Remarks	s.)		
Are Vegetation Soil	☐ or Hy	/drology	/ M	significar	ntly disturbed?	_ No	Are "Norma	al" Circ	umstances pr	esent?	✓ Yes	☐ No
Are Vegetation Soil		/drology		naturally	problematic?	_ No						
_						_			_			
SUMMARY OF FINDI	NGS - At	tach			wing samplir	ng point	locations	s, trar	nsects, imp	oortant	features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☑ No			Is the San	nnled	Δroa			
Hydric Soil Present?		$\overline{\mathbf{V}}$	Yes	☐ No			within a V			Yes [] No	
Wetland Hydrology Present?		<u> </u>	Yes	☐ No	1							
Field Wetland Classification:	PFO											
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicate	ors:							<u>S</u>	econdary Indi	cators (2	or more requ	<u>iired)</u>
Primary Indicators (minimum	of one req	uired; c	heck al	l that appl	<u>y)</u>] Surface So	oil Cracks	(B6)	
☐ Surface Water (A1)			v	☑ Water	-Stained Leaves (B9)		v	Drainage F	Patterns (B10)	
☐ High Water Table (A2)				−] Aquat	ic Fauna (B13)	•			Moss Trim	Lines (B	16)	
☐ Saturation (A3)				Marl D	Deposits (B15)				Dry-Seaso	n Water ⁻	Table (C2)	
☐ Water Marks (B1)] Hydro	gen Sulfide Odor ((C1)			Crayfish B	urrows (C	28)	
☐ Sediment Deposits (B2)			v	☑ Oxidiz	ed Rhizospheres	along Living	g Roots (C3)] Saturation	Visible o	n Aerial imag	jery (C9)
☐ Drift Deposits (B3)			v	Prese	nce of Reduced Ir	on (C4)] Stunted or	Stressed	l Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction in	n Tilled Soil	ls (C6)] Geomorph	ic Positio	n (D2)	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7)				Shallow Ad	quitard (D	03)	
☐ Inundation Visible on A	rial Imagei	y (B7)		Other	(Explain in Remar	rks)] Microtopog	graphic R	elief (D4)	
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)						v	FAC-Neutr	al Test ([D5)	
Field Observations:												
Surface Water Present?	☐ Yes	1	No E	Depth (incl	hes):							
Water Table Present?	☐ Yes			Depth (incl	•		Wetlan	nd Hvd	rology Prese	nt?		
Saturation Present?	☐ Yes	_		Depth (incl	•		Wetlan	ia riya	rology i resci		Yes □	No
(includes capillary fringe)		<u>.</u>	10 2	opui (iiioi	1100).							
Remarks (Describe Recorded	Data (stre	am gag	e, moni	toring wel	ll, aerial photos, pr	revious insp	pections), if a	availabl	e):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% Co	over	Domi	nant	Indicato	or Status
Acer rubrum Tsuga canadensis							60		YES YES			AC .CU
r suga cariautrisis					Т	otal Cover:	1		150	_	PA	.00



Number of Dominant Species That Are OBL FACW or FAC: 4 (A)	% Cov 10 30 ver: 40	ver Do	ominant YES YES YES YES YES YES YES YES Ominant YES YES	Indicator Status FAC FACU FACU FACU FACU FAC FAC Indicator Status FACU FAC
Scientific Name Abies balsamea Quercus rubra Fagus grandifolia Tsuga canadensis Betula alleghaniensis Total Co Herb Stratum Plot Size: 5 Scientific Name Rubus idaeus Parathelypteris noveboracensis Total Co Woody Vine Stratum Plot Size: 30 Scientific Name Total Co Dominance Test Worksheet: Number of Dominant Species That Are ORL FACW, or FAC: 4 (A)	10 10 10 10 30 % Cov 10 30 wer: 40	ver Do	YES YES YES YES YES YES YES YES Ominant YES YES	FAC FACU FACU FACU FAC Indicator Status FACU FAC
Abies balsamea Quercus rubra Fagus grandifolia Tsuga canadensis Betula alleghaniensis Total Co Herb Stratum Plot Size: 5 Scientific Name Rubus idaeus Parathelypteris noveboracensis Total Co Woody Vine Stratum Plot Size: 30 Scientific Name Total Co Dominance Test Worksheet: Number of Dominant Species Total Ye Total Ye	10 10 10 10 30 % Cov 10 30 wer: 40	ver Do	YES YES YES YES YES YES YES YES Ominant YES YES	FAC FACU FACU FACU FAC Indicator Status FACU FAC
Quercus rubra Fagus grandifolia Tsuga canadensis Betula alleghaniensis Total Co Herb Stratum Plot Size: 5 Scientific Name Rubus idaeus Parathelypteris noveboracensis Total Co Woody Vine Stratum Plot Size: 30 Scientific Name Total Co Dominance Test Worksheet: Number of Dominant Species That Are OBL FACW, or FAC: 4 (A)	10 10 10 30 % Cov 10 30 wer: 40	ver Do	YES YES YES YES YES Ominant YES YES	FACU FACU FAC FAC Indicator Status FACU FAC
Herb Stratum Plot Size: 5 Scientific Name Rubus idaeus Parathelypteris noveboracensis Total Co Woody Vine Stratum Plot Size: 30 Scientific Name Total Co Dominance Test Worksheet: Number of Dominant Species Total % Total %	/ver: 70	ver Do	ominant YES YES	Indicator Status FACU FAC
Herb Stratum Plot Size: 5 Scientific Name Rubus idaeus Parathelypteris noveboracensis Total Co Woody Vine Stratum Plot Size: 30 Scientific Name Total Co Dominance Test Worksheet: Number of Dominant Species Total % Total %	% Cov 10 30 ver: 40		YES YES	FACU FAC
Plot Size: 5 Scientific Name Rubus idaeus Parathelypteris noveboracensis Total Co Woody Vine Stratum Plot Size: 30 Scientific Name Total Co Dominance Test Worksheet: Number of Dominant Species That Are OBL FACW or FAC: 4 (A)	10 30 ver: 40		YES YES	FACU FAC
Scientific Name Rubus idaeus Parathelypteris noveboracensis Total Co Woody Vine Stratum Plot Size: 30 Scientific Name Total Co Dominance Test Worksheet: Number of Dominant Species That Are OBL FACW or FAC: 4 (A)	10 30 ver: 40		YES YES	FACU FAC
Rubus idaeus Parathelypteris noveboracensis Total Co Woody Vine Stratum Plot Size: 30 Scientific Name Total Co Dominance Test Worksheet: Number of Dominant Species That Are OBL FACW or FAC: 4 (A)	10 30 ver: 40		YES YES	FACU FAC
Parathelypteris noveboracensis Total Co Woody Vine Stratum Plot Size: 30 Scientific Name Total Co Dominance Test Worksheet: Number of Dominant Species That Are ORL FACW or FAC: 4 (A)	30 ver: 40 % Cov		YES	FAC
Total Co Woody Vine Stratum Plot Size: 30 Scientific Name Total Co Dominance Test Worksheet: Prevale Number of Dominant Species That Are ORL FACW or FAC: 4 (A)	wer: 40 % Cov	'	'	
Plot Size: 30 Scientific Name Total Cc Dominance Test Worksheet: Prevale Number of Dominant Species That Are OBL FACW or FAC: 4 (A)		ver Do	ominant	
Plot Size: 30 Scientific Name Total Cc Dominance Test Worksheet: Prevale Number of Dominant Species That Are OBL FACW or FAC: 4 (A)		ver Do	ominant	
Scientific Name Total Cc Dominance Test Worksheet: Prevale Number of Dominant Species That Are OBL FACW or FAC: 4 (A)		ver Do	ominant	
Dominance Test Worksheet: Number of Dominant Species That Are ORL FACW or FAC: 4 (A)				Indicator Status
Dominance Test Worksheet: Number of Dominant Species That Are OBL FACW or FAC: 4 (A)	/er:	1		
Dominance Test Worksheet: Number of Dominant Species That Are ORL FACW or FAC: 4 (A)		1	I	
Number of Dominant Species That Are ORL FACW or FAC: 4 (A)	nce Index Worksl	hoot:		
That Are OBL_FACW_or_FAC: 4 (A)		Multipl	v bv:	
OBL Sp		x 1 =	у Бу. <u>О</u>	
Total Number of Dominant FACW :		x 2 =	<u>u</u> 10	
Species Across All Strata: 9 (B) FAC Sp	•	x 3 =	<u>10</u> 390	
Percent of Dominant Species FACUS		x 4 =	280	
That Are OBL, FACW, or FAC: 44 (A/B) UPL Sp		x 5 =	<u>200</u>	
Column			<u>680 (B)</u>	
Column				
	Fievalence	Index = B/A =	3.32	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrog	hytic Vegetation	Present? [⊒ Yes ☑	No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
I				
Remarks:				



Providence, R	RI 02904										-		
SOIL													
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the ir	ndicator or	confirm t	he absen	ce of indicators.)				
Depth	Matrix		·		atures								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		Text	ure		Re	marks	
0-3	2.5Y 2.5/1	100						ORGA	INIC				
3-8	2.5Y 4/1	70	2.5Y 6/1 2.5Y 4/4	25 5	D C	M PL		LOA	M				
8-16	2.5Y 5/1	20	2.5Y 6/2 2.5Y 4/4	70 10	D C	M M		SANDY	LOAM				
¹Type: C=Cond	centration. D=De	epletion	l n, RM=Reduced	L	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	a. M=N	 latrix	
· ·	<u> </u>	•	o all LRR's, unle						Indicators for Pr				3-
Histosol (A Histic Epip Black Hist Hydrogen Stratified L Depleted I Thick Dark Sandy Mu Sandy Gle Sandy Re Stripped I Dark Surfa	A1) pedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surface (A12) icky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R eyedrophytic vege	ace (A1	P N	Polyvalu ILRA 1 Phin Da oamy I oamy I Deplete Redox I Redox I	ue Below (49B) rk Surface Mucky Mir Gleyed Matrix (Dark Surfa d Dark Surfa Depressio	Surface (S e (S9) (LRf neral (F1) (atrix (F2) F3) ace (F6) urface (F7) ns (F8)		ed or prob	2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark Sc Iron-Mangar Piedmont Fle Mesic Spodi Red Parent Very Shallov Other (Explain	A10) (LRR Redox (A Peat or Pe (S7) (LRF elow Surfac urface (S9) ese Masse codplain Se (TA6) (M Material (F Dark Surf in in Rema	K, L, M 16) (LR eat (S3) R K, L, M ce (S8) ((LRR K es (F12) bils (F15 LRA 14- 21) face (TF	LRA 14 R K, L, (LRR k (LRR k (, L) (LRR k (LRR k (L	49B) , R) <, L, R) <, L) K, L, R) RA 149B)
Remarks:													
·=		eristics,	Aquatic Diversity	or Ge	neral Con	nments:							
	CATED IN PFO												
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated \	Wetland?	☐ Yes 🗹	No 🗆	Unkr	iown	
General Comm	ello.												







WETLAND DETERMINATION FORM - North	ncentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line Other
Project/Site: NED Milepost: 157076.9 Count	y: Franklin Date: 07/20/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: AS-M-W015-UPL
Investigators: CM Quad Name: Ashfield Towns	ship: Ashfield
Logbook No.: 5M Logbook Pg.: 76 Tract: 358	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.535363	Long: -72.822689 Datum: NAD83
Soil Map Unit Name: Ashfield fine sandy loam, 3 to 8 percent slopes, very stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ N	O Are "Normal" Circumstances present? 🗹 Yes 🔲 No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ N	0
SUMMARY OF FINDINGS - Attach site map showing sampling po	int locations transects important features etc
Hydrophytic Vegetation Present? ☐ Yes ☑ No	int rodutoris, transcots, important roduitos, etc.
Hydric Soil Present? □ Yes ☑ No	Is the Sampled Area
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland?
Field Wetland Classification: UPLAND PLOT	
Remarks:	
Kenidiks.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
Saturation (A3) Marl Deposits (B15)	□ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along L	iving Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present? Yes V No Depth (inches):	☐ Yes ☑ No
(includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Betula alleghaniensis	15 NO FAC
Prunus serotina Acer rubrum	15 NO FACU 30 YES FAC
Tsuga canadensis Total Co	30 YES FACU
I Dial Co	voi. 30



Sapling/Shrub Stratum Plot Size: 15 Scientific Name Fagus grandifolia Fraxinus americana Quercus rubra Acer pensylvanicum Tsuga canadensis Total Cover: Herb Stratum Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1(A) Total Number of Dominant Species Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) FAC Species: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) FACU Species: Column Totals	ies: <u>0</u> ies: <u>0</u> s: <u>45</u> es: <u>145</u>	Dominant YES NO NO YES NO NO YES NO NO NO NO NO NO NO N	Indicator Status FACU FACU FACU FACU FACU FACU FACU FAC
Scientific Name Fagus grandifolia Fraxinus americana Quercus rubra Acer pensylvanicum Tsuga canadensis Total Cover: Herb Stratum Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1(A) Prevalence Ir Species Across All Strata: 6(B) FAC Species: That Are OBL, FACW, or FAC: 17 (A/B) FACU Species That Are OBL, FACW, or FAC: 17 (A/B) FACU Species: That Are OBL, FACW, or FAC: 17 (A/B)	20 10 10 25 15 80 % Cover 5 15 20 % Cover 5 15 20 lindex Worksheet er of: s: 0 ies: 0 s: 45 es: 145	Dominant YES NO Dominant YES YES Multiply by: x 1 = 0	FACU FACU FACU FACU FACU FACU FACU FACU
Fagus grandifolia Fraxinus americana Quercus rubra Acer pensylvanicum Tsuga canadensis Total Cover: Herb Stratum Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Dryopteria Cover: Total Cover: Prevalence In Total % Cover OBL Species: FACW Species: FACW Species: FACW Species: FACW Species: FACU Species: Total Number of Dominant Species That Are OBL, FACW, or FAC: Dryopteria Cover: Dryo	20 10 10 25 15 80 % Cover 5 15 20 % Cover 5 15 20 lindex Worksheet er of: s: 0 ies: 0 s: 45 es: 145	Dominant YES NO Dominant YES YES Multiply by: x 1 = 0	FACU FACU FACU FACU FACU FACU FACU FACU
Fraxinus americana Quercus rubra Acer pensylvanicum Tsuga canadensis Total Cover: Herb Stratum Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Ir FACW Species: FACW Species: FACW Species: Tratal Are OBL, FACW, or FAC: 17 (A/B) FACU Species: FACU Species: FACU Species: FACU Species:	10 10 25 15 80 % Cover 5 15 20 % Cover % Cover s: 0 ies: 0 ies: 0 s: 45 es: 145	Dominant YES YES Dominant Williply by: x 1 = 0	FACU FACU FACU FACU FACU FACU Indicator Status FACU FACU
Herb Stratum Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species: Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent OBL, FACW, or FAC:	% Cover 5 15 20 % Cover	Dominant Builtiply by: x 1 = 0	FACU FACU
Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species: Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Cover: Prevalence Ir Total Cover: Prevalence Ir Total % Cover Total % Co	5 15 20 % Cover % Cover lindex Worksheet er of: 5:	Dominant Builtiply by: x 1 = 0	FACU FACU
Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species: TACW Species: FACW Species: TACU Species:	5 15 20 % Cover % Cover lindex Worksheet er of: 5:	Dominant Builtiply by: x 1 = 0	FACU FACU
Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species: FACW Species: FACW Species: FACU Species: That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Cover:	5 15 20 % Cover % Cover lindex Worksheet er of: 5:	Dominant Builtiply by: x 1 = 0	FACU FACU
Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Prevalence Ir OBL Species: Total Number of Dominant Species Across All Strata: Paccy Species FACW Species FACW Species: That Are OBL, FACW, or FAC: 17 (A/B) FACU Species: UPL Species:	5 15 20 % Cover % Cover lindex Worksheet er of: 5:	Dominant Builtiply by: x 1 = 0	FACU FACU
Maianthemum canadense Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) Total Cover: Prevalence Ir Total % Cover OBL Species: FACW Species: FACW Species: FACW Species: FACU Species: UPL Species:	15 20 % Cover % Co	Dominant Builtiply by: x 1 = 0	FACU
Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) Prevalence Ir Total % Cover OBL Species: FACW Species: FACW Species: FACW Species: FACU Species: UPL Species:	% Cover 	:: Multiply by: x 1 = 0	Indicator Status
Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A) OBL Species: FACW Species FAC Species: FAC Species: That Are OBL, FACW, or FAC: 17 (A/B) UPL Species:	Index Worksheet er of: s: 0 ies: 0 s: 45 es: 145	:: Multiply by: x 1 = 0	Indicator Status
Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A) 6 (B) FACW Species: FACU Species: That Are OBL, FACW, or FAC: 17 (A/B) UPL Species:	Index Worksheet er of: s: 0 ies: 0 s: 45 es: 145	:: Multiply by: x 1 = 0	Indicator Status
Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A) OBL Species: FACW Species FACW Species FAC Species: That Are OBL, FACW, or FAC: 17 (A/B) UPL Species:	Index Worksheet er of: s: 0 ies: 0 s: 45 es: 145	:: Multiply by: x 1 = 0	Indicator Status
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) 1 (A) OBL Species: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) Prevalence Ir Total % Cover OBL Species: FACW Species: FACW Species: FACU Species: UPL Species:	er of: 5: 0 ies: 0 5: 45 es: 145	Multiply by: $x 1 = 0$	
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) Prevalence Ir Total % Cover OBL Species: FACW Species: FACW Species: FACU Species: UPL Species:	er of: 5: 0 ies: 0 5: 45 es: 145	Multiply by: $x 1 = 0$	
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) OBL Species: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A) 1 (A) FACW Species: FACU Species: FACU Species: UPL Species:	er of: 5: 0 ies: 0 5: 45 es: 145	Multiply by: $x 1 = 0$	
That Are OBL, FACW, or FAC: 1 (A) OBL Species: Total Number of Dominant Species Across All Strata: 6 (B) FACW Species: FAC Species: FACU Species: That Are OBL, FACW, or FAC: 17 (A/B) UPL Species:	ies: <u>0</u> ies: <u>0</u> s: <u>45</u> es: <u>145</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: OBL Species: FACW Species FAC Species: FACU Species: UPL Species:	ies: <u>0</u> s: <u>45</u> es: <u>145</u>	-	
Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) FAC Species: FACU Species: UPL Species:	s: <u>45</u> es: <u>145</u>	x 2 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) FAC Species: FACU Species: UPL Species:	es: <u>145</u>		
That Are OBL, FACW, or FAC: 17 (A/B) UPL Species:		x 3 = <u>135</u>	
UPL Species:		x 4 = <u>580</u>	
Column Totals	s: <u>0</u>	x 5 = <u>0</u>	
	als: <u>190 (A)</u>	<u>715 (B)</u>	
	Prevalence Inde	ex = B/A = <u>3.76</u>	
Hydrophytic Vegetation Indicators:		·	
1 - Rapid Test for Hydrophytic Vegetation			
2 - Dominance Test is > 50%			
	c Vegetation Pres	sent?	✓ No
data in Remarks or on a separate sheet)	o vegetation i res	sent: 🔲 Tes	<u>v</u> NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)			
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
1			
Remarks:			



Providence, R	1 02904										
SOIL											
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	r confirm th	e absen	ce of indicators.)		
Depth	Matrix				atures				•		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Textu	ıre	Rer	narks
0-2	, ,				71 -			ORGA	NIC		
0-2	10YR 2/1	100						UKGA	INIC		
2-4	10YR 3/2	100						SILT LO	MAC		
4-10	10YR 3/3	100						LOA	М		
10-18	10YR 3/3	50	10YR 4/4	50	С	М		SANDY I	OAM		
10 10	10111 0/0		1011(1) 1				· ·	07111011	207 1101		
		l	L			L					
¹Type: C=Cond	centration, D=De	epletior	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated G	Brains.	² Location: PL=	Pore Lining, M=M	atrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pr	roblematic Hydric	Soils³:
☐ Histosol (A	A1)			,		Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR K, L, ML	.RA 149B)
☐ Histic Epip	pedon (A2)		N	ILRA 1	149B)				☐ Coast Prairie	e Redox (A16) (LRF	≀ K, L, R)
☐ Black Hist	ic (A3)		Пт	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 1	149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
_	Sulfide (A4)		_				(LRR K, L)	,		e (S7) (LRR K, L, M	
	Layers (A5)		_	•	Gleyed Ma	, ,	(LIXIX IX, L)			elow Surface (S8) (´
_		(11	_	•	•	, ,			_ ′	, , ,	. ,
	Below Dark Surfa	ace (A	_	•	d Matrix (I	•			_	urface (S9) (LRR K,	,
_	k Surface (A12)		_		Dark Surfa	. ,			☐ Iron-Mangan	ese Masses (F12)	(LRR K, L, R)
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B)) (MLRA 149B)	
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)				c (TA6) (MLRA 144	A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F21)	
☐ Stripped N	Matrix (S6)								□ Very Shallov	v Dark Surface (TF	12)
☐ Dark Surfa	ace (S7) (LRR R	, MLR	A 149B)						Other (Expla	in in Remarks)	
3Indicators of h	ydrophytic vege	tation a	and wetland hydro	ology n	nust he nr	esent unle	ess disturbed	l or probl		•	
								or probl	iomatio.		
Restrictive Lay	er Present?	□ `	Yes ☑ No		Inknown						
								l	Hydric Soil Prese	ent? 🗌 Yes	☑ No
Remarks:							1				
5			A .: D: ::								
Description of I	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Com	nments:					
Wetland Qualit	y: 🔲 High		Moderate	Low			Isolated W	/etland?	☐ Yes ☐	No 🔲 Unkn	own
General Comm	onto:										
General Comm	ienis.										





S



WETLAND DETERMINATION FORM - Northce	ntral and Northeast Region							
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Ti	ransmission Line							
Project/Site: NED Milepost: 157329.0 County:	Franklin Date: 07/21/2015							
Applicant/Owner: Kinder Morgan State: N	MA Sampling Point: AS-M-W016-PFO							
Investigators: CM Quad Name: Ashfield Township:	Ashfield							
Logbook No.: 5M Logbook Pg.: 82 Tract: 358								
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave Convex None Slope%.:	3						
Subregion (LRR): Middle Atlantic Lat: 42.535502	Long: -72.821773 Datum: NAD	33						
Soil Map Unit Name: Ashfield fine sandy loam, 8 to 15 percent slopes, very stony	NWI Classification: Not map	ped						
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? 🔽 No	Are "Normal" Circumstances present? ✓ Yes	☐ No						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No								
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations, transects, important features,	etc.						
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area							
Hydric Soil Present?	within a Wetland? ✓ Yes ☐ No							
Wetland Hydrology Present? ✓ Yes ☐ No								
Field Wetland Classification: PFO								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:	Secondary Indicators (2 or more require	ed)						
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)							
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)							
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)								
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)							
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	<u> </u>							
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	long Living Roots (C3) Saturation Visible on Aerial imagery (C9							
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	on (C4) Stunted or Stressed Plants (D1)							
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	n Tilled Soils (C6) Geomorphic Position (D2)							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)							
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)								
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)							
Field Observations:								
Surface Water Present? ☐ Yes 🔽 No Depth (inches):								
Water Table Present? ☐ Yes ✓ No Depth (inches):	Wetland Hydrology Present?							
Saturation Present?	✓ Yes □	No						
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspired	ections), if available):							
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name	% Cover Dominant Indicator	Status						
Acer saccharum	15 NO FAC	U						
Acer rubrum Fraxinus pennsylvanica	15 NO FAI 30 YES FAC							
Betula lenta	30 YES FAC							
Total Cover:	90							



Providence, RI 02904			- 1	A_CON				
Sapling/Shrub Stratum								
lot Size: 15								
Scientific Name		% Cover	Dominant	Indicator Status				
Acer rubrum		10 5	YES	FAC				
Acer pensylvanicum Acer saccharum		5 10	NO YES	FACU FACU				
Acer spicatum		10	YES	FACU				
agus grandifolia	Tatal Causes	10	YES	FACU				
	Total Cover:	45						
lerb Stratum								
Plot Size: 5								
Scientific Name		% Cover	Dominant	Indicator Status				
Onoclea sensibilis		10 25	NO YES	FACW FAC				
Parathelypteris noveboracensis Osmunda claytoniana		30	YES	FAC				
Oryopteris intermedia		25	YES	FAC				
	Total Cover:	90						
/oody Vine Stratum								
lot Size: 30	1	ı	1	ı				
Scientific Name		% Cover	Dominant	Indicator Status				
	Total Cover:							
Oominance Test Worksheet:		lence Index Worksheet: % Cover of: Multiply by:						
lumber of Dominant Species hat Are OBL, FACW, or FAC: 5 (A)	Total % Cover	of:	Multiply by:					
	OBL Species:	<u>0</u>	x 1 = <u>0</u>					
otal Number of Dominant Species Across All Strata: 9 (B)	FACW Species	s: <u>40</u>	x 2 = <u>80</u>					
Species Across All Strata: 9 (B)	FAC Species:	<u>105</u>	x 3 = <u>315</u>					
Percent of Dominant Species	FACU Species	: <u>80</u>	x 4 = <u>320</u>					
That Are OBL, FACW, or FAC: 56 (A/B)	UPL Species:	<u>o</u>	x 5 = <u>0</u>					
	Column Totals:		715 (B)					
		Prevalence Index						
Judranhutia Vagatatian Indiaatara			. = B/A = <u>3.10</u>					
Hydrophytic Vegetation Indicators:								
1 - Rapid Test for Hydrophytic Vegetation								
2 - Dominance Test is > 50%								
3 - Prevalence Index is ≤ 3.0								
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	Vegetation Prese	ent? ☑ Yes [□ No				
data in Remarks or on a separate sheet)								
Problematic Hydrophytic Vegetation¹ (Explain)								
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.								
resent, unless disturbed of problematic.								
Remarks:								



Depth	Providence, F	KI 02904								
Color (moist) % Color (moist) % Type! Loc2 Texture Remarks O-6 2.5Y 4/1 95 10YR 5/6 5 C PL FINE SANDY LOAM 6-18 2.5Y 4/1 30 2.5Y 6/2 60 D M FINE SANDY LOAM Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. *Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)	SOIL									
Depth	Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	nce of indicators.)	
Color (moist)	-									
0-6			%				Loc2	Text	ture	Remarks
6-18	0.6	, ,		` ′				FINE CAN	DVLOAM	
10YR 5/6	0-6	2.5 ¥ 4/1	95	1018 5/6	5		PL	FINE SAN	DY LOAM	
10YR 5/6										
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. **Location: Pt=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	6-18	2.5Y 4/1	30					FINE SAN	DY LOAM	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)				10110 3/0	10		IVI			
Histosol (A1)	¹Type: C=Con	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	-Pore Lining, M=Matrix
Histic Epipedon (A2)	Hydric Soil Inc	dicators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils³:
Histic Epipedon (A2)	☐ Histosol (/	A1)		ПБ	Polyvali	ıe Below	Surface (S	88) (I RR R	☐ 2 cm Muck (A10) (LRR K. L. MLRA 149B)
Black Histic (A3)	<u> </u>	•					- Canado (C	(=:,		
Hydrogen Sulfide (A4)	=				hin Do	rk Curfoo	o (SO) (LB	D D MI DA 140D)	_	
□ Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Polyvalue Below Surface (S8) (LRR K, L) □ Depleted Below Dark Surface (A11) ☑ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes □ No □ Unknown □ Unknown □ Hydric Soil Present? □ Yes □ No □ Depleted Matrix (F3) □ Unknown □ Yes □ No □ Unknown								•		
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Moderate □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Piedmont				_	-	-		(LRR K, L)		
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Piedmont Floodplain Soils (F19) (MLRA 149B) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☐ Sandy Redox (S5) ☐ Red Parent Material (F21) ☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12) ☐ Dark Surface (S7) (LRR R, MLRA 149B) ☐ Other (Explain in Remarks) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? ☐ Yes ☑ No ☐ Unknown Hydric Soil Present? ☑ Yes ☐ No Wetland Quality: ☐ High ☐ Moderate ☑ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown				_	-	-			_	
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes ☑ No □ Unknown □ Hydric Soil Present? ☑ Yes □ No □ No □ Velland Quality: □ High □ Moderate ☑ Low □ Isolated Wetland? □ Yes ☑ No □ Unknown □ Unknown □ Velland Quality: □ High □ Moderate ☑ Low □ Isolated Wetland? □ Yes ☑ No □ Unknown □ Velland Quality: □ High □ Moderate ☑ Low □ Isolated Wetland? □ Yes ☑ No □ Unknown			ace (A1	11) 🗹 🖸	Deplete	d Matrix (F3)		☐ Thin Dark St	urface (S9) (LRR K, L)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? Yes ✓ No Unknown Hydric Soil Present? Yes ✓ No No Unknown Isolated Wetland? Yes ✓ No Unknown	☐ Thick Dar	k Surface (A12)		□ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	ese Masses (F12) (LRR K, L, R)
Sandy Redox (S5)	☐ Sandy Mu	ucky Mineral (S1))		Deplete	d Dark Su	urface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
Stripped Matrix (S6)	☐ Sandy Gl	eyed Matrix (S4)		☐ F	Redox I	Depressio	ons (F8)			c (TA6) (MLRA 144A, 145, 149B)
Dark Surface (S7) (LRR R, MLRA 149B)	☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?	☐ Stripped I	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
Restrictive Layer Present?	☐ Dark Surf	ace (S7) (LRR R	, MLR	A 149B)					Other (Expla	iin in Remarks)
Restrictive Layer Present?				•	ology n	nuet ha nr	econt unl	ace disturbed or prob		,
Wetland Quality: ☐ High ☐ Moderate ☑ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown	Remarks:									
	Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Con	nments:			
General Comments:	Wetland Qualit	ty: High	_ r	Moderate ✓	Low			Isolated Wetland?	? ☐ Yes ☑	No Unknown
	General Comm	ents:								





SW



WE	TLAND	DETER	RMINATIO	ON FORM - I	Northc	entral an	d Northeast I	Region		
☑ Centerline ☐ Re-Ro	oute	Access F	Road 🔲	Ancillary Facility		Transmission	Line Other	r		
Project/Site: NED			Milepost:	157670.7	County:	Frankl	lin	Date:	07/21/201	5
Applicant/Owner: Kinder Mo	rgan				State:	MA	Sampling Point:	AS-M-W0	16-UPL	
Investigators: CM	Q	Quad Name	e: Ashfield		Township	p: Ashfie	ld			
Logbook No.: 5M	Logbo	ook Pg.: 8	34	Tract: 358						
Landform (hillslope, terrace, e	etc.):	Slope - mi	d	Local Re	elief:	Concave	☑ Convex [None	Slope%.:	7
Subregion (LRR): Middle	e Atlantic		Lat:	42.535572		Long:	-72.820422		Datum: NAI)83
Soil Map Unit Name: Ash	nfield fine sa	andy loam,	8 to 15 perce	ent slopes, very sto	ony		NWI Clas	sification:	Not ma	pped
Are climatic / hydrologic cond	litions on the	e site typica	al for this time	e of year?:	1 Yes	☐ No (If no	o, explain in Remar	ks.)		
Are Vegetation	or Hyd	drology [significar	ntly disturbed?	√ No	Are "Norma	al" Circumstances p	resent?	☑ Yes	☐ No
Are Vegetation Soil	or Hyd	drology [naturally	problematic?	☑ No					
SUMMARY OF FINDIN	NGS - Att	tach site	map sho	wing samplir	ng point	locations	s, transects, in	nportant	features	, etc.
Hydrophytic Vegetation Prese	ent?	□ Yee	es 🗹 No	1						
Hydric Soil Present?		□ Ye	es 🗹 No			Is the San within a V	npled Area	Yes ✓	No	
Wetland Hydrology Present?		☐ Ye	es 🗹 No	ı						
Field Wetland Classification:	UPLA	ND PLOT								
Remarks:										
HYDROLOGY										
Wetland Hydrology Indicato	ors:						Secondary Inc	dicators (2	or more requ	ired)
Primary Indicators (minimum	of one requ	uired; checl	k all that appl	y)			☐ Surface S	Soil Cracks	(B6)	
☐ Surface Water (A1)			□ Water	-Stained Leaves (I	B9)		□ Drainage	Patterns (I	B10)	
☐ High Water Table (A2)			☐ Aquat	ic Fauna (B13)				m Lines (B1	16)	
☐ Saturation (A3)			☐ Marl □	Deposits (B15)			☐ Dry-Seas	on Water T	Table (C2)	
□ Water Marks (B1)			☐ Hydro	gen Sulfide Odor ((C1)	Crayfish Burrows (C8)				
☐ Sediment Deposits (B2)			Oxidiz	ed Rhizospheres	along Livin	ving Roots (C3) Saturation Visible on Aerial imagery (C9)				
☐ Drift Deposits (B3)			☐ Prese	nce of Reduced Iro	on (C4)	☐ Stunted or Stressed Plants (D1)				
☐ Algal Mat or Crust (B4)			Recer	nt Iron Reduction in	n Tilled So	oils (C6) Geomorphic Position (D2)				
☐ Iron Deposits (B5)			☐ Thin N	Muck Surface (C7)		☐ Shallow Aquitard (D3)				
☐ Inundation Visible on Ae	rial Imagery	y (B7)	☐ Other	(Explain in Remar	ks)	☐ Microtopographic Relief (D4)				
☐ Sparsely Vegetated Con	cave Surfac	ce (B8)					☐ FAC-Neu	ıtral Test (D	05)	
Field Observations:										
Surface Water Present?	☐ Yes	☑ No	Depth (incl	hes):						
Water Table Present?	☐ Yes	☑ No	Depth (incl	hes):		Wetlan	nd Hydrology Pres			
Saturation Present? (includes capillary fringe)	☐ Yes	☑ No	Depth (incl	hes):				Ц	Yes ☑	No
Remarks (Describe Recorded	Data (strea	ım gage, m	nonitoring wel	ll, aerial photos, pr	evious ins	pections), if a	available):			



Providence, RI 02904				- 4	ALCOM!
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name			% Cover	Dominant	Indicator Status
Fraxinus pennsylvanica			20	YES	FACW
Betula lenta Acer rubrum			15 10	YES NO	FACU FAC
Tsuga canadensis Fraxinus americana			15 20	YES YES	FACU FACU
Traxinas americana		Total Cover:	80	120	17100
Sapling/Shrub Stratum					
Plot Size: 15					
Scientific Name			% Cover	Dominant	Indicator Status
Tsuga canadensis			10	NO	FACU
Fraxinus americana Acer saccharum			10 20	NO YES	FACU FACU
Kalmia latifolia			25	YES	FACU
Acer spicatum Prunus serotina			20 10	YES NO	FACU FACU
		Total Cover:	95	1	
Herb Stratum					
Plot Size: 5					
Scientific Name			% Cover	Dominant	Indicator Status
Osmunda regalis			10	NO	OBL
Polystichum acrostichoides			5	NO	FACU
Dryopteris intermedia Phegopteris hexagonoptera			25 10	YES NO	FAC FACU
Phegopteris connectilis			25	YES	FACU
		Total Cover:	75		
Woody Vine Stratum					
Plot Size: 30					1
Scientific Name			% Cover	Dominant	Indicator Status
Rubus idaeus			10	YES	FACU
		Total Cover:	10		
Dominance Test Worksheet:		Prevalence Inc	dex Worksheet:		
Number of Dominant Species	<u>2 (A)</u>	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC:	= v v	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant Species Across All Strata:	<u>10 (B)</u>	FACW Species	: <u>20</u>	x 2 = <u>40</u>	
Species Across All Strata.	··· ()	FAC Species:	<u>35</u>	x 3 = <u>105</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC:	20 (A/B)	FACU Species:	<u>195</u>	x 4 = <u>780</u>	
That Are OBE, I AGW, OF I AG.	<u>== (, , , , , , , , , , , , , , , , , , </u>	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
		Column Totals:	260 (A)	935 (B)	
		-	Prevalence Index	= B/A = <u>3.60</u>	
Hydrophytic Vegetation Indicators:					
1 - Rapid Test for Hydrophytic Vege	etation				
2 - Dominance Test is > 50%					
☐ 3 - Prevalence Index is ≤ 3.0					
4 - Morphological Adaptations¹ (Pro	wide supporting	Hydrophytic \	egetation Prese	nt? ☐ Yes ⊡	 No
data in Remarks or on a separate s		nyuropnyuc v	regetation Frese	ini: 🔲 Tes M	J NO
Problematic Hydrophytic Vegetation	n¹ (Explain)				
¹ Indicators of hydric soil and wetland hydric present, unless disturbed or problematic					
Pemarks:					
Remarks:					



T TOVIGETICE, T	(1 0200+										3 1 2 3 3 3 3 3 3	
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the in	dicator o	r confirm the	e absen	ce of indicators.)			
Depth	Matrix		Re	dox Fe	atures							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Textu	ire		Remarks	
0-8	` ′	100	, ,		71		EINI	E CAND	Y LOAM			
0-8	2.5Y 3/3	100					FIINI	E SAND	Y LOAW			
8-12	10YR 3/3	100					FINI	E SAND	Y LOAM			
12-18	2.5Y 4/4	100					FINE SANDY LOAM					
18-20	2.5Y 4/1	30	2.5Y 6/1	70	D	М	S	SANDY I	_OAM			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated G	rains.	² Location: PL=	Pore Linin	ng, M=Matrix	
Hydric Soil Inc	licators: (Annli	cable t	o all LRR's, unle	es oth	nerwise n	oted)			Indicators for Pr	ohlematic	Hydric Soils ³ :	
		cabic t	·			•	a) // DD D				•	
Histosol (41)			olyvalı 1LRA 1		Surface (S	8) (LRR R,		_		R K, L, MLRA 149B)	
☐ Histic Epi	pedon (A2)				,				☐ Coast Prairie	Redox (A	116) (LRR K, L, R)	
■ Black Hist	tic (A3)		□ т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 14	49B)	☐ 5 cm Mucky	Peat or Pe	eat (S3) (LRR K, L, R)	
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1) ((LRR K, L)		☐ Dark Surface	(S7) (LRI	R K, L, M)	
	Layers (A5)		_	•	Gleyed Ma	, ,					ce (S8) (LRR K, L)	
	Below Dark Surfa	aco (A1	_	•	•	` ,						
		ace (A i	· –	•	d Matrix (I	•			Thin Dark Su	, ,		
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R)												
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B)												
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)												
☐ Sandy Re	edox (S5)								☐ Red Parent I	Material (F	21)	
☐ Stripped I	Matrix (S6)								☐ Very Shallov		•	
	. ,) 110D)									
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	arks)	
³ Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed	or probl	ematic.			
Restrictive Lay	er Present?		res √ No	ΠU	nknown							
		_	_						Hydric Soil Prese	nt?	Yes ☑ No	
									Tyuric John Frese	ш. Ц	162 N 140	
Remarks:												
Description of	Habitat Characte	rictics	Aquatic Diversity	or Go	noral Com	monte:						
Description of	Habitat Characte	nsucs,	Aquatic Diversity	oi Ge	nerai Con	iiiieiiis.						
Wetland Qualit	ty: 🔲 High		Moderate	Low			Isolated We	etland?	☐ Yes ☐	No 🗆	Unknown	
0												
General Comm	ients:											







WETLAND DETERMINATION FORM - Nor	rthcentral and Northeast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other	
Project/Site: NED Milepost: 158171.4 Cou	ounty: Franklin Date: 07/21/2015	
Applicant/Owner: Kinder Morgan Star	ate: MA Sampling Point: AS-M-W017-PSS	
Investigators: CM Quad Name: Ashfield Tow	wnship: Ashfield	
Logbook No.: 5M Logbook Pg.: 90 Tract: 358		
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	: 🗹 Concave 🗌 Convex 🔲 None Slope%.:	
Subregion (LRR): Middle Atlantic Lat: 42.535654	Long: -72.818632 Datum: NAD83	
Soil Map Unit Name: Millsite-Westminster complex, 15 to 25 percent slopes, rocky	NWI Classification: Not mapped	
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes ☐ No (If no, explain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☐	No Are "Normal" Circumstances present?	No
	No	
The vegetation on or rivation of naturally problematic:	NO .	
SUMMARY OF FINDINGS - Attach site map showing sampling p	point locations, transects, important features, etc	
Hydrophytic Vegetation Present? ☑ Yes ☐ No		
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area	
Wetland Hydrology Present? ☑ Yes ☐ No	Within a Wetana:	
Field Wetland Classification: PSS		
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)	
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	g Living Roots (C3) Saturation Visible on Aerial imagery (C	29)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	C4) Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	led Soils (C6) Geomorphic Position (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)	
Field Observations:		
Surface Water Present?		
Water Table Present? ☑ Yes ☐ No Depth (inches): 2	Wetland Hydrology Present?	
Saturation Present?	☑ Yes ☐ No	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	us inspections), if available):	
VEGETATION		
Tree Stratum		
Plot Size: 30		
Scientific Name	% Cover Dominant Indicator Sta	tus
Betula lenta Betula alleghaniensis	10 YES FACU 10 YES FAC	
Total (Cover: 20	



	% Cover	Dominant	Indicator Status
	10	NO NO	FACW FAC
	5 50	YES	FACW
	15 15	NO NO	FACW FACW
Total Cover:		110	17.00
Total Gover.			
ı		1	1
			Indicator Status
			FACW FAC
	10	NO	OBL FAC
Total Cover:		TES	FAC
Total Cover.	70		
1	0/ Cayer	Dominant	Indicator Status
	% Cover	Dominant	Indicator Status
Total Cayer			
OBL Species:	<u>10</u>	x 1 = <u>10</u>	
FACW Species	: <u>100</u>	x 2 = <u>200</u>	
FAC Species:	<u>65</u>	x 3 = <u>195</u>	
FACU Species:	<u>10</u>	x 4 = 40	
UPL Species:	<u>0</u>	x 5 = <u>0</u>	
Column Totals:	<u>185 (A)</u>	<u>445 (B)</u>	
F	Prevalence Index	= B/A = 2.41	
Hydronbytic V	legetation Prese	nt? ⊡ Vos F] No
riyaropiiyiic v	egetation Frese	iit: 🔽 162 L	_ NO
	Total % Cover of OBL Species: FACW Species: FAC Species: FACU Species: UPL Species: Column Totals:	10 5 50 15 15 15 15 15	10



Providence, R	1 02904												
SOIL													
Profile Descrip	tion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	r confirm tl	he absen	ce of indicators.)				
Depth	Matrix		Red	dox Fe	atures								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Textu	ıre		Rer	marks	
0-3	2.5Y 2.5/1	100						ORGA	NIC				
3-6	2.5Y 4/1	95	10YR 4/6	5	С	PL	FI						
6-14	2.5Y 4/1	30	2.5Y 6/1 10YR 4/6	60 10	D C	M M	SANDY LOAM						
¹Type: C=Cond	entration D=De	epletion	, RM=Reduced	Matrix	CS=Cov	ered Sand	or Coated	Grains	² Location: PL=	Pore Lining	m=M		
							- Coulou	Oramo.					
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Redox Depressions (F8) Hydric Soil Present? Polyvalue Below Surface (Hydric Soils*: a mucky (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Dark Surface (S7) (LRR K, L, M) Dark Surface (S7) (LRR K, L, M) Depleted Matrix (F2) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Redox Depressions (F8) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? Yes No Unknown									9B) R) , L, R) , L) (, L, R) A 149B) , 149B)				
Remarks:													
Description of H	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:							
Wetland Quality	y: High		Moderate ☑	Low			Isolated \	Wetland?	☐ Yes ☐	No 🗖	Unkn	own	
General Comm	ents:												





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WETLAND DETERMINATION FORM - Northcentral and Northeast Region									
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Tran	nsmission Line								
Project/Site: NED Milepost: 158052.7 County:	Franklin Date: 07/21/2015								
Applicant/Owner: Kinder Morgan State: MA	Sampling Point: AS-M-W017-UPL								
Investigators: CM Quad Name: Ashfield Township:	Ashfield								
Logbook No.: 5M Logbook Pg.: 91 Tract: 358	_								
Landform (hillslope, terrace, etc.): Slope - mid Local Relief: 🗹 C	Concave Convex None Slope%.: 1								
Subregion (LRR): Middle Atlantic Lat: 42.535695 L	Long: -72.819090 Datum: NAD83								
Soil Map Unit Name: Millsite-Westminster complex, 15 to 25 percent slopes, rocky	NWI Classification: Not mapped								
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)								
Are Vegetation ☑ Soil ☑ or Hydrology ☑ significantly disturbed? ☐ No Ar	re "Normal" Circumstances present?								
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No									
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present? ☐ Yes ☑ No									
Hydric Soil Brosont?	the Sampled Area ✓ Yes □ No								
Wetland Hydrology Present? ☐ Yes ☑ No	ithin a Wetland?								
Field Wetland Classification: UPLAND PLOT									
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)								
Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6)									
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	Drainage Patterns (B10)								
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)									
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)								
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)								
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living Ro	ring Roots (C3) Saturation Visible on Aerial imagery (C9)								
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)								
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C	Soils (C6) Geomorphic Position (D2)								
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)								
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)									
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)								
Field Observations:									
Surface Water Present? ☐ Yes 🔽 No Depth (inches):									
Water Table Present?	Wetland Hydrology Present?								
Saturation Present?	☐ Yes ☑ No								
(includes capillary fringe)									
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspecti	tions), if available):								
VEGETATION									
Tree Stratum									
Plot Size: 30									
Scientific Name	% Cover Dominant Indicator Status								
Acer rubrum	20 YES FAC								
Betula papyrifera	20 YES FACU								
Total Cover:	40								



T TOVIGETICE, THE 02304							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Fagus grandifolia		20	YES	FACU			
Betula alleghaniensis Fraxinus americana		10 20	NO YES	FAC FACU			
Acer saccharum		15	YES	FACU			
	Total Cover:	65					
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
		25	YES	FACU			
Phegopteris connectilis		20	YES	FACU			
	Total Cover:	45					
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:					
Number of Dominant Species	Total % Cover	of:	Multiply by:				
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant	FACW Species	s: <u>0</u>	x 2 = <u>0</u>				
Species Across All Strata: 7 (B)	FAC Species:	<u>30</u>	x 3 = <u>90</u>				
Percent of Dominant Species	FACU Species:		x 4 = 480				
That Are OBL, FACW, or FAC: 14 (A/B)	UPL Species:	<u>o</u>	x 5 = <u>0</u>				
	Column Totals:		<u> </u>				
		Prevalence Index =					
Lindan butin Vanatatina balinatan	'	Trevalence index -	- <u>5.00</u>				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
2 - Dominance Test is > 50%							
3 - Prevalence Index is ≤ 3.0							
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	Hydrophytic Vegetation Present? 🔲 Yes 🗹 No					
data in Normania of on a separate sheety							
Problematic Hydrophytic Vegetation¹ (Explain)							
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
present, unless disturbed of problematic.							
Remarks:							



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SOIL									
•		the d				dicator o	r confirm the abs	ence of indicators.)	1
Depth (inches)	Matrix		Redox Features			То		exture	Remarks
(11101103)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			remand
0-4	10YR 4/3	100					FINE SA	NDY LOAM	
4-10	2.5Y 4/3	100					FINE SA	NDY LOAM	
10-20	2.5Y 4/3	30	5Y 4/4	70			SANDY LOAM		
¹Type: C=Cond	entration D=De	 - nletion	RM=Reduced I	Matrix	CS=Cov	ered Sand	or Coated Grains	²l ocation: Pl =	 =Pore Lining, M=Matrix
		<u> </u>	o all LRR's, unle				Tor Coatoa Graine		roblematic Hydric Soils³:
		cable t					0) (1 DD D		•
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) D 0 18 11 R 1 (A10) (LRR K, L, MLRA 14									
Histic Epipedon (A2) Coast Prairie Redox (A16) (LRR K, L,									
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L,									, , , , , , , , , , , , , , , , , , , ,
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (LRR K, L) ☐ Dark Surface (S7) (LRR K, L, M)									
☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2) ☐ Polyvalue Below Surface (S8) (LRR K, L									elow Surface (S8) (LRR K, L)
☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thin Dark Surface (S9) (LRR K, L)									urface (S9) (LRR K, L)
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L,									nese Masses (F12) (LRR K, L, R)
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149)									
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B									
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pr	oblematic.	
Restrictive Lay	er Present?		Yes √ No	Пυ	Inknown				
		_		_ ~				Hydric Soil Prese	ent? ☐ Yes ☑ No
								riyane con ricse	162 M
Domorko									
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: 🔲 High		Moderate	Low			Isolated Wetlan	d? ☑ Yes 🗖	No Unknown
General Comm	ente:								
General Comm	erits.								





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WE	TLAND) DET	ERN	IINATI	ON F	ORM - I	Northc	entral a	nd No	ortheas	t Region	<u> </u>	
☑ Centerline ☐ Re-R	oute	Acce	ss Roa	ıd 🔲	Ancilla	ry Facility		Transmissio	on Line	☐ Oth	ner		
Project/Site: NED			I	Milepost:	16649	95.8	County:	Fran	klin		Date:	07/22/201	15
Applicant/Owner: Kinder Mo	rgan						State:	MA	Sam	pling Poin	t: AS-M-W	018-PFO	
Investigators: CM		Quad N	ame: .	Ashfield			Townshi	p: Ashf	ield				
Logbook No.: 5M	LogI	ook Pg	.: 96		Trac	t: 11973							
Landform (hillslope, terrace,	etc.):	Depres	ssion	'		Local R	elief:	Concav	e 🔲	Convex	None	Slope%.:	2
Subregion (LRR): Middl	e Atlantic			Lat	: 42.53	38766		Long:	-72.78	38214		Datum: NA	D83
Soil Map Unit Name: Co	Irain-Millsit	e compl	ex, 15	to 25 per	cent slop	pes, rocky				NWI CI	assification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	ne site ty	pical f	or this tim	e of yea	ar?: ▽] Yes	☐ No (If	no, exp	lain in Rem	arks.)		
Are Vegetation Soil	or H	ydrology	/ 	significa	ntly dist	urbed?	√ No	Are "Nor	mal" Cir	cumstance	s present?	√ Yes	□ No
Are Vegetation Soil	or H	ydrology	∕ □	naturally	probler	matic?	√ No						
SUMMARY OF FINDII	NGS - At	tach s	site n	nan she	owina	samplir	na point	location	ns. tra	nsects.	importan	t features	s etc.
Hydrophytic Vegetation Pres		V	Yes	□ No			.9 0		,				
Hydric Soil Present?													
Wetland Hydrology Present?		<u>.</u> ✓	Yes					within a	Wetla	nd?	00 _		
Field Wetland Classification:	PFO												
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicate	ors:									Secondary	Indicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one req	uired; c	heck a	ll that app	oly)					☐ Surfac	e Soil Cracks	s (B6)	
☐ Surface Water (A1)				☐ Wate	r-Staine	d Leaves (I	B9)						
✓ High Water Table (A2)				☐ Aqua	tic Faun	a (B13)	Moss Trim Lines (B16)						
✓ Saturation (A3)				Marl	Deposits	s (B15)		Dry-Season Water Table (C2)					
□ Water Marks (B1)				☐ Hydro	ogen Su	lfide Odor (Cotypotion Visible on April imagent (CO)						
☐ Sediment Deposits (B2)				Oxidi	zed Rhiz	zospheres	along Livir	ong Living Roots (C3) Saturation Visible on Aerial imagery (C9)					
☐ Drift Deposits (B3)			5	✓ Prese	ence of I	Reduced Iro	on (C4)	<u> </u>					
☐ Algal Mat or Crust (B4)				Rece	nt Iron F	Reduction in	n Tilled So	lled Soils (C6) Geomorphic Position (D2)					
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)							Shallow Aquitard (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark						ks)	Microtopographic Relief (D4)						
☐ Sparsely Vegetated Con	ncave Surfa	ace (B8)	١							▼ FAC-N	eutral Test (D5)	
Field Observations:													
Surface Water Present?	☐ Yes	√ 1	l ok	Depth (inc	ches):								
Water Table Present?	✓ Yes		l ok	Depth (inc	ches):	0		Wetl	and Hy	drology Pr	esent?		
Saturation Present? (includes capillary fringe)	☑ Yes	1	No [Depth (inc	ches):	0					✓	Yes □	No
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring we	ell, aeria	l photos, pr	evious ins	pections), it	availab	ole):			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name								%	Cover	D	ominant	Indicat	or Status
Betula alleghaniensis Acer rubrum									70 10		YES NO	F	AC AC
Tsuga canadensis						т	otal Cove	1	10 90	I	NO	FA	ACU
						'	otal COVE	١.	90				



Sapling/Shrub Stratum Plot Size: 15 Scientific Name				
Scientific Name				
		% Cover	Dominant	Indicator Status
Abies balsamea Betula alleghaniensis Fraxinus pennsylvanica Hamamelis virginiana Acer rubrum		20 40 10 15 10	YES YES NO NO NO	FAC FAC FACW FACU FAC
	Total Cover:	95	ı	I
Herb Stratum				
Plot Size: 5				
	1	% Cover	Dominant	Indicator Status
Scientific Name Toxicodendron radicans		% Cover 5	Dominant NO	Indicator Status FAC
Impatiens capensis		35	YES	FACW
	Total Cover:	40		
Noody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>45</u>	x 2 = <u>90</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>155</u>	x 3 = <u>465</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>25</u>	x 4 = <u>100</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	225 (A)	<u>655 (B)</u>	
	F	Prevalence Index	= B/A = <u>2.91</u>	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Prese	nt? ☑ Yes [] No
Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, I									
SOIL									
Profile Descrip	•	the d				dicator o	r confirm the abse	nce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		Toy	ture	Remarks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Tex	uure	Remarks
0-3	10YR 2/1	100					ORG	ANIC	
3-6	10YR 2/2	50	10YR 4/1	50	D	М	FINE SAN	IDY LOAM	
6-15	10YR 5/3	30	10YR 6/1	60	D	М	FINE SAN	IDY LOAM	
			10YR 4/6	10	С	М			
¹Type: C=Cond	entration D=De	 - nletion	RM=Reduced	Matrix	CS=Cov	ered Sand	or Coated Grains.	2l ocation: Pl =	 =Pore Lining, M=Matrix
		•	to all LRR's, unle				or coated Grains.		roblematic Hydric Soils³:
		cable t				-	0) (1 DD D		•
Histosol (A	•			olyvalı 1LRA 1		Surface (S	8) (LRR R,		(A10) (LRR K, L, MLRA 149B)
	pedon (A2)								e Redox (A16) (LRR K, L, R)
☐ Black Hist			_				R R, MLRA 149B)	_ `	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			•	•	` '	(LRR K, L)	_	e (S7) (LRR K, L, M)
_	_ayers (A5)			-	Gleyed Ma				elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1	I1) 🗹 🗅	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		□ R	edox [Dark Surfa	ice (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	icky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	ledox I	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped M	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prol	blematic.	
Restrictive Lay	er Present?		Yes √ No	Пυ	nknown				
•		_	_					Hydric Soil Prese	ent? ☑ Yes ☐ No
								,	163 . 160
Remarks:									
Remarks.									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High	☑ I	Moderate	Low			Isolated Wetland	?	No 🗹 Unknown
General Comm	ents:								





NE



WETLAND DETERMINATION FORM - North	central	and No	rtheast Re	gion		
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmiss	sion Line	☐ Other			
Project/Site: NED Milepost: 166430.2 County	/: Fra	anklin		Date:	07/22/2015	
Applicant/Owner: Kinder Morgan State:	MA	Samp	ling Point: AS	S-M-W018	B-UPL	
Investigators: CM Quad Name: Ashfield Towns	hip: As	hfield				
Logbook No.: 5M Logbook Pg.: 97 Tract: 11973						
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Conca	ve 🗹 (Convex	None S	lope%.:	6
Subregion (LRR): Middle Atlantic Lat: 42.538702	Long:	-72.788	3452	D	atum: NAD8	33
Soil Map Unit Name: Colrain-Millsite complex, 15 to 25 percent slopes, rocky			NWI Classific	cation:	Not map	ped
Are climatic / hydrologic conditions on the site typical for this time of year?: $ \qquad \qquad \boxed{ \ \ } $	□ No ((If no, expla	ain in Remarks.)			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "No	ormal" Circ	umstances pres	ent?	✓ Yes	☐ No
Are Vegetation \square Soil \square or Hydrology \square naturally problematic? $ ewline olimits$ No)					
SUMMARY OF FINDINGS - Attach site map showing sampling poi	nt locatio	ons. trar	sects. impo	ortant f	eatures.	etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No		,				
Hydric Soil Present? ☐ Yes ☑ No		Sampled		es ☑	No	
Wetland Hydrology Present? ☐ Yes ☑ No	within	a Wetlan	d? □ '`	C3 <u>F</u>	110	
Field Wetland Classification: UPLAND PLOT						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:		<u>S</u>	econdary Indica	tors (2 or	more requir	ed)
Primary Indicators (minimum of one required; check all that apply)			Surface Soil	Cracks (E	36)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)			Drainage Par	tterns (B1	0)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Li	ines (B16)	
☐ Saturation (A3) ☐ Marl Deposits (B15)			Dry-Season	Water Tal	ble (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			Crayfish Burn	rows (C8)		
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Li	ving Roots (C3)	Saturation Vi	isible on A	Aerial image	ry (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)			Stunted or St	tressed P	lants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	Soils (C6)] Geomorphic	Position (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)] Shallow Aqui	itard (D3)		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)] Microtopogra	aphic Reli	ef (D4)	
☐ Sparsely Vegetated Concave Surface (B8)			FAC-Neutral	Test (D5))	
Field Observations:						
Surface Water Present?						
Water Table Present?	We	tland Hydi	rology Present	2		
Saturation Present?		tialia riyal	ology i resem		Yes ☑	No
(includes capillary fringe)						
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous i	nspections),	if available	e):			
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name	%	6 Cover	Domina	ınt	Indicator	Status
Tsuga canadensis		15	NO		FAC	
Acer rubrum Acer saccharum		15 30	NO YES		FAC FAC	0
Betula lenta		30	YES		FAC	
Total Cov	/er:	90				



1 Tovidence, IXI 02004				1. 10 1. 20 1. 20 1. 20 1.
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fagus grandifolia Tsuga canadensis		5 5	YES YES	FACU FACU
roaga dariadoridio	Total Cover:	10	120	17.00
11.10				
Herb Stratum				
Plot Size: 5	ı	24.2	1	l
Scientific Name		% Cover	Dominant	Indicator Status
Polystichum acrostichoides	Total Cover:	15 15	YES	FACU
Manada Vina Otrataura	Total Cover.	15		
Woody Vine Stratum Plot Size: 30				
	I	0/ 0	1 5	
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>15</u>	x 3 = <u>45</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>100</u>	x 4 = <u>400</u>	
Hat Ale OBL, I AGW, OF I AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>115 (A)</u>	<u>445 (B)</u>	
	ı	Prevalence Index	= B/A = 3.87	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? 🔲 Yes 🔽	7 No
data in Remarks or on a separate sheet)				-
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



Providence, R	RI 02904										
SOIL											
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm t	he absen	ce of indicators.)		
Depth	Matrix		Re	dox Fe	atures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		Text	ure	Re	emarks
0-3	7.5YR 3/2	100						ORGA	INIC		
3-6	7.5YR 2.5/3	100						SILT L	OAM		
6-10	7.5YR 4/4	90	7.5YR 3/2	10	С	M		LOA	M		
10-12	7.5YR 4/2	100					COA	ARSE SAI	NDY LOAM	12" restric	tive rock layer
		L				L					
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	l or Coated	Grains.	² Location: PL=	Pore Lining, M=N	1atrix
Hydric Soil Ind	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pr	oblematic Hydric	; Soils³:
☐ Histosol (A	A1)					Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR K, L, M	LRA 149B)
☐ Histic Epip	pedon (A2)		IV.	ILRA 1	1496)				☐ Coast Prairie	Redox (A16) (LR	R K, L, R)
■ Black Hist	tic (A3)		□ т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)	5 cm Mucky	Peat or Peat (S3)	(LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mi	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRR K, L, I	J)
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surface (S8)	(LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	11) 🔲 🗆	eplete	d Matrix (F3)			☐ Thin Dark Su	ırface (S9) (LRR k	ζ, L)
☐ Thick Darl	k Surface (A12)		□ F	Redox [Dark Surfa	ace (F6)			☐ Iron-Mangan	ese Masses (F12)	(LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))		eplete	d Dark Su	urface (F7)			☐ Piedmont Flo	oodplain Soils (F19	9) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox [Depressio	ns (F8)			☐ Mesic Spodie	c (TA6) (MLRA 14	4A, 145, 149B)
☐ Sandy Re	edox (S5)								☐ Red Parent I	Material (F21)	
☐ Stripped M	Matrix (S6)								□ Very Shallow	Dark Surface (TF	⁻ 12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	\ 149B)						Other (Expla	in in Remarks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	ed or prob	lematic.		
Restrictive Lay	er Present?	7	res ☐ No	U	Inknown						
YES				— °					Hydric Soil Prese	nt? ☐ Yes	☑ No
									riyuric doli i rese	iii: 🗀 ies	V NO
12 Pomorko:											
Remarks:											
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:					
Wetland Qualit	ty: High		Moderate	Low			Isolated	Wetland?	☐ Yes ☐	No 🔲 Unki	nown
General Comm	ents:										





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WETLAND DETERMINATION FORM - No	rthcei	ntral and	d Nort	heast Re	gion		
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Tr	ansmission	Line	☐ Other			
Project/Site: NED Milepost: 167606.9 Co	ounty:	Franklir	n		Date:	07/24/2015	
Applicant/Owner: Kinder Morgan Sta	ate: N	1A (Samplin	g Point: AS	S-M-W02	1-PEM	
Investigators: CM CG Quad Name: Ashfield To	wnship:	Ashfield	d	<u>-</u>			
Logbook No.: 5M Logbook Pg.: 118 Tract: 11973							
Landform (hillslope, terrace, etc.): Floodplain terrace Local Relief	f: 🗹	Concave	Со	nvex 🔲	None S	Slope%.:	2
Subregion (LRR): Middle Atlantic Lat: 42.538667		Long: -	72.78407	73	D	atum: NAD	83
Soil Map Unit Name: Pillsbury stony sandy loam, 0 to 5 percent slopes, extremely	stony			NWI Classific	cation:	Not map	ped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes [No (If no	, explain	in Remarks.)			
Are Vegetation ☑ Soil ☑ or Hydrology ☑ significantly disturbed? □	No	Are "Norma	al" Circum	nstances pres	ent?	✓ Yes	☐ No
Are Vegetation $\ \square$ Soil $\ \square$ or Hydrology $\ \square$ naturally problematic? $\ \square$	No						
SUMMARY OF FINDINGS - Attach site map showing sampling	noint l	ocations	trans	ects. impo	ortant f	eatures.	etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	P • · · · · ·		,				
Hydric Soil Present? ✓ Yes ☐ No		ls the Sam			es 🗆	No	
Wetland Hydrology Present? ✓ Yes ☐ No	'	within a W	etland?	, ,		110	
Field Wetland Classification: PEM							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:			Sec	ondary Indica	tors (2 or	more requir	red)
Primary Indicators (minimum of one required; check all that apply)				Surface Soil	Cracks (E	36)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)				Drainage Par	tterns (B1	0)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)				Moss Trim Li	ines (B16)	
☐ Saturation (A3) ☐ Marl Deposits (B15)				Dry-Season	Water Ta	ble (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1))			Crayfish Burn	rows (C8)		
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres alon	ng Living	Roots (C3)		Saturation Vi	isible on A	Aerial image	ry (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (0	C4)			Stunted or St	tressed P	lants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Till	lled Soils	(C6)	\checkmark	Geomorphic	Position ((D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)				Shallow Aqui	itard (D3)		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)				Microtopogra	aphic Reli	ef (D4)	
☐ Sparsely Vegetated Concave Surface (B8)			\checkmark	FAC-Neutral	Test (D5)	
Field Observations: Surface Water Present? □ Yes ☑ No Depth (inches):							
		Madan		D	•		
Water Table Present? ☐ Yes ☑ No Depth (inches): Saturation Present? ☐ Yes ☑ No Depth (inches):		wetiand	a Hyaroi	ogy Present	_	Yes □	No
Saturation Present?					_	_	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previo	ous inspe	ections), if av	vailable):				
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name		% Co	ver	Domina	ınt	Indicator	Status
Acer saccharum		10	1	YES		FAC	U
Total	Cover:	10)				



				1 6 1 6 1 1 1 1 1
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name	ĺ	% Cover	Dominant	Indicator Status
Carex lurida				
Onoclea sensibilis		5 10	NO NO	OBL FACW
Carex vulpinoidea Phalaris arundinacea		5 80	NO YES	OBL FACW
Plantago major		5	NO	FACU
Juncus effusus		5	NO	OBL
	Total Cover:	110		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			•
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:			
Total Number of Deminant	•	<u>15</u>	x 1 = <u>15</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species		x 2 = <u>180</u>	
	FAC Species:	<u>0</u>	x 3 = 0	
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species:	<u>15</u>	x 4 = <u>60</u>	
That 100 052, 171011, 01 1710.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	120 (A)	255 (B)	
		Prevalence Index =	= B/A = 2.13	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☑ Yes 🗆] No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, I	1 02004								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abs	ence of indicators.))
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	exture	Remarks
0-12	5YR 3/2	85	7.5YR 4/6	15	С	M,PL	SILT	LOAM	
12-18	7.5YR 3/1	100					FINE SA	NDY LOAM	
12 10	7.511(5,1	100					1 1112 071		
1Tunas C. Cana	antrotion D Do	nlation	DM Dadwood	Matrix	CC Co.	ored Cond	or Coated Crains	21 agation, DI	Dave Lining M Metrix
	· · · · · · · · · · · · · · · · · · ·	·	·				or Coated Grains		=Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)			Polyvalı /ILRA 1		Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		,	/ILIXA I	1490)			☐ Coast Prairi	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ 1	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			.oamy	Mucky Mir	neral (F1)	(LRR K, L)	Dark Surfac	e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)			.oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	selow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	I1) 🔲 🛭	Peplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		_ ☑ F	Redox I	Dark Surfa	ace (F6)			nese Masses (F12) (LRR K, L, R)
_	ıcky Mineral (S1)		_			ırface (F7)			loodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	•	Depressio	` ,		_	ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	. ,				2 op. 000.0	(. 0)			Material (F21)
	Matrix (S6)							_	w Dark Surface (TF12)
		MIDA	\ 4.40D\					= '	, ,
_	ace (S7) (LRR R		•						ain in Remarks)
³ Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pr	oblematic.	
Restrictive Lay			Yes √ No		Inknown			Hydric Soil Prese	ent? ☑ Yes 🗆 No
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate 🗹	Low			Isolated Wetland	d? ☐ Yes ☑	No Unknown
General Comm	ents:								





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WE	TLAND) DET	ERM	INATI	ON FORM -	Northce	ntral and	d No	rtheast	Region		
☑ Centerline ☐ Re-R	oute _	Acces	ss Roa	d \square	Ancillary Facility	□ ⊤	ransmission	Line	☐ Othe	er		
Project/Site: NED			N	/lilepost:	167614.5	County:	Frankli	in		Date:	07/24/201	5
Applicant/Owner: Kinder Mo	rgan					State: N	MA	Samp	ling Point:	AS-M-W)21-UPL	
Investigators: CM CG	(Quad Na	ame: A	Ashfield		Township:	Ashfiel	ld				
Logbook No.: 5M	Logi	ook Pg	.: 119		Tract: 11973							
Landform (hillslope, terrace, e	etc.):	Slope	- toe		Local R	Relief:	Concave	V	Convex	None	Slope%.:	5
Subregion (LRR): Middl	e Atlantic			Lat	42.538769		Long: -	-72.784	4054		Datum: NA	D83
Soil Map Unit Name: Pill	sbury ston	y sandy	loam, (to 5 per	cent slopes, extre	mely stony			NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	itions on th	ne site ty	pical fo	or this tim	e of year?:	✓ Yes [No (If no	o, expla	ain in Rema	rks.)		-
Are Vegetation Soil	✓ or H	ydrology	/ V	significa	ntly disturbed?	☐ No	Are "Norma	al" Circ	umstances	present?	✓ Yes	■ No
Are Vegetation	or H	ydrology	∕ □	naturally	problematic?	✓ No						
SUMMARY OF FINDIN	NGS - At	tach s	site m	ap sho	wing sampli	ng point	locations	s, trar	nsects, ir	mportant	features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☑ No)				_			
Hydric Soil Present?			Yes	☑ No)		Is the San within a W	npled Vetlan	Area □	Yes ⊻	∐ No	
Wetland Hydrology Present?			Yes	☑ No)							
Field Wetland Classification:	UPL	AND PL	.OT									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	ors:							<u>S</u>	econdary Ir	ndicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one req	uired; cl	heck al	I that app	l <u>y)</u>] Surface	Soil Cracks	(B6)	
☐ Surface Water (A1)] Water	-Stained Leaves ((B9)] Drainag	e Patterns (B10)	
☐ High Water Table (A2)] Aquat	ic Fauna (B13)] Moss Tr	im Lines (B	16)	
☐ Saturation (A3)				Marl [Deposits (B15)] Dry-Sea	son Water	Table (C2)	
□ Water Marks (B1)] Hydro	gen Sulfide Odor	(C1)] Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizospheres	along Living	Roots (C3)] Saturation	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of Reduced Ir	ron (C4)			Stunted	or Stressec	l Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction i	in Tilled Soils	s (C6)		_	phic Positio	` '	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7))				Aquitard (D	*	
☐ Inundation Visible on A	erial Image	ry (B7)		Other	(Explain in Rema	rks)				ographic R		
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)] FAC-Ne	utral Test ([D5)	
Field Observations:												
Surface Water Present?	☐ Yes	<u>√</u> 1		epth (inc	·							
Water Table Present?	Yes			epth (inc	•		Wetlan	d Hyd	rology Pres		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ 1	No E	epth (inc	hes):						ies 🖭	NO
Remarks (Describe Recorded	Data (stre	am gag	e, moni	toring we	ll, aerial photos, p	revious insp	ections), if a	vailable	e):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% Co	over	Do	minant	Indicate	or Status
Acer saccharum Betula populifolia							25 10)		'ES 'ES		ACU AC
					٦	Total Cover:	35	5				



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rosa multiflora		5	YES	FACU
	Total Cover:	5	I	I
11.1.0				
Herb Stratum				
Plot Size: 5	1		T.	1
Scientific Name		% Cover	Dominant	Indicator Status
Celastrus scandens Achillea millefolium		5 10	NO NO	FACU FACU
Solidago canadensis		5	NO	FACU
Dactylis glomerata Ranunculus acris		65 10	YES NO	FACU FAC
Onoclea sensibilis		5	NO	FACW
	Total Cover:	100		•
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Vitis riparia		10	YES	FAC
F	 Total Cover:	10	1	1
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover of	of:	Multiply by:	
That it is obtained the second of the second	OBL Species:	<u>0</u>	x 1 = 0	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>5</u>	x 2 = <u>10</u>	
Species Across Air Strata.	FAC Species:	<u>30</u>	x 3 = <u>90</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)	FACU Species:	<u>115</u>	x 4 = <u>460</u>	
Hidt Ale OBL, FACW, OI FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	150 (A)	<u>560 (B)</u>	
		Prevalence Index :	= B/A = 3.73	
Hydrophytic Vegetation Indicators:			<u> </u>	
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? 🗌 Yes 🛚	☑ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:	1			



T TOVIGETICE, I	1 02304								1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the in	ndicator o	confirm the abs	ence of indicators.))
Depth	Matrix		Red	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Te	exture	Remarks
0-6	7.5YR 4/3	100					SILT	LOAM	
6-10	7.5YR 3/4	100					SII T	LOAM	Rock refusal at 10"
0 10	7.5111 6, 1	100					0.21	207 1171	rtook rordodi di 10
1Tunas C. Cana	controtion D Do	nletion	DM Dadward	Matrix	CC Co.	arad Cand	ar Caatad Crains	2l agation, DI	Days Lining M Matrix
	· · · · · · · · · · · · · · · · · · ·		·				or Coated Grains.		=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils ³ :
Histosol (A	A1)			olyval 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		IV	ILIXA	1490)			☐ Coast Prairi	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surfac	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1		eplete	d Matrix (I	F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		_		Dark Surfa	•			nese Masses (F12) (LRR K, L, R)
	ıcky Mineral (S1)		_			ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	•	Depressio	` '		_	ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re			ш.	COOX	Бергеззіо	113 (1 0)		_ :	
_									Material (F21)
	Matrix (S6)							= '	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	oblematic.	
Restrictive Lay	er Present?	☑ \	Yes □ No	□ L	Inknown				
ROCK								Hydric Soil Prese	ent? ☐ Yes ☑ No
10									
Remarks:									
rtomanto.									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: 🔲 High		Moderate	Low			Isolated Wetland	d? 🔲 Yes 🔲	No Unknown
General Comm	onte:								
General Comm	lerits.								





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WETLAND DETERMINATION FORM - Nort	hcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 21986.8 Cour	nty: Franklin Date: 07/27/2015
Applicant/Owner: Kinder Morgan State	e: MA Sampling Point: CN-M-W002-PFO
Investigators: CM MN Quad Name: Shelburne Falls Town	nship: Conway
Logbook No.: 6M Logbook Pg.: 8 Tract: 26954	
Landform (hillslope, terrace, etc.): Slope - toe Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.549660	Long: -72.687876 Datum: NAD83
Soil Map Unit Name: Chatfield-Hollis complex, 15 to 25 percent slopes, rocky	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Ye	s No (If no, explain in Remarks.)
Are Vegetation Soil □ or Hydrology □ significantly disturbed? □ N	No Are "Normal" Circumstances present? ☑ Yes ☐ No
	No
SUMMARY OF FINDINGS - Attach site map showing sampling po	pint locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area within a Wetland? ✓ Yes No
Wetland Hydrology Present? ☑ Yes ☐ No	William a Westalia.
Field Wetland Classification: PFO	
Remarks: VEG DISURBANCE DUE TO LOGGING OPERATION IN SURROUN	DING FOREST
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
✓ Surface Water (A1) ☐ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
✓ Saturation (A3)	□ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	d Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	✓ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ✓ Yes No Depth (inches): 1	
Water Table Present?	Wetland Hydrology Present?
Saturation Present?	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	s inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Acer saccharinum Betula alleghaniensis Tsuga canadensis	10 NO FACW 80 YES FAC 10 NO FACU
Total C	



Providence, RI 02904				720111
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus pennsylvanica Betula alleghaniensis Ulmus americana		10 10 20	YES YES YES	FACW FAC FACW
Ollius americana	Total Cover:	40	153	FACW
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Impatiens capensis		50	YES	FACW
Dryopteris intermedia	Total Cavar	15	YES	FAC
N. 1. N. 2.	Total Cover:	65		
Woody Vine Stratum				
Plot Size: 30		ı	ı	1
Scientific Name		% Cover	Dominant	Indicator Status
Vitis riparia		30	YES	FAC
	Total Cover:	30		
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, I ACW, OF I AC.	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species	s: <u>90</u>	x 2 = <u>180</u>	
oposios / toloso / iii oliuta.	FAC Species:	<u>135</u>	x 3 = 405	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species	: <u>10</u>	x 4 = <u>40</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	: <u>235 (A)</u>	<u>625 (B)</u>	
		Prevalence Index	$= B/A = \underline{2.66}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	Vegetation Prese	nt? ☑ Yes	□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, F	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abs	ence of indicators.)	1
Depth	Matrix		-		atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	exture	Remarks
0.7	` '		` ′				FINE CAL	NDVLOAM	
0-7	7.5YR 4/1	95	5YR 4/6	5	С	PL	FINE SAI	NDY LOAM	
7-16	10YR 5/1	20	10YR 6/2 10YR 4/6	70 10	D C	M M	FINE SAI	NDY LOAM	
			10110 4/0	10		IVI			
¹Type: C=Con	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	. ² Location: PL:	-Pore Lining, M=Matrix
Hydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)		_ F	Polyvali	ue Below	Surface (S	88) (LRR R,	☐ 2 cm Muck ((A10) (LRR K, L, MLRA 149B)
<u> </u>	pedon (A2)			/ILRA 1		- Canado (C	(=:,	_	e Redox (A16) (LRR K, L, R)
_				hin Do	rk Curfoo	o (SO) (LB	D D MI DA 140D)	=	
☐ Black Hist							R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_	-	-		(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed Ma			_	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	I1) 🗹 🖸	Peplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))		Peplete	d Dark Su	urface (F7)		☐ Piedmont FI	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		☐ F	Redox I	Depressio	ons (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							□ Red Parent	Material (F21)
☐ Stripped I	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
3Indicators of I	ovdrophytic vege	tation s	and wetland hydr	ology n	nuet ha nr	econt unl	ess disturbed or pro	oblematic	·
Remarks:									
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: High	√ 1	Moderate	Low			Isolated Wetland	d? ☐ Yes ☑	No 🔲 Unknown
General Comm	nents:								





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WE.	ΓLAND	DETE	RMINA	ATION I	FORM - I	Northc	entral ar	nd No	ortheast	Region		
☑ Centerline ☐ Re-Ro	ute 🔲	Access	Road	☐ Ancill	lary Facility		Transmissio	n Line	☐ Oth	er		
Project/Site: NED			Milep	ost: 2206	67.3	County:	Frank	klin		Date:	07/27/201	15
Applicant/Owner: Kinder Mor	gan		'			State:	MA	Sam	pling Point	: CN-M-W	002-PEM2	
Investigators: CM MN	Q	uad Nan	ne: Shelb	urne Falls		Townshi	p: Conv	vay				
Logbook No.: 6M	Logbo	ook Pg.:	9	Tra	ct: 26954	'						
Landform (hillslope, terrace, et	c.):	Depress	sion		Local Re	elief:	Z Concave	. 🗆	Convex	None	Slope%.:	3
Subregion (LRR): Middle	Atlantic			Lat: 42.5	550077		Long:	-72.68	37788		Datum: NA	D83
Soil Map Unit Name: Cha	tfield-Hollis	complex	x, 25 to 60	percent sl	opes, rocky				NWI Cla	assification:	Not ma	apped
Are climatic / hydrologic condit	ions on the	site typ	ical for this	time of ye	ear?: ⊽	1 Yes	☐ No (If	no, exp	lain in Rem	arks.)		
Are Vegetation Soil	or Hyd	drology	☐ sign	ificantly dis	sturbed?	□ No	Are "Norn	nal" Cir	cumstances	s present?	 ✓ Yes	□ No
Are Vegetation	or Hyd	drology	natu	rally proble	ematic?	☑ No						
SUMMARY OF FINDIN	GS - Att	ach si	te map	showing	g samplir	ng poin	t location	s, tra	nsects, i	mportan	t features	, etc.
Hydrophytic Vegetation Preser	nt?	d	Yes 🔲	No								
Hydric Soil Present?		d ,	Yes 🔲	No			Is the Sa within a	ımpled Wetla	d Area nd?	Yes [□ No	
Wetland Hydrology Present?		I	Yes 🔲	No								
Field Wetland Classification:	PEM											
Remarks: VEG DISTU	JRBANCE I	DUE TO	POWER	LINE MAIN	ITENANCE							
HYDROLOGY												
Wetland Hydrology Indicator	s:								Secondary I	ndicators (2	or more requ	uired)
Primary Indicators (minimum c	f one requ	ired; che	eck all that	apply)				I	Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)			□ v	/ater-Stain	ed Leaves (F	B9)		I	✓ Drainage Patterns (B10)			
☐ High Water Table (A2)				quatic Fau	na (B13)			I	☐ Moss T	rim Lines (B	16)	
☐ Saturation (A3)				larl Deposi	ts (B15)		☐ Dry-Season Water Table (C2)					
			□ ⊢	ydrogen S	ulfide Odor ((C1)		I	☐ Crayfis	h Burrows (0	C8)	
☐ Sediment Deposits (B2)			☑ C	xidized Rh	izospheres a	along Livii	ong Living Roots (C3)					
☐ Drift Deposits (B3)			 P	resence of	Reduced Iro	n (C4) Stunted or Stressed Plants (D1)						
☐ Algal Mat or Crust (B4)			□R	ecent Iron	Reduction in	n Tilled So	lled Soils (C6) Geomorphic Position (D2)					
☐ Iron Deposits (B5)			ПΤ	hin Muck S	Surface (C7)		Shallow Aquitard (D3)					
☐ Inundation Visible on Aer	ial Imagery	/ (B7)		ther (Expla	ain in Remar	ks)						
☐ Sparsely Vegetated Cond	ave Surfac	ce (B8)						I	▼ FAC-N	eutral Test (D5)	
Field Observations:												
Surface Water Present?	☐ Yes	✓ No	Depth	(inches):								
	✓ Yes	☐ No	Depth	(inches):	14		Wetla	and Hy	drology Pre		Yes □	No
Saturation Present? (includes capillary fringe)	✓ Yes	☐ No	o Depth	(inches):	10					<u>[V]</u>	res 🗆	NO
Remarks (Describe Recorded	Data (strea	m gage,	monitoring	g well, aeri	al photos, pr	evious ins	spections), if	availab	ole):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	Cover	Do	ominant	Indicat	or Status
					Т	otal Cove	r:					



Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		I	I
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
- Colonial Hamb		70 00001	Dominant	maiodioi otatas
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:	I	I	I
Dominance Test Worksheet:	Prevalence In	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species		x 2 = <u>0</u>	
Species Across All Strata: 0 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL FACW or FAC: 0 (A/B)	FACU Species	: <u>0</u>	x 4 = <u>0</u>	
That Are OBL, FACW, or FAC: 0 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals	: <u>0 (A)</u>	<u>0 (B)</u>	
		Prevalence Index	= B/A = <u>0</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	Vegetation Preser	nt? ☑ Yes [] No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
present, unless disturbed of problematic.				
Remarks:				



Providence, F	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	nce of indicators.)	1
Depth	Matrix				atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	ture	Remarks
0.5	` ′		` ′				FINIT CAN	IDV I OAM	
0-5	7.5YR 4/1	95	5YR 4/6	5	С	PL	FINE SAN	IDY LOAM	
5-18	10YR 5/1	20	10YR 6/2 10YR 4/6	70 10	D C	M M	FINE SAN	IDY LOAM	
			101K 4/6	10		IVI			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	=Pore Lining, M=Matrix
Hydric Soil Inc	dicators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
Histosol (A	,		•			•	88) (LRR R,		(A10) (LRR K, L, MLRA 149B)
<u> </u>	,			/ILRA 1		Currace (C	o) (ERREIK,	_	
_	pedon (A2)			ilia Da		- (CO) (LD	D D MI DA 440D)	_	e Redox (A16) (LRR K, L, R)
☐ Black Hist							R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			.oamy	Mucky Mii	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
	Layers (A5)		_	-	Gleyed Ma				elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	11) 🗹 🖸	Peplete	ed Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		☐ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))		Peplete	d Dark Su	urface (F7)		☐ Piedmont Fl	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
☐ Stripped I	Matrix (S6)							☐ Very Shallov	w Dark Surface (TF12)
	ace (S7) (LRR R	. MLR/	A 149B)						ain in Remarks)
			•	مامصره			ess disturbed or pro		,
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: High	_ r	Moderate ✓	Low			Isolated Wetland	? □ Yes ☑	No Unknown
General Comm									

AECOM
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Providence, RI 02904

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Δ	-			n	п
_	_		_	•	/ 1

PHOTOS	



WETLAND [DETERMINATION FORM - N	orthcentral and No	ortheast Region	
	Access Road	Transmission Line	Other	
Project/Site: NED	<u> </u>	County: Franklin		7/2015
Applicant/Owner: Kinder Morgan			pling Point: CN-M-W002-PE	M
Investigators: CM Qua	ad Name: Shelburne Falls	Township: Conway		
Logbook No.: Logboo	ok Pg.: Tract: 26954			
Landform (hillslope, terrace, etc.):	Local Rel	ief: Concave	Convex	%.:
Subregion (LRR): Middle Atlantic	Lat: 42.550212	Long: -72.68	37236 Datum	n: NAD83
Soil Map Unit Name: Chatfield-Hollis of	complex, 25 to 60 percent slopes, rocky		NWI Classification: N	ot mapped
Are climatic / hydrologic conditions on the s	site typical for this time of year?:	Yes No (If no, exp	lain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydr	rology significantly disturbed?	No Are "Normal" Cir	cumstances present?	Yes 🔲 No
	rology naturally problematic?] No		
SUMMARY OF FINDINGS - Atta	nch site map showing sampling	g point locations, tra	nsects, important featu	ıres, etc.
Hydrophytic Vegetation Present?	☐ Yes ☐ No	Is the Sample	ΙΛιοα	
Hydric Soil Present?	☐ Yes ☐ No	within a Wetla	II VAS II NA	
Wetland Hydrology Present?	Yes No			
Field Wetland Classification: PEM				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		:	Secondary Indicators (2 or more	e required)
Primary Indicators (minimum of one require	red: check all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1)	☐ Water-Stained Leaves (B	9)	☐ Drainage Patterns (B10)	
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16)	
Saturation (A3)	Marl Deposits (B15)		☐ Dry-Season Water Table (0	C2)
Water Marks (B1)	☐ Hydrogen Sulfide Odor (C	:1)	Crayfish Burrows (C8)	
Sediment Deposits (B2)	Oxidized Rhizospheres al	· .	☐ Saturation Visible on Aerial	I imagery (C9)
Drift Deposits (B3)	☐ Presence of Reduced Iron		☐ Stunted or Stressed Plants	(D1)
☐ Algal Mat or Crust (B4)	Recent Iron Reduction in		Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	` ,	☐ Shallow Aquitard (D3)	
☐ Inundation Visible on Aerial Imagery (s)	☐ Microtopographic Relief (D	4)
☐ Sparsely Vegetated Concave Surface			FAC-Neutral Test (D5)	
	3 (50)			
Field Observations:	□ No Dead (1.1.)			
_	No Depth (inches):		lulu Burra	
Water Table Present? Yes	No Depth (inches):	Wetland Hy	drology Present?	□ No
Saturation Present?	☐ No Depth (inches):			
Remarks (Describe Recorded Data (stream	n gage, monitoring well, aerial photos, pre	vious inspections), if availab	ole):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant In	dicator Status
	То	tal Cover:	1	



Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 0 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 0 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 0 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species	: <u>0</u>	x 4 = <u>0</u>	
That All OBE, Thom, of the	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	: <u>0 (A)</u>	<u>0 (B)</u>	
		Prevalence Index	= B/A = <u>0</u>	
Hydrophytic Vegetation Indicators:	Hydrophytic \	Vegetation Preser	nt? □ Yes □] No
Remarks:				



IL					
file Description: (Describe the depth need	ded t	o document the indicator or confirm the ab	sence o	of indicators.)	
or: Subreport could not be show	vn.				
pe: C=Concentration, D=Depletion, RM=Re	educe	ed Matrix, CS=Covered Sand or Coated Grain	ns.	PLocation: PL=Pore Lining, M=Matrix	
lric Soil Indicators: (Applicable to all LRR	Inc	Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)		Polyvalue Below Surface (S8) (LRR R,		2 cm Muck (A10) (LRR K, L, MLRA 149B)	
Histic Epipedon (A2)		MLRA 149B)		Coast Prairie Redox (A16) (LRR K, L, R)	
Black Histic (A3)		Thin Dark Surface (S9) (LRR R, MLRA 149B	3) 🗖	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1) (LRR K, L)		Dark Surface (S7) (LRR K, L, M)	
Stratified Layers (A5)		Loamy Gleyed Matrix (F2)		Polyvalue Below Surface (S8) (LRR K, L)	
Depleted Below Dark Surface (A11)		Depleted Matrix (F3)		Thin Dark Surface (S9) (LRR K, L)	
Thick Dark Surface (A12)		Redox Dark Surface (F6)		Iron-Manganese Masses (F12) (LRR K, L, R)	
Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)		Piedmont Floodplain Soils (F19) (MLRA 149B)	
Sandy Gleyed Matrix (S4)		Redox Depressions (F8)	П	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy Redox (S5)		. , ,		Red Parent Material (F21)	
Stripped Matrix (S6)			_	Very Shallow Dark Surface (TF12)	
				Other (Explain in Remarks)	
	ad by	drology must be present upless disturbed or r	_	,	
			orobiem	auc.	
trictive Layer Present? ☐ Yes ☑	No	Unknown			
			Hyd	ric Soil Present?	
marks:					
scription of Habitat Characteristics, Aquatic D	Diver	sity or General Comments:			
tland Quality: High Moderate		Low Isolated Wetla	nd?	☐ Yes ☐ No ☐ Unknown	
		25.11			
neral Comments:					
	ric Soil Indicators: (Applicable to all LRR Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetlar trictive Layer Present? Yes marks: scription of Habitat Characteristics, Aquatic E	ric Soil Indicators: (Applicable to all LRR's, u Histosol (A1)	Per: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grain Pric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	Per C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	





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WETLAND DETERMINATION FORM - Northc	entral and Northeast Region			
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line			
Project/Site: NED Milepost: 22037.4 County:	Franklin Date: 07/27/2015			
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: CN-M-W002-UPL			
Investigators: CM Quad Name: Shelburne Falls Townshi	o: Conway			
Logbook No.: 6M Logbook Pg.: 10 Tract: 26954				
Landform (hillslope, terrace, etc.): Hilltop Local Relief:	Concave ☑ Convex ☐ None Slope%.: 0			
Subregion (LRR): Middle Atlantic Lat: 42.549900	Long: -72.687808 Datum: NAD83			
Soil Map Unit Name: Chatfield-Hollis complex, 15 to 25 percent slopes, rocky	NWI Classification: Not mapped			
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, explain in Remarks.)			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No				
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations, transects, important features, etc.			
Hydrophytic Vegetation Present? ☐ Yes ☑ No				
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area Western 2 Yes ✓ No			
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland? ☐ Yes ☑ No			
Field Wetland Classification: UPLAND PLOT				
Remarks:				
Remarks.				
HYDROLOGY				
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)			
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)			
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)			
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)			
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livin	g Roots (C3) Saturation Visible on Aerial imagery (C9)			
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Sc				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)			
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)			
Field Observations:				
Surface Water Present? ☐ Yes ☑ No Depth (inches):				
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?			
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous ins	pections), if available):			
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name	% Cover Dominant Indicator Status			
Tsuga canadensis	90 YES FACU			
Total Cove	r: 90			



Providence, Ri 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Tsuga canadensis		20	YES	FACU
	Total Cover:	20		
Herb Stratum				
Plot Size: 5				
Scientific Name	1	% Cover	Dominant	Indicator Status
- Colonial Hame		70 COVCI	Dominant	maiodioi otatas
	Total Cover:			
Woody Vine Stratum	Total Gover.			
Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lov Workshoot		
Number of Dominant Species	Total % Cover of		Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	от: <u>О</u>	Multiply by: x 1 = 0	
Total Number of Dominant	FACW Species:		-	
Species Across All Strata: 2 (B)	-		x = 0	
Percent of Dominant Species	FAC Species: FACU Species:	<u>0</u>	x 3 = 0	
That Are OBL, FACW, or FAC: 0 (A/B)	-		x 4 = 440	
	UPL Species: Column Totals:	<u>0</u>	x 5 = 0	
			<u>440 (B)</u>	
	F	Prevalence Index =	= B/A = <u>4.00</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? 🔲 Yes 🔽	∐ No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, I												
SOIL												
Profile Descrip	tion: (Describe	the de	epth needed to o	locum	ent the in	dicator o	r confirm t	he absen	ce of indicators.)			
Depth (inches)	Matrix		Red	dox Fe	atures			Textu	ıro		Pon	narks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		Texto	ile.		IVEII	liains
0-5	10YR 6/4	100						LOA	М			
5-12	10YR 6/4	70	10YR 4/6	30	С	М		LOA	М			
12-16	10YR 6/6	60	10YR 6/4	40	С	М		LOA	M	ı	Rock refu	usal at 16"
¹Type: C=Cond	centration. D=De	epletion	l n, RM=Reduced I	Matrix.	CS=Cov	L ered Sand	or Coated	Grains.	² Location: PL=	Pore Linine	ı. M=Ma	atrix
	· · · · · · · · · · · · · · · · · · ·	•	o all LRR's, unle						Indicators for Pr		*	
		ouble t				•	0) /I DD D				•	
_ `	•			ILRA 1		Surface (S	8) (LRR R,		2 cm Muck (
	pedon (A2)			hin Da	nle Comfood	(CO) (LDI	D D MI DA	1.40D)	Coast Prairie			•
☐ Black Hist							R R, MLRA	1496)	5 cm Mucky			
	Sulfide (A4)			-	-		(LRR K, L)		☐ Dark Surface	. , .		•
	_ayers (A5)	noc /^4	· 	-	Gleyed Ma				Polyvalue Be		. , .	. ,
	Below Dark Surfa	ace (A i	_	•	d Matrix (I	,			Thin Dark Su			
_	k Surface (A12)		· 		Dark Surfa				_			(LRR K, L, R)
_	icky Mineral (S1)		_	•		ırface (F7)				-		(MLRA 149B)
	eyed Matrix (S4)		☐ R	edox I	Depressio	ns (F8)						A, 145, 149B)
☐ Sandy Re									Red Parent		•	
	Matrix (S6)								☐ Very Shallov			12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	rks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	logy n	nust be pr	esent, unle	ess disturbe	d or prob	lematic.			
Restrictive Lay	er Present?	V	Yes ☐ No	□ U	nknown							
ROCK								1	Hydric Soil Prese	nt?	Yes	☑ No
16												
Remarks:												
Description of I	Habitat Characte	ristics.	Aquatic Diversity	or Ge	neral Com	ments:						
·												
Wetland Qualit	y: 🗖 High		Moderate	Low			Isolated \	Wetland?	☐ Yes ☐	No □	Unkno	own
	, .											
General Comm	ents:											





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WE	TLAND) DET	ERN	IINATI	ON F	FORM -	Northc	ent	tral an	d No	ortheas	st Regi	on		
☑ Centerline ☐ Re-R	oute _] Acces	ss Roa	ad 🔲	Ancill	lary Facility		Trar	nsmission	Line	□∘	ther			
Project/Site: NED				Milepost:	2306	61.5	County:		Frankl	lin		Da	ate:	07/28/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA		Samp	oling Poi	nt: CN-N	1-W0	03-PSS	
Investigators: CM	(Quad Na	ame:	Shelburn	e Falls		Townshi	p:	Conwa	ay					
Logbook No.: 6M	Logi	oook Pg	.: 19		Tra	ct: 26954									
Landform (hillslope, terrace,	etc.):	Slope	- mid	<u> </u>		Local F	Relief:	7 (Concave		Convex	☐ No	ne	Slope%.:	1
Subregion (LRR): Middl	e Atlantic			Lat	: 42.5	551054		ı	Long:	-72.68	4342			Datum: NAI	D83
Soil Map Unit Name: Ch	atfield-Holli	is compl	lex, 15	to 25 per	cent sle	opes, rocky	/				NWI C	Classification	on:	Not ma	apped
Are climatic / hydrologic cond	litions on th	ne site ty	/pical f	or this tim	ne of ye	ear?:	√ Yes		No (If n	о, ехр	lain in Re	marks.)			-
Are Vegetation ✓ Soil	or Hy	ydrology	/ 	significa	intly dis	sturbed?	□ No	Α	re "Norm	al" Cir	cumstanc	es present	t?	 ✓ Yes	☐ No
Are Vegetation Soil	or Hy	ydrology	/ 	naturally	y proble	ematic?	_ No								
0	100 1														
SUMMARY OF FINDII						g sampli	ng poin	t Io	cations	s, tra	nsects.	import	ant	features	, etc.
Hydrophytic Vegetation Pres	ent?	✓	Yes	□ N				ls	the San	npled	l Area	_			
Hydric Soil Present?		☑	Yes	□ N					ithin a V			✓ Yes		No	
Wetland Hydrology Present?		✓	Yes	□ N	0										
Field Wetland Classification:	PSS														
Remarks: Floodplain															
HYDROLOGY															
Wetland Hydrology Indicate	ors:									<u> </u>	Secondar	/ Indicator	s (2 c	or more requ	uired)
Primary Indicators (minimum	of one req	uired; cl	heck a	II that app	oly)					[Surfa	ce Soil Cra	acks	(B6)	
☐ Surface Water (A1)			[☐ Wate	r-Stain	ed Leaves	(B9)			<u> </u>	☑ Drain	age Patter	rns (E	310)	
✓ High Water Table (A2)			[☐ Aqua	tic Fau	na (B13)					Moss	Trim Line:	s (B1	6)	
✓ Saturation (A3)			[☐ Marl	Deposi	ts (B15)				[Dry-S	eason Wa	ter T	able (C2)	
☐ Water Marks (B1)			[☐ Hydro	ogen Si	ulfide Odor	(C1)			[☐ Crayf	ish Burrow	vs (C	8)	
☐ Sediment Deposits (B2)			[Oxidi	zed Rh	izospheres	along Livii	ng R	oots (C3)	. [Satur	ation Visib	le on	Aerial imag	gery (C9)
☐ Drift Deposits (B3)			[√ Prese	ence of	Reduced I	ron (C4)				Stunt	ed or Stres	ssed	Plants (D1)	
☐ Algal Mat or Crust (B4)			[Rece	nt Iron	Reduction	in Tilled So	oils (C6)	<u> </u>	 Geon	orphic Po	sition	n (D2)	
☐ Iron Deposits (B5)			[Thin	Muck S	Surface (C7	")				Shalle	ow Aquitar	d (D3	3)	
☐ Inundation Visible on A	erial Imagei	ry (B7)	[Othe	r (Expla	ain in Rema	arks)	<u> </u>							
☐ Sparsely Vegetated Con	ncave Surfa	ace (B8)	١							[✓ FAC-	Neutral Te	est (D	5)	
Field Observations:															
Surface Water Present?	☐ Yes	√ 1	No I	Depth (ind	ches):										
Water Table Present?	✓ Yes		No I	Depth (ind	ches):	6			Wetlan	nd Hyd	drology P	resent?		v =	
Saturation Present? (includes capillary fringe)	√ Yes	1	No I	Depth (ind	ches):	0							⊻	Yes □	No
Remarks (Describe Recorded	Data (stre	am gag	e, mon	nitoring we	ell, aeria	al photos, p	orevious ins	spec	tions), if a	availab	le):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Co	over		Dominant		Indicate	or Status
Tsuga canadensis Acer saccharum							Total Cove	-	1(15	5		YES YES			CU CU
							Total Cove	1.	2	J					



rovidence, RI 02904			- 1	
apling/Shrub Stratum				
lot Size: 15				
cientific Name		% Cover	Dominant	Indicator Status
almia latifolia alix interior cer saccharum		10 15 10	NO YES NO	FACU FACW FACU
suga canadensis onicera morrowii		15 35	YES YES	FACU FACU
	Total Cover:	85		1
look Ctrotum				
lerb Stratum Plot Size: 5				
	1	% Cover	Dominant	Indicator Status
Scientific Name Equisetum palustre		% Cover	Dominant NO	Indicator Status FACW
Typha latifolia		10	NO	OBL
mpatiens capensis Onoclea sensibilis		35 25	YES YES	FACW FACW
	Total Cover:	85	1	ı
Voody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	1
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant	FACW Species	: <u>90</u>	x 2 = <u>180</u>	
Species Across All Strata: 7 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL FACW or FAC: 43 (A/B)	FACU Species:	<u>95</u>	x 4 = <u>380</u>	
That Are OBL, FACW, or FAC: 43 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>195 (A)</u>	<u>570 (B)</u>	
	ı	Prevalence Index	= B/A = 2.92	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	ent? ☑ Yes [] No
data in Remarks or on a separate sheet)				_
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				



	(1 0200+										
SOIL											
Profile Descrip		the d				ndicator o	r confirm the abse	nce of indicators.)			
Depth (inches)	Matrix		Red	dox Features			Tov	turo	Domarko		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Tex	ture	Remarks		
0-7	7.5YR 4/1	100					FINE SAN	DY LOAM			
7-10	10YR 5/2	30	10YR 6/1	70	D	М	SANDY	LOAM			
10-14	10YR 5/1	20	10YR 6/1	65	D	М	COARSE SA	ANDY I OAM	Cobble at 14", refusal		
10 11	1011(0,1	20	10YR 5/8	15	Č	M	00/11/02/0/		Cobbie at 11, fordear		
1T 0.0			DM D 1				0 / 10 :	al .: DI	<u></u>		
		<u> </u>					or Coated Grains.		=Pore Lining, M=Matrix		
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:		
☐ Histosol (A	A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)		
☐ Histic Epip	oedon (A2)		IV	ILIXA I	490)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)		
■ Black Hist	ic (A3)		□т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)		
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)		
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)		
☐ Depleted I	Below Dark Surfa	ace (A1	 11)	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)		
☐ Thick Darl	k Surface (A12)		 □ R	edox [Dark Surfa	ace (F6)		_	nese Masses (F12) (LRR K, L, R)		
	ıcky Mineral (S1)		_			ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)		
_	eyed Matrix (S4)		_	•	Depressio	, ,					
☐ Sandy Re			<u></u>	iedox i	Depressio	113 (1 0)		_	c (TA6) (MLRA 144A, 145, 149B)		
								_	Material (F21)		
	Matrix (S6)							_	w Dark Surface (TF12)		
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)		
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.			
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown						
								Hydric Soil Prese	ent? ☑ Yes ☐ No		
								,	<u> </u>		
Remarks:											
rtomanto.											
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:					
Wetland Qualit	y: 🔲 High	√ 1	Moderate	Low			Isolated Wetland	? ☐ Yes ☑	No Unknown		
General Comm	onto:										
General Comm	ieriis.										





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WE	TLAND [DETERM	IINATIO	N FORM - I	Northc	entral and	d Northeast I	Region		
☑ Centerline ☐ Re-Re	oute 🔲	Access Roa	d 🗖 A	Ancillary Facility		Transmission	Line	•		
Project/Site: NED		I	Milepost:	23068.4	County:	Frankli	in	Date:	07/28/201	5
Applicant/Owner: Kinder Mo	rgan				State:	MA	Sampling Point:	CN-M-W0	03-PFO	
Investigators: CM	Qu	ad Name:	Shelburne F	alls	Township	o: Conwa	ау			
Logbook No.: 6M	Logboo	ok Pg.: 18		Tract: 26954						
Landform (hillslope, terrace, e	etc.): S	Slope - toe	<u>'</u>	Local Re	elief: 🔽	Concave	☐ Convex [None	Slope%.:	2
Subregion (LRR): Middle	e Atlantic		Lat:	42.550890		Long:	-72.684221		Datum: NAI	D83
Soil Map Unit Name: Par	xton fine sand	dy loam, 8 to	15 percent	slopes, very stor	ny		NWI Clas	sification:	Not ma	ipped
Are climatic / hydrologic cond	litions on the	site typical f	or this time	of year?: ✓	Yes	☐ No (If no	o, explain in Remar	ks.)		
Are Vegetation	or Hydr	rology 🔲	significantl	y disturbed?	√ No	Are "Norma	al" Circumstances p	resent?	☑ Yes	☐ No
Are Vegetation 🗹 Soil	or Hydr	rology 🔲	naturally p	roblematic?	□ No					
SUMMARY OF FINDIN	NGS - Atta	ch site n	nap show	ving samplin	g point	locations	s, transects, im	portant	features	, etc.
Hydrophytic Vegetation Prese	ent?	 ✓ Yes	☐ No							
Hydric Soil Present?		✓ Yes	☐ No			Is the San within a W	npled Area Vetland? ☑	Yes 🗆] No	
Wetland Hydrology Present?		 ✓ Yes	☐ No				Tollaria :			
Field Wetland Classification:	PFO									
Remarks: Stream frin	nge									
HYDROLOGY										
Wetland Hydrology Indicato	ors:						Secondary Inc	dicators (2	or more requ	<u>iired)</u>
Primary Indicators (minimum	of one require	red; check a	ll that apply)	1			☐ Surface S	Soil Cracks	(B6)	
☐ Surface Water (A1)		[☐ Water-S	Stained Leaves (E	39)		Drainage	Patterns (E	310)	
☐ High Water Table (A2)		-		Fauna (B13)				m Lines (B1	16)	
☐ Saturation (A3)		[☐ Marl De	posits (B15)			□ Dry-Seas	on Water T	able (C2)	
☐ Water Marks (B1)		[☐ Hydroge	en Sulfide Odor (C1)		☐ Crayfish I	Burrows (C	8)	
☐ Sediment Deposits (B2)		<u> </u>	Oxidized	d Rhizospheres a	along Livin	g Roots (C3)	☐ Saturation	n Visible or	n Aerial imag	ery (C9)
☐ Drift Deposits (B3)		E	☑ Presend	ce of Reduced Iro	on (C4)		☐ Stunted of	or Stressed	Plants (D1)	
☐ Algal Mat or Crust (B4)		[Recent	Iron Reduction ir	Tilled So	ils (C6)	✓ Geomorp	hic Position	n (D2)	
☐ Iron Deposits (B5)		[Thin Mu	ick Surface (C7)			☐ Shallow A	Aquitard (D	3)	
☐ Inundation Visible on Ae	erial Imagery ((B7) [Other (E	Explain in Remar	ks)		☐ Microtopo	ographic Re	elief (D4)	
□ Sparsely Vegetated Cor	ncave Surface	e (B8)					☐ FAC-Neu	tral Test (D	05)	
Field Observations:										
Surface Water Present?	☐ Yes 5	√ No I	Depth (inche	es):						
Water Table Present?	☐ Yes 5	√ No I	Depth (inche	es):		Wetlan	nd Hydrology Pres			
Saturation Present? (includes capillary fringe)	☐ Yes [☑ No I	Depth (inche	es):				⊻	Yes □	No
Remarks (Describe Recorded	Data (stream	n gage, mon	itoring well,	aerial photos, pr	evious ins	pections), if a	vailable):			



EGETATION				
ree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Betula lenta		30	YES	FACU
「suga canadensis Picea glauca		30 10	YES NO	FACU FACU
Betula alleghaniensis Jlmus americana		10 30	NO YES	FAC FACW
ac anoneana	Total Cover:	110	1 .20	1
apling/Shrub Stratum				
lot Size: 15				
cientific Name		% Cover	Dominant	Indicator Status
raxinus pennsylvanica		10	YES	FACW
lmus americana cer pensylvanicum		10 5	YES YES	FACW FACU
	Total Cover:	25	1	ı
erb Stratum				
lot Size: 5				
cientific Name		% Cover	Dominant	Indicator Status
Pryopteris intermedia		15	YES	FAC
olystichum acrostichoides Onoclea sensibilis		5 5	YES YES	FACU FACW
nociea sensibilis	Total Cover:	25	123	I AOW
/oody Vine Stratum				
lot Size: 30				
cientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	1
Oominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
lumber of Dominant Species	Total % Cover of	of:	Multiply by:	
hat Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
otal Number of Dominant onecies Across All Strata: 9 (B)	FACW Species:	<u>55</u>	x 2 = <u>110</u>	
Species Across All Strata: 9 (B)	FAC Species:	<u>25</u>	x 3 = <u>75</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 56 (A/B)	FACU Species:	<u>80</u>	x 4 = <u>320</u>	
TAIL ATE OBL, FACW, OF FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	160 (A)	505 (B)	
	F	Prevalence Index	= B/A = <u>3.16</u>	
lydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? 🗹 Yes [¬ No
data in Remarks or on a separate sheet)		· ·		
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be resent, unless disturbed or problematic.				
temarks:	I			



Profile Description: (Describe the depth needed to document the indicator or confirm the absence of Indicators.) Depth Matrix Redox Features Remarks Remarks	Providence, R	(1 02904									
Depth	SOIL										
Depth	Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm th	ne absen	nce of indicators.)	
Color (moist)	-	-									
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	-	Text	rure	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. **Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	0-5	7.5YR 4/1	95	7.5YR 5/6	5	С	PL		SANDY	LOAM	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Histosol (A4) Histosol (A3) Histosol (A4) Histosol (A3) Histosol (A4) Histosol (5-12	7.5YR 4/1	30		1				SANDY	LOAM	
Histosol (A1)	Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	rered Sand	or Coated	Grains.	²Location: PL=	=Pore Lining, M=Matrix
Histosol (A1)	Hvdric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for P	roblematic Hvdric Soils³:
Histic Epipedon (A2)							-	88) (I RR R			•
Black Histic (A3)	_ `	•					- Canado (C	(=: :: : : : : ;			
Hydrogen Sulfide (A4)	= '			Пт	hin Da	rk Surface	e (S9) (I R	RR MIRA	149R)		
□ Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Polyvalue Below Surface (S8) (LRR K, L) □ Depleted Below Dark Surface (A11) ☑ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes □ No Hydric Soil Present? ☑ Yes □ No Remarks: Wetland Quality: □ High □ Moderate ☑ Low Isolated Wetland? □ Yes ☑ No □ Unknown	_								1100)		
Depleted Below Dark Surface (A11)					-	=		(LIXIX IX, L)			
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Piedmont Floodplain Soils (F19) (MLRA 149B) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☐ Sandy Redox (S5) ☐ Red Parent Material (F21) ☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12) ☐ Dark Surface (S7) (LRR R, MLRA 149B) ☐ Other (Explain in Remarks) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? ☐ Yes ☑ No ☐ Unknown Hydric Soil Present? ☑ Yes ☐ No Wetland Quality: ☐ High ☐ Moderate ☑ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown			ace (Δ1	_	•	•	` ,			_	
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes ☑ No □ Unknown □ Hydric Soil Present? ☑ Yes □ No □ N			~00 (A I	_	•		•				, , , , , , , , , , , , , , , , , , , ,
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes ☑ No □ Wrespective Layer Present? □ Yes ☑ No □ Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: □ High □ Moderate ☑ Low Isolated Wetland? □ Yes ☑ No □ Unknown	_			_				1		_	, , , , , , , , , , , , , , , , , , , ,
Sandy Redox (S5)				_	•			'			
Stripped Matrix (S6)	: _			ш.	(COOX I	Jepi 03310	113 (1 0)				
Dark Surface (S7) (LRR R, MLRA 149B)	· ·	` '									
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?			MIDA	\ 140B)							
Restrictive Layer Present?	_			·							an in Remarks)
Wetland Quality: ☐ High ☐ Moderate ☑ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown	Remarks:										
	Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:				
General Comments:	Wetland Qualit	y:		Moderate ✓	Low			Isolated V	Vetland?	Yes 🗹	No Unknown
	Gonoral Comm	onte:									





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WE	TLAND	DET	ERMIN	IATI	ON FORM - I	Northc	entral ar	nd No	ortheast	Region	l	
☑ Centerline ☐ Re-Ro	ute 🔲	Acces	s Road		Ancillary Facility		Transmissio	n Line	☐ Oth	er		
Project/Site: NED			Mile	epost:	23124.8	County:	Frank	klin		Date:	07/28/201	15
Applicant/Owner: Kinder Mor	gan					State:	MA	Sam	pling Point	: CN-M-W	003-UPL	
Investigators: CM	(Quad Na	me: She	elburne	Falls	Townshi	p: Conv	vay				
Logbook No.: 6M	Logb	ook Pg.:	: 20		Tract: 26954							
Landform (hillslope, terrace, e	tc.):	Floodpl	ain terra	ce	Local R	elief: v	Concave	· 🗆	Convex	■ None	Slope%.:	1
Subregion (LRR): Middle	Atlantic			Lat:	42.551085		Long:	-72.68	34104		Datum: NA	D83
Soil Map Unit Name: Pax	ton fine sa	ındy loan	n, 8 to 15	perce	nt slopes, very sto	ny			NWI Cla	assification:	Not ma	apped
Are climatic / hydrologic condi	tions on th	e site typ	oical for t	his time	e of year?:	1 Yes	☐ No (If	no, exp	lain in Rem	arks.)		
Are Vegetation Soil	or Hy	/drology	☐ si	gnifica	ntly disturbed?	□ No	Are "Norn	nal" Cir	cumstances	s present?	√ Yes	☐ No
Are Vegetation	or Hy	/drology	☐ na	aturally	problematic?	☑ No						
SUMMARY OF FINDIN	GS - At	tach s	ite ma	p sho	owing samplir	ng point	location	s, tra	ınsects, i	mportan	t features	, etc.
Hydrophytic Vegetation Prese	nt?		Yes [Z No)		l- (l- 0-					
Hydric Soil Present?			Yes 5	Z No)		Is the Sa within a	impled Wetla	nd?] Yes [☑ No	
Wetland Hydrology Present?			Yes [Z No)							
Field Wetland Classification:	UPLA	AND PLO	TC									
Remarks: Disturbed v	egetation	due to O	HVPL m	aintena	ance							
HYDROLOGY												
Wetland Hydrology Indicator	rs:								Secondary I	ndicators (2	or more requ	uired)
Primary Indicators (minimum c	of one requ	uired; ch	eck all th	at app	<u>ly)</u>				☐ Surface	Soil Crack	s (B6)	
☐ Surface Water (A1)				Water	-Stained Leaves (I	B9)			☐ Drainaç	ge Patterns	(B10)	
☐ High Water Table (A2)				Aquat	ic Fauna (B13)				☐ Moss T	rim Lines (E	316)	
☐ Saturation (A3)				Marl E	Deposits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
□ Water Marks (B1)				Hydro	gen Sulfide Odor ((C1)		I	☐ Crayfis	h Burrows (C8)	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizospheres	along Livir	ng Roots (C3	₃₎ l	☐ Saturat	ion Visible o	on Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of Reduced Ire	on (C4)		I	Stunted	d or Stresse	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction in	n Tilled So	ils (C6)	ļ	☐ Geomo	rphic Position	on (D2)	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7)			l	Shallov	v Aquitard ([D3)	
☐ Inundation Visible on Aer	ial Imager	y (B7)		Other	(Explain in Remar	ks)			☐ Microto	pographic F	Relief (D4)	
☐ Sparsely Vegetated Cond	cave Surfa	ace (B8)							☐ FAC-N	eutral Test (D5)	
Field Observations:												
	☐ Yes	☑ N	o Dep	th (inc	hes):							
	☐ Yes	☑ N	•	th (inc	,		Wetla	and Hy	drology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ N	o Dep	oth (inc	hes):						l les 🔽	NO
Remarks (Describe Recorded	Data (strea	am gage	, monitor	ing we	ll, aerial photos, pr	evious ins	pections), if	availab	ole):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	Cover	Do	ominant	Indicate	or Status
Pinus strobus								50		YES	FA	ACU
					Т	otal Cove	r: '	50	•		•	



Tsuga canadensis S	tentific Name	Indicator Status FACU FACU FACU FACU FACU FACU FACU FAC
Scientific Name	lentific Name	FACU FACU FACU FACU FACU
Total Cover: Section	uga canadensis er saccharum 10 NO Imia latifolia 30 YES Inicera morrowii 25 YES 20 YES 20 YES Total Cover: 90 Total Cover Dominant Internocissus quinquefolia Total Cover: 5 Total Cover: 5 Total Cover: 5	FACU FACU FACU FACU FACU
10 N Kalmia latifolia 30 Yt 10 25 Yt 10 10 10 10 10 10 10 1	er saccharum Initial atifolia Initial at	FACU FACU FACU FACU
Herb Stratum	Total Cover: 90 The Stratum In Size: 5 Identific Name	
Plot Size: 5 Scientific Name	of Size: 5 dentific Name	
Plot Size: 5 Scientific Name	of Size: 5 dentific Name	
Scientific Name Parthenocissus quinquefolia Total Cover: 5 Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0_(A) Percent of Dominant Species That Are OBL, FACW, or FAC: 0_(AB) Percent of Dominant Species That Are OBL, FACW, or FAC: 0_(AB) Percent of Dominant Species That Are OBL, FACW, or FAC: 0_(AB) Prevalence Index Worksheet: Total Cover: Total Cover of: Multiply OBL Species: 0_ x 1 = FACW Species: 0_ x 2 = FAC Species: 0_ x 3 = FACU Species: 0_ x 3 = FACU Species: 0_ x 3 = FACU Species: 0_ x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)	ientific Name % Cover Dominant rthenocissus quinquefolia 5 YES Total Cover: 5 rody Vine Stratum of Size: 30	
Parthenocissus quinquefolia 5 Yi	rthenocissus quinquefolia 5 YES Total Cover: 5 rody Vine Stratum ot Size: 30	
Total Cover: 5	Total Cover: 5 body Vine Stratum of Size: 30	17.00
Plot Size: 30 Scientific Name	oody Vine Stratum ot Size: 30	
Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) Prevalence Index Worksheet: Total % Cover of: Multiply OBL Species: 0 x1 = FACW Species: 0 x2 = FACW Species: 0 x3 = FACW Species: 0 x3 = FACU Species: 0 x3 = FACU Species: 0 x3 = FACU Species: 0 x5 = Column Totals: 145 x4 = UPL Species: 0 x5 = Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)	ot Size: 30	
Total Cover: Dominance Test Worksheet: Number of Dominant Species Total % Cover of: Multiply OBL Species: Q x1 = Total % Cover of: Multiply OBL Species: Q x1 = Total % Cover of: Multiply OBL Species: Q x2 = FACW Species: Q x3 = FACW Species: Q x4 = UPL Species: Q x5 = UPL Spec		
Total Cover: Dominance Test Worksheet: Prevalence Index Worksheet: Total % Cover of: Multiply OBL Species: 0		Indicator Status
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total % Cover of: Multiply OBL Species: 0 x 1 = Total Number of Dominant Species Across All Strata: 5 (B) FACW Species: 0 x 2 = Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) FACU Species: 0 x 4 = UPL Species: 0 x 5 = Column Totals: 145 (A) UPL Species: 0 x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Prevalence Index = B/A = Hydrophytic Vegetation Indicators: Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? 1 - Rapid Test for Hydrophytic Vegetations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □	letituit Name // Cover Dominant	Thulcator Status
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total % Cover of: Multiply OBL Species: 0 x 1 = Total Number of Dominant Species Across All Strata: 5 (B) FACW Species: 0 x 2 = Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) FACU Species: 0 x 4 = UPL Species: 0 x 5 = Column Totals: 145 (A) UPL Species: 0 x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Prevalence Index = B/A = Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? □ 1 - Rapid Test for Hydrophytic Vegetations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □	Total Cover:	
Number of Dominant Species That Are OBL, FACW, or FAC: O(A) OBL Species: OBL Spe		
That Are OBL, FACW, or FAC: OBL Species: OBL Species: OBL Sp		
Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: O(A/B) FACW Species: O(x x 2 = FACW Species: O(x x 3 = FACU Species: O(x x 4 = UPL Species: O(x x 5 = Column Totals: O(a/B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: O(a/B) 1 - Rapid Test for Hydrophytic Vegetation O(x - Dominance Test is > 50% O(x - Dominance Te	at Are OBL, FACW, or FAC: 0 (A)	
Species Across All Strata: 5 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: O(A/B) FAC Species: 0 x 3 = FACU Species: 145 x 4 = UPL Species: 0 x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Problematic Hydrophytic Vegetation¹ (Explain)	tal Number of Dominant FACW Species: 0 x 2 = 0	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) FACU Species: 0 x 4 = UPL Species: 0 x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Problematic Hydrophytic Vegetation¹ (Explain)	pecies Across All Strata: 5 (B)	
UPL Species: 0 x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Problematic Hydrophytic Vegetation¹ (Explain)	ercent of Dominant Species FACIL Species 145 x 4 = 580	
Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: □ 1 - Rapid Test for Hydrophytic Vegetation □ 2 - Dominance Test is > 50% □ 3 - Prevalence Index is ≤ 3.0 □ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) □ Problematic Hydrophytic Vegetation¹ (Explain)	at Are OBL, FACW, or FAC:	
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Problematic Hydrophytic Vegetation¹ (Explain)		
Hydrophytic Vegetation Indicators:	Prevalence Index = $B/A = 4.00$	
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Problematic Hydrophytic Vegetation¹ (Explain)		
2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □		
3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Problematic Hydrophytic Vegetation¹ (Explain)		
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?		
data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)		1 No
		, NO
	Problematic Hydrophytic Vegetation¹ (Explain)	
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Remarks:	emarks:	



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	r confirm the abse	nce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		Toy	ture	Remarks
(11101162)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	iex	uul 5	izemano
0-5	7.5YR 4/3	100					LO	AM	
5-15	7.5YR 3/3	60	7.5YR 5/4	40	С	М	SANDY	/ LOAM	
45.40	7.EVD.E/4	70	7 EVD 6/6	20		M	COARCE C	ANDVIOAM	
15-18	7.5YR 5/4	70	7.5YR 6/6	30	С	М	COARSE SA	ANDY LOAM	
¹Type: C=Cond	centration D=De	enletion	RM=Reduced I	Matrix	CS=Cov	ered Sand	or Coated Grains.	²l ocation: Pl =	 =Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	<u> </u>	o all LRR's, unle				or coated craine.		roblematic Hydric Soils³:
☐ Histosol (A						-	8) (LRR R,	_	A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILRA 1		(-	-, (=: :: : :,		e Redox (A16) (LRR K, L, R)
☐ Black Hist			ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_				LRR K, L)		e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1		-	d Matrix (I				urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		_ R	edox [Dark Surfa	ice (F6)		 ☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□R	edox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown				
•		_	_					Hydric Soil Prese	ent? ☐ Yes ☑ No
								_	
Remarks:									
Description of I	Habitat Characte	ristics.	Aquatic Diversity	or Ge	neral Com	ments:			
, , , , ,		,	, , , , , , , , , , , , , , , , , , , ,						
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland	?	No Unknown
General Comm	ents:								





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WETLAND DETERMINATION FORM - N	lorthce	ntral and No	ortheast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Tr	ransmission Line	Other	
Project/Site: NED Milepost: 23566.7	County:	Franklin	Date:	07/28/2015
Applicant/Owner: Kinder Morgan	State: N	//A Sam	oling Point: CN-M-W0	04-PFO
Investigators: CM Quad Name: Shelburne Falls	Township:	Conway	· · · ·	
Logbook No.: 6M Logbook Pg.: 26 Tract: 26954				
Landform (hillslope, terrace, etc.): Slope - mid Local Rei	lief: 🗹	Concave	Convex None	Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.551556		Long: -72.68	32593	Datum: NAD83
Soil Map Unit Name: Woodbridge loam, 3 to 8 percent slopes			NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes [☐ No (If no, exp	lain in Remarks.)	
Are Vegetation Soil or Hydrology significantly disturbed? □	□ No □	- Are "Normal" Cir	cumstances present?	☐ Yes 🗹 No
	No		·	
The regetation con or riversingy naturally problemate				
SUMMARY OF FINDINGS - Attach site map showing sampling	g point l	locations, tra	nsects, important	features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No				
Hydric Soil Present? ✓ Yes ☐ No	!	Is the Sampled within a Wetlar	lArea nd? ☑ Yes □	l No
Wetland Hydrology Present? ✓ Yes ☐ No				
Field Wetland Classification: PFO				
Remarks: RECENT FORESTRY ACTIVITY BY LANDOWNER				
HYDROLOGY				
Wetland Hydrology Indicators:		<u> </u>	Secondary Indicators (2 of	or more required)
Primary Indicators (minimum of one required; check all that apply)		Ι	☐ Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B	9)	E	✓ Drainage Patterns (E	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		1	Moss Trim Lines (B1	6)
✓ Saturation (A3) ☐ Marl Deposits (B15)		1	☐ Dry-Season Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C	21)	1	☐ Crayfish Burrows (C	8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres al	long Living	Roots (C3)	Saturation Visible or	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	n (C4)]	☐ Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Tilled Soils	s (C6)	Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		[Shallow Aquitard (D:	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	s)	[☐ Microtopographic Re	elief (D4)
Sparsely Vegetated Concave Surface (B8)		[FAC-Neutral Test (D	95)
Field Observations:				
Surface Water Present?				
Water Table Present? ☑ Yes ☐ No Depth (inches): 3		Wetland Hyd	drology Present?	
Saturation Present?			⊻	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pre	vious inspe	ections), if availab	le):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus		20	YES	FACU
Fraxinus pennsylvanica	tal Cover:	10	YES	FACW
	50701.	30		



Providence, RI 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Ulmus americana Lonicera morrowii		25 10	YES YES	FACW FACU
Acer saccharum		10	YES	FACU
	Total Cover:	45		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Onoclea sensibilis		15	NO	FACW
Impatiens capensis Galium asprellum		40 35	YES YES	FACW OBL
	Total Cover:	90		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Vitis riparia		10	YES	FAC
	Total Cover:	10		1
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of		Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>35</u>	x 1 = <u>35</u>	
Total Number of Dominant	FACW Species	: <u>90</u>	x 2 = <u>180</u>	
Species Across All Strata: 8 (B)	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species That Are OBL_FACW_or FAC: 63 (A/B)	FACU Species:	<u>40</u>	x 4 = <u>160</u>	
That Are OBL, FACW, or FAC: 63 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>175 (A)</u>	<u>405 (B)</u>	
	F	Prevalence Index	x = B/A = 2.31	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	ent? ☑ Yes [□ No
data in Remarks or on a separate sheet)		ū		
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks: RECENT LOGGING REFLECTED IN PLOTS				



SOIL									
Profile Descri	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				6 .
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-8	10YR 5/1	30	10YR 6/1 10YR 5/6	60 10	D C	M M	FINE SANI	DY LOAM	
8-12	10YR 6/1	70	10YR 4/1	30	С	М	FINE SANI	DY LOAM	
¹Type: C=Con	L centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	l ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil In	dicators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epi	pedon (A2)		N	/ILRA 1	149B)			☐ Coast Prairie	Redox (A16) (LRR K, L, R)
☐ Black His	tic (A3)		П 1	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydroger	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	11) 🔽 🖸	Deplete	d Matrix (F3)		☐ Thin Dark Su	ırface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy M	ucky Mineral (S1)			Deplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy GI	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)		☐ Mesic Spodie	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped	Matrix (S6)							□ Very Shallow	Dark Surface (TF12)
☐ Dark Sur	ace (S7) (LRR R	, MLR	A 149B)					Other (Expla	in in Remarks)
3Indicators of	hydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Remarks:								Hydric Soil Prese	nt? ☑ Yes □ No
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Quali	ty: High	<u> </u>	Moderate ✓	Low			Isolated Wetland?	Yes □	No Unknown
General Comn	nents:								





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WE	TLAND	DETE	RMINATI	ON FORM -	Northce	entral ar	nd Nor	rtheast	Region	1	
☑ Centerline ☐ Re-R	oute	Access	Road	Ancillary Facility		Transmissio	n Line	☐ Othe	er		
Project/Site: NED			Milepost:	23481.9	County:	Frank	klin		Date:	07/28/20	15
Applicant/Owner: Kinder Mo	organ				State:	MA	Sampl	ing Point:	CN-M-W	004-UPL	
Investigators: CM MN		Quad Nam	ne: Shelburn	e Falls	Township	o: Conw	way				
Logbook No.: 6M	Logb	ook Pg.:	27	Tract: 26954							
Landform (hillslope, terrace, e	etc.):	Slope - n	nid	Local R	elief:] Concave	• 🗹 C	Convex	None	Slope%.:	6
Subregion (LRR): Middl	e Atlantic		Lat	: 42.551357		Long:	-72.682	822		Datum: NA	AD83
Soil Map Unit Name: Wo	odbridge Ic	am, 3 to 8	8 percent slop	es				NWI Cla	ssification:	Not m	apped
Are climatic / hydrologic cond	litions on th	e site typi	ical for this tim	ne of year?:	7 Yes	☐ No (If r	no, expla	in in Rema	rks.)		
Are Vegetation	☐ or Hy	drology	☐ significa	intly disturbed?	√ No	Are "Norn	mal" Circu	umstances	present?	√ Yes	s 🔲 No
Are Vegetation Soil		/drology		y problematic?	✓ No						
SUMMARY OF FINDIN	NGS - At	tach sit	te map sh	owing samplir	ng point	location	s, tran	sects, ir	nportan	t features	s, etc.
Hydrophytic Vegetation Prese	ent?		Yes ☑ N	0				_			
Hydric Soil Present?			Yes ☑ N	0		Is the Sa within a			Yes [⊘ No	
Wetland Hydrology Present?			Yes ☑ N	0		within a	TTOURIN	ч.			
Field Wetland Classification:	UPLA	AND PLO	Т								
Remarks:											
HYDROLOGY											
Wetland Hydrology Indicate	ors:						Se	econdary Ir	dicators (2	or more req	uired)
Primary Indicators (minimum		uired: che	ck all that apr	olv)				Surface	Soil Crack	s (B6)	
☐ Surface Water (A1)	0. 00 .04	uou, oo		r-Stained Leaves (R9)			Drainage	e Patterns	(B10)	
High Water Table (A2)				tic Fauna (B13)	5 3)			Moss Tr	im Lines (E	316)	
Saturation (A3)				Deposits (B15)				Dry-Sea	son Water	Table (C2)	
☐ Water Marks (B1)				ogen Sulfide Odor	(C1)			Crayfish	Burrows (C8)	
Sediment Deposits (B2)				zed Rhizospheres		a Roots (C3	3) 🗆	Saturation	on Visible o	on Aerial ima	gery (C9)
☐ Drift Deposits (B3)				ence of Reduced In	-	9		Stunted	or Stresse	d Plants (D1)
☐ Algal Mat or Crust (B4)			_	nt Iron Reduction is		ils (C6)		Geomor	phic Position	on (D2)	
☐ Iron Deposits (B5)			_	Muck Surface (C7)		(00)		Shallow	Aquitard (I	D3)	
☐ Inundation Visible on Ae	erial Imager	v (B7)	-	r (Explain in Remai				Microtop	ographic F	Relief (D4)	
☐ Sparsely Vegetated Cor	_			(Explain in Romai	110)			FAC-Ne	utral Test (D5)	
		(==)									
Field Observations:											
Surface Water Present?	☐ Yes	☑ No	Depth (inc	ches):							
Water Table Present?	☐ Yes	☑ No				Wetla	and Hydr	ology Pres	_	l Voc 🖂	1 No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ No	Depth (ind	ches):						Yes ⊻	, NO
Remarks (Describe Recorded	l Data (strea	am gage,	monitoring we	ell, aerial photos, pi	revious ins	pections), if	available	e):			



Providence, RI 02904				1 1 1 1 1 1 1 1 1
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Ulmus americana		10	YES	FACW
Acer rubrum Acer saccharum		10 10	YES YES	FAC FACU
Pinus strobus Betula lenta		40 10	YES YES	FACU FACU
Detaila letta	Total Cover:	80	123	TACO
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum		10	YES	FAC
Betula lenta Acer saccharum		10 15	YES YES	FACU FACU
Carya ovata		10	YES	FACU
Ulmus rubra		10 10	YES YES	FAC FACU
Fagus grandifolia	Total Cavar	10	163	PACO
	Total Cover:	65		
Herb Stratum				
Plot Size: 5	I	0/ 0		1
Scientific Name Maianthemum canadense		% Cover	Dominant	Indicator Status
Manantremum canadense Monotropa uniflora		10 5	YES YES	FACU FACU
,	Total Cover:	15	ı	I
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Vitis riparia		15	YES	FAC
	Total Cover:	15		
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species	: <u>10</u>	x 2 = <u>20</u>	
Species Across All Strata: 14 (B)	FAC Species:	<u>45</u>	x 3 = <u>135</u>	
Percent of Dominant Species	FACU Species:		x 4 = 480	
That Are OBL, FACW, or FAC: 36 (A/B)				
	UPL Species:	<u>0</u>	x 5 = 0	
	Column Totals:		<u>635 (B)</u>	
		Prevalence Index	= B/A = <u>3.63</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Prese	nt? ☐ Yes ဩ	☑ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
F,				
Remarks:				



T TOVIGETICE, I	(1 02004								11 1 2 1 2 1 2 1 2 1 2 1
SOIL									
Profile Descrip	otion: (Describe	the d				dicator o	r confirm the a	absence of indicators.)	
Depth (inches)	Matrix				atures			Texture	Remarks
(11101162)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		I GALUIG	I/CIIIGIV2
0-8	10YR 4/2	100					SA	NDY LOAM	
8-12	10YR 4/3	80	10YR 5/3	20	С	М		LOAM	
12-18	10YR 5/3	70	10YR 4/3	30	С	М		LOAM	
12 10	10111 0/0	'	1011111110	00				2071111	
1T 0.0			DM D 1				0 . 10	. a D	L
		<u> </u>	n, RM=Reduced				or Coated Gra		=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
Histosol (A	A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		IV	ILIXA I	490)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149	9B) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1		eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		_ □ R	edox [Dark Surfa	ace (F6)		— ☐ Iron-Mangan	nese Masses (F12) (LRR K, L, R)
_	ıcky Mineral (S1)					ırface (F7)		_	podplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)		_	•	Depressio				
☐ Sandy Re			<u></u>	iedox i	Depressio	113 (1 0)			c (TA6) (MLRA 144A, 145, 149B)
								_	Material (F21)
	Matrix (S6)								v Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed o	r problematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown				
								Hydric Soil Prese	ent? ☐ Yes ☑ No
								•	
Remarks:									
Remarks.									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wet	land?	No Unknown
0 10									
General Comm	ents:								





SW



WETLAND DETERMINATION FORM - Nort	central and Northea	st Region
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	Transmission Line	Other
Project/Site: NED Milepost: 86408.3 Cour	/: Franklin	Date: 07/31/2015
Applicant/Owner: Kinder Morgan State	MA Sampling Po	int: ER-M-W002-PFO
Investigators: CM MN Quad Name: Millers Falls Town	hip: Erving	
Logbook No.: 6M Logbook Pg.: 52 Tract: 8453		
Landform (hillslope, terrace, etc.): Depression Local Relief:	☑ Concave ☐ Convex	☐ None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.582003	Long: -72.477707	Datum: NAD83
Soil Map Unit Name: Chatfield-Hollis complex, 15 to 25 percent slopes, rocky	NWI	Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, explain in Re	emarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ✓ ↑	Are "Normal" Circumstand	ces present? ☑ Yes ☐ No
Are Vegetation ☑ Soil ☐ or Hydrology ☐ naturally problematic? ☐ 1)	
SUMMARY OF FINDINGS. Attach site man showing compling no	nt locations transcets	important factures, etc.
SUMMARY OF FINDINGS - Attach site map showing sampling por Hydrophytic Vegetation Present?	iii iocations, transects	, important leatures, etc.
	Is the Sampled Area	☑ Vac □ Na
Hydric Soil Present?	within a Wetland?	✓ Yes □ No
Field Wetland Classification: PFO		
Remarks:		
Remarks.		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondar	y Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surfa	ace Soil Cracks (B6)
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)	✓ Drain	nage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss	s Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-	Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Cray	fish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	ving Roots (C3)	ration Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	☐ Stun	ted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (C6) Geor	morphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shal	ow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	✓ Micro	otopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	☐ FAC	-Neutral Test (D5)
Field Observations:		
Surface Water Present? ☐ Yes ☑ No Depth (inches):		
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology F	Present?
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)		☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	nspections), if available):	
VEGETATION		
Tree Stratum		
Plot Size: 30		
Scientific Name	% Cover	Dominant Indicator Status
Betula lenta Fraxinus pennsylvanica Acer rubrum	10 10 80	NO FACU NO FACW YES FAC
Total C	1	1



Sapling/Shrub Stratum Plot Size: 15 Scientific Name Betula lenta Vaccinium corymbosum Hamamelis virginiana Total Cov Herb Stratum Plot Size: 5 Scientific Name Maianthemum canadense Osmunda claytoniana Total Cov Woody Vine Stratum Plot Size: 30 Scientific Name Total Cov Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation	% Cov 10 45 27: 55 % Cov 28: 28: 28: 28: 28: 28: 28: 28: 28: 28:	ver C	Dominant YES NO NO Dominant NO YES Dominant	Indicator Status FACU FACW FACU Indicator Status FACU FAC Indicator Status
Scientific Name Betula lenta Vaccinium corymbosum Hamamelis virginiana Total Cov Herb Stratum Plot Size: 5 Scientific Name Maianthemum canadense Osmunda claytoniana Total Cov Noody Vine Stratum Plot Size: 30 Scientific Name Total Cov Nominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	40 5 10 5 10 10 10 10 10	ver C	Pominant NO YES Dominant	FACU FACU Indicator Statu FACU FAC
Betula lenta Placcinium corymbosum Hamamelis virginiana Total Corymbosum Hamamelis virginiana Total Corymbosum Plot Size: 5 Scientific Name Maianthemum canadense Osmunda claytoniana Total Corymbosum Plot Size: 30 Scientific Name Total Corymbosum Plot Size: 30 Scientific Name Total Corymbosum Plot Size: 30 Scientific Name Total Corymbosum Prevaler Total % (OBL Spe Total Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) FACW Species Across All Strata: 3 (B) FAC Spe Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	40 5 10 5 10 10 10 10 10	ver C	Pominant NO YES Dominant	FACU FACU Indicator Statu FACU FAC
Accinium corymbosum Hamamelis virginiana Total Cov Herb Stratum Plot Size: 5 Scientific Name Maianthemum canadense Osmunda claytoniana Total Cov Voody Vine Stratum Plot Size: 30 Scientific Name Total Cov Total Cov Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	5 10 10 10 10 10 10 10	ver C	Dominant NO YES	FACW FACU Indicator Statu FACU FAC
Total Covered Stratum Plot Size: 5 Scientific Name Maianthemum canadense Osmunda claytoniana Total Covered Stratum Plot Size: 30 Scientific Name Total Covered Stratum Plot Size: 30 Scientific Name Total Covered Stratum Prevaler Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	10 55 % Cov. 10 45 55 % Cov. 20 20 20 20 20 20 20 2	ver C	Dominant NO YES Dominant	Indicator Statu
Plot Size: 5 Scientific Name Maianthemum canadense Dosmunda claytoniana Total Cov Voody Vine Stratum Plot Size: 30 Scientific Name Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Species Across All Strata: Species Across All Str	% Cov 10 45 er: 55 % Cov er: 55 % Cov er: 15	ver C	NO YES	FACU FAC
Plot Size: 5 Scientific Name Maianthemum canadense Dismunda claytoniana Total Con Moody Vine Stratum Plot Size: 30 Scientific Name Total Con Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Fotal Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	### 10 45 ### 15 ####### 15 ##	ver C	NO YES	FACU FAC
Plot Size: 5 Scientific Name Maianthemum canadense Dismunda claytoniana Total Cov Voody Vine Stratum Plot Size: 30 Scientific Name Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Fotal Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	### 10 45 ### 15 ####### 15 ##	ver C	NO YES	FACU FAC
Accentific Name Maianthemum canadense Demunda claytoniana Total Cov Moody Vine Stratum Plot Size: 30 Accentific Name Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Description of Dominant Species Across All Strata: Prevaler Total % (OBL Species Across All Strata: Description of Dominant Species That Are OBL, FACW, or FAC: Description of D	### 10 45 ### 15 ####### 15 ##	ver C	NO YES	FACU FAC
Maianthemum canadense Dismunda claytoniana Total Con Woody Vine Stratum Plot Size: 30 Scientific Name Total Con Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Paccel and Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Spe	### 10 45 ### 15 ####### 15 ##	ver C	NO YES	FACU FAC
Osmunda claytoniana Total Cov Voody Vine Stratum Plot Size: 30 Scientific Name Total Cov Dominance Test Worksheet: Number of Dominant Species Fhat Are OBL, FACW, or FAC: Cotal Number of Dominant Species Across All Strata: Percent of Dominant Species FAC Species Across All Strata: Percent of Dominant Species FAC Species Across All Strata: Percent of Dominant Species FACU S Column Hydrophytic Vegetation Indicators:	45 % Cov. % Cov. % Cov. % Cov. % Cov. % Cov. % Co	ver C	YES	FAC
Plot Size: 30 Scientific Name Total Covered Common	% Cover of: eleies: 0 ecies: 15	heet: Multip		Indicator Statu
Plot Size: 30 Scientific Name Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Prevaler Total % (OBL Spe FACW S Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Provide Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Provaler Total Cov Prevaler Total % (OBL Species FACW S FACW S FACW S Column Hydrophytic Vegetation Indicators:	ce Index Workslover of: eies: 0 ecies: 15	heet: Multip		Indicator Statu
Total Cov Cominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Cotal Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Cotal Number of Dominant Species Across All Strata: Cotal Number of Dominant Species Across	ce Index Workslover of: eies: 0 ecies: 15	heet: Multip		Indicator Statu
Dominance Test Worksheet: Number of Dominant Species Fhat Are OBL, FACW, or FAC: Cotal Number of Dominant Species Across All Strata: Percent of Dominant Species FAC Species Are OBL, FACW, or FAC: Percent of Dominant Species FACU S That Are OBL, FACW, or FAC: Column Hydrophytic Vegetation Indicators:	ce Index Workslover of: eies: 0 ecies: 15	heet: Multip		Indicator Statu
Prevaler Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) OBL Spe Fotal Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Prevaler Total % (A) OBL Species FACW S FACW S FACW S FAC Species Column Hydrophytic Vegetation Indicators:	ce Index Works over of: cies: 0 ecies: 15	Multip	oly by:	
Prevaler Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) OBL Spe Fotal Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Prevaler Total % (A) OBL Species FACW S FACW S FACW S FAC Species Column Hydrophytic Vegetation Indicators:	ce Index Works over of: cies: 0 ecies: 15	Multip	oly by:	
Number of Dominant Species That Are OBL, FACW, or FAC: OBL Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: OBL Species FACW S FAC Species Across All Strata: FAC Species FACU S UPL Species Column Addrophytic Vegetation Indicators:	over of: iles: 0 ecies: 15	Multip	oly by:	
That Are OBL, FACW, or FAC: 2 (A) OBL Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) OBL Species FACW S FACW S FAC Species FACU S UPL Species Column Objective Across All Strata: FACU S Column	ecies: <u>0</u>	•	alv by:	
OBL Species Across All Strata: Percent of Dominant Species FACU Species Are OBL, FACW, or FAC: OBL Species FACW SPECIES FAC Species FACU Species FACU Species FACU Species Column OBL Species FACW SPECIES FACU Species Column OBL Species FACW SPECIES FACU Species Column	ecies: <u>15</u>	v 1 –	Jiy Dy.	
Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Output O		A 1 -	<u>0</u>	
FAC Specers of Dominant Species Fhat Are OBL, FACW, or FAC: 67 (A/B) UPL Specers Column Hydrophytic Vegetation Indicators:	ies: <u>125</u>	x 2 =	<u>30</u>	
That Are OBL, FACW, or FAC: 67 (A/B) UPL Spe Column Hydrophytic Vegetation Indicators:		x 3 =	<u>375</u>	
UPL Spe Column	ecies: <u>70</u>	x 4 =	280	
Hydrophytic Vegetation Indicators:	ies: <u>0</u>	x 5 =	<u>0</u>	
	otals: <u>210</u>	(A)	685 (B)	
		Index = B/A =	<u>3.26</u>	
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0 7. 4. Membelogical Adoptational (Provide supporting	utia Vagatatian	Brocont?	□ Vaa □	7 No
 ✓ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydropl	ytic Vegetation	Present?	✓ Yes 🗆] No
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Described AND CHRUROS TREES WITH ADVANTAGE OF CO.	207 01/075110			
Remarks: HUMMOCKS WITH UPLAND SHRUBS; TREES WITH ADVANTAGEOUS F				



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ture	Remarks
0-4	10YR 2/1	100					ORGA	ANIC	
4-14	10YR 4/1	20	10YR 5/1 10YR 6/1	20 60	D D	M M	FINE SANI	DY LOAM	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
☐ Histosol (A	A1)					Surface (S	8) (LRR R,	□ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		N	ILRA 1	49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ 1	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified L	ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	I1) 🗹 🖸	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Dark	Surface (A12)			Redox [Dark Surfa	ace (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	cky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox [Depressio	ns (F8)		☐ Mesic Spodi	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	iin in Remarks)
3Indicators of h	ydrophytic vege	tation a	and wetland hydro	ology m	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No
			Aquatic Diversity	or Ge	neral Com	nments:			
	LOCATED WIT	_	_						
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetland?	Yes ☐	No Unknown
General Comm	ents:								





Ν



WETLAND DETERMINATION FORM - Nort	central and Northea	st Region
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line	Other
Project/Site: NED Milepost: 86408.3 Cour	/: Franklin	Date: 07/31/2015
Applicant/Owner: Kinder Morgan State	MA Sampling Po	int: ER-M-W002-PFO
Investigators: CM MN Quad Name: Millers Falls Town	hip: Erving	
Logbook No.: 6M Logbook Pg.: 52 Tract: 8453		
Landform (hillslope, terrace, etc.): Depression Local Relief:	☑ Concave ☐ Convex	☐ None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.582003	Long: -72.477707	Datum: NAD83
Soil Map Unit Name: Chatfield-Hollis complex, 15 to 25 percent slopes, rocky	NWI	Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, explain in Re	emarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ✓ ↑	Are "Normal" Circumstand	ces present? ☑ Yes ☐ No
Are Vegetation ☑ Soil ☐ or Hydrology ☐ naturally problematic? ☐ 1)	
SUMMARY OF FINDINGS. Attach site man showing compling no	nt locations transcets	important factures, etc.
SUMMARY OF FINDINGS - Attach site map showing sampling por Hydrophytic Vegetation Present?	iii iocations, transects	, important leatures, etc.
	Is the Sampled Area	☑ Vac □ Na
Hydric Soil Present?	within a Wetland?	✓ Yes □ No
Field Wetland Classification: PFO		
Remarks:		
Remarks.		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondar	y Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surfa	ace Soil Cracks (B6)
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)	✓ Drain	nage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss	s Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-	Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Cray	fish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	ving Roots (C3)	ration Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	☐ Stun	ted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (C6) Geor	morphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shal	ow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	✓ Micro	otopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	☐ FAC	-Neutral Test (D5)
Field Observations:		
Surface Water Present? ☐ Yes ☑ No Depth (inches):		
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology F	Present?
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)		☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	nspections), if available):	
VEGETATION		
Tree Stratum		
Plot Size: 30		
Scientific Name	% Cover	Dominant Indicator Status
Betula lenta Fraxinus pennsylvanica Acer rubrum	10 10 80	NO FACU NO FACW YES FAC
Total C	1	1



Sapling/Shrub Stratum Plot Size: 15 Scientific Name Betula lenta Vaccinium corymbosum Hamamelis virginiana Total Cov Herb Stratum Plot Size: 5 Scientific Name Maianthemum canadense Osmunda claytoniana Total Cov Woody Vine Stratum Plot Size: 30 Scientific Name Total Cov Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation	% Cov 10 45 27: 55 % Cov 28: 28: 28: 28: 28: 28: 28: 28: 28: 28:	ver C	Dominant YES NO NO Dominant NO YES Dominant	Indicator Status FACU FACW FACU Indicator Status FACU FAC Indicator Status
Scientific Name Betula lenta Vaccinium corymbosum Hamamelis virginiana Total Cov Herb Stratum Plot Size: 5 Scientific Name Maianthemum canadense Osmunda claytoniana Total Cov Noody Vine Stratum Plot Size: 30 Scientific Name Total Cov Nominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	40 5 10 5 10 10 10 10 10	ver C	Pominant NO YES Dominant	FACU FACU Indicator Statu FACU FAC
Betula lenta Placcinium corymbosum Hamamelis virginiana Total Corymbosum Hamamelis virginiana Total Corymbosum Plot Size: 5 Scientific Name Maianthemum canadense Osmunda claytoniana Total Corymbosum Plot Size: 30 Scientific Name Total Corymbosum Plot Size: 30 Scientific Name Total Corymbosum Plot Size: 30 Scientific Name Total Corymbosum Prevaler Total % (OBL Spe Total Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) FACW Species Across All Strata: 3 (B) FAC Spe Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	40 5 10 5 10 10 10 10 10	ver C	Pominant NO YES Dominant	FACU FACU Indicator Statu FACU FAC
Accinium corymbosum Hamamelis virginiana Total Cov Herb Stratum Plot Size: 5 Scientific Name Maianthemum canadense Osmunda claytoniana Total Cov Voody Vine Stratum Plot Size: 30 Scientific Name Total Cov Total Cov Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	5 10 10 10 10 10 10 10	ver C	Dominant NO YES	FACW FACU Indicator Statu FACU FAC
Total Covered Stratum Plot Size: 5 Scientific Name Maianthemum canadense Osmunda claytoniana Total Covered Stratum Plot Size: 30 Scientific Name Total Covered Stratum Plot Size: 30 Scientific Name Total Covered Stratum Prevaler Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	10 55 % Cov. 10 45 55 % Cov. 20 20 20 20 20 20 20 2	ver C	Dominant NO YES Dominant	Indicator Statu
Plot Size: 5 Scientific Name Maianthemum canadense Dismunda claytoniana Total Cor Woody Vine Stratum Plot Size: 30 Scientific Name Total Cor Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Species Across All Strata: Species Across All Str	% Cov 10 45 er: 55 % Cov er: 55 % Cov er: 15	ver C	NO YES	FACU FAC
Plot Size: 5 Scientific Name Maianthemum canadense Dismunda claytoniana Total Con Moody Vine Stratum Plot Size: 30 Scientific Name Total Con Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Fotal Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	### 10 45 ### 15 ####### 15 ##	ver C	NO YES	FACU FAC
Plot Size: 5 Scientific Name Maianthemum canadense Dismunda claytoniana Total Cov Voody Vine Stratum Plot Size: 30 Scientific Name Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Fotal Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Hydrophytic Vegetation Indicators:	### 10 45 ### 15 ####### 15 ##	ver C	NO YES	FACU FAC
Accentific Name Maianthemum canadense Demunda claytoniana Total Cov Moody Vine Stratum Plot Size: 30 Accentific Name Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Description of Dominant Species Across All Strata: Prevaler Total % (OBL Species Across All Strata: Description of Dominant Species That Are OBL, FACW, or FAC: Description of D	### 10 45 ### 15 ####### 15 ##	ver C	NO YES	FACU FAC
Maianthemum canadense Dismunda claytoniana Total Con Woody Vine Stratum Plot Size: 30 Scientific Name Total Con Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Paccel and Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Spe	### 10 45 ### 15 ####### 15 ##	ver C	NO YES	FACU FAC
Osmunda claytoniana Total Cov Voody Vine Stratum Plot Size: 30 Scientific Name Total Cov Dominance Test Worksheet: Number of Dominant Species Fhat Are OBL, FACW, or FAC: Cotal Number of Dominant Species Across All Strata: Percent of Dominant Species FAC Species Across All Strata: Percent of Dominant Species FAC Species Across All Strata: Percent of Dominant Species FACU S Column Hydrophytic Vegetation Indicators:	45 % Cov. % Cov. % Cov. % Cov. % Cov. % Cov. % Co	ver C	YES	FAC
Plot Size: 30 Scientific Name Total Covered Common	% Cover of: eleies: 0 ecies: 15	heet: Multip		Indicator Statu
Plot Size: 30 Scientific Name Total Cov Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Prevaler Total % (OBL Spe FACW S Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Provide Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Provaler Total Cov Prevaler Total % (OBL Species FACW S FACW S FACW S Column Hydrophytic Vegetation Indicators:	ce Index Workslover of: eies: 0 ecies: 15	heet: Multip		Indicator Statu
Total Cov Cominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Cotal Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Cotal Number of Dominant Species Across All Strata: Cotal Number of Dominant Species Across	ce Index Workslover of: eies: 0 ecies: 15	heet: Multip		Indicator Statu
Dominance Test Worksheet: Number of Dominant Species Fhat Are OBL, FACW, or FAC: Cotal Number of Dominant Species Across All Strata: Percent of Dominant Species FAC Species Are OBL, FACW, or FAC: Percent of Dominant Species FACU S That Are OBL, FACW, or FAC: Column Hydrophytic Vegetation Indicators:	ce Index Workslover of: eies: 0 ecies: 15	heet: Multip		Indicator Statu
Prevaler Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) OBL Spe Fotal Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Prevaler Total % (A) OBL Species FACW S FACW S FACW S FAC Species Column Hydrophytic Vegetation Indicators:	ce Index Works over of: cies: 0 ecies: 15	Multip	oly by:	
Prevaler Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) OBL Spe Fotal Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) Prevaler Total % (A) OBL Species FACW S FACW S FACW S FAC Species Column Hydrophytic Vegetation Indicators:	ce Index Works over of: cies: 0 ecies: 15	Multip	oly by:	
Number of Dominant Species That Are OBL, FACW, or FAC: OBL Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: OBL Species FACW S FAC Species Across All Strata: FAC Species FACU S UPL Species Column Addrophytic Vegetation Indicators:	over of: iles: 0 ecies: 15	Multip	oly by:	
That Are OBL, FACW, or FAC: 2 (A) OBL Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B) OBL Species FACW S FACW S FAC Species FACU S UPL Species Column Objective Across All Strata: FACU S Column	ecies: <u>0</u>	•	alv by:	
OBL Species Across All Strata: Percent of Dominant Species FACU Species Are OBL, FACW, or FAC: OBL Species FACW SPECIES FAC Species FACU Species FACU Species FACU Species Column OBL Species FACW SPECIES FACU Species Column OBL Species FACW SPECIES FACU Species Column	ecies: <u>15</u>	v 1 –	Jiy Dy.	
Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Output O		A 1 -	<u>0</u>	
FAC Specers of Dominant Species Fhat Are OBL, FACW, or FAC: 67 (A/B) UPL Specers Column Hydrophytic Vegetation Indicators:	ies: <u>125</u>	x 2 =	<u>30</u>	
That Are OBL, FACW, or FAC: 67 (A/B) UPL Spe Column Hydrophytic Vegetation Indicators:		x 3 =	<u>375</u>	
UPL Spe Column	ecies: <u>70</u>	x 4 =	280	
Hydrophytic Vegetation Indicators:	ies: <u>0</u>	x 5 =	<u>0</u>	
	otals: <u>210</u>	(A)	685 (B)	
		Index = B/A =	<u>3.26</u>	
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0 7. 4. Membelogical Adoptational (Provide supporting	utia Vagatatian	Brocont?	□ Vaa □	7 No
 ✓ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydropl	ytic Vegetation	Present?	✓ Yes 🗆] No
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Described AND CHRUROS TREES WITH ADVANTAGE OF CO.	207 01/075110			
Remarks: HUMMOCKS WITH UPLAND SHRUBS; TREES WITH ADVANTAGEOUS F				



Providence, R	KI 02904								
SOIL									
rofile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	nce of indicators.	
Depth	Matrix			dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Tex	ture	Remarks
0-4	10YR 2/1	100					ORG	ANIC	
4-14	10YR 4/1	20	10YR 5/1 10YR 6/1	20 60	D D	M M	FINE SAN	IDY LOAM	
Гуре: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL:	=Pore Lining, M=Matrix
ydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)			Polyvalı	ue Below	Surface (S	8) (LRR R,	☐ 2 cm Muck ((A10) (LRR K, L, MLRA 149B)
 '	pedon (A2)			/ILŔA 1		•		_	e Redox (A16) (LRR K, L, R)
☐ Black Hist			Пт	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)		_	-	Gleyed Ma		(2.000, 2)	_	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	ed Matrix (_	urface (S9) (LRR K, L)
	k Surface (A12)	(- 1.	_	•	Dark Surfa	•		_	nese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		_			urface (F7)			oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	•	Depressio				ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re						()			Material (F21)
_	Matrix (S6)								w Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	\ 149R)						ain in Remarks)
			·				ess disturbed or pro		an in Kemarko)
Remarks:									
·			Aquatic Diversity	or Ge	neral Con	nments:			
	I LOCATED WIT	_							=
Wetland Qualit	ty: 🔽 High		Moderate	Low			Isolated Wetland	? ☑ Yes □	No Unknown
General Comm	ents:								





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WETLAND DETERMINATION FORM - Northo	entral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 113823.9 County:	Franklin Date: 08/11/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: NO-M-W003-PSS
Investigators: CM Quad Name: Northfield Townsh	ip: Northfield
Logbook No.: 6M Logbook Pg.: 114 Tract: 21164	
Landform (hillslope, terrace, etc.): Slope - toe Local Relief: [☑ Concave ☐ Convex ☐ None Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.636563	Long: -72.435147 Datum: NAD83
Soil Map Unit Name: Canton fine sandy loam, 8 to 15 percent slopes, very stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☑ Soil ☐ or Hydrology ☐ naturally problematic? ☐ No	
SUMMARY OF FINDINGS - Attach site map showing sampling poin	t locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area within a Wetland? ✓ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No	William a Westalia.
Field Wetland Classification: PSS	
Remarks: USE NO-M-W004-UPL AS REPSENTATIVE UPLAND PLOT	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livi	ng Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled So	_
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	✓ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in:	spections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Total Cove	or:



Providence, RI 02904				A_COM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Spiraea alba		40	YES	FACW
Acer rubrum Rhamnus cathartica		15 30	NO YES	FAC FAC
	Total Cover:	85		•
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Carex lurida		5	NO	OBL
Onoclea sensibilis Solidago canadensis		15 20	NO YES	FACW FACU
Solidago rugosa		20	YES	FAC
Osmunda claytoniana	Total Cover:	30 90	YES	FAC
Woody Vine Stratum	Total Gover.			
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
- Colorado Halifo		/0 OOVGI	Dominant	maioator Status
	 Total Cover:		I	I
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	51. <u>5</u>	x 1 = <u>5</u>	
Total Number of Dominant	FACW Species		x 2 = 110	
Species Across All Strata: 5 (B)	FAC Species:	. <u>95</u>	x 3 = 285	
Percent of Dominant Species	FACU Species:		x 4 = 80	
That Are OBL, FACW, or FAC: 80 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:		480 (B)	
		Prevalence Index	c = B/A = 2.74	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	egetation Prese	ent? ☑ Yes ∣	□ No
data in Remarks or on a separate sheet)	Tiyaropiiyiio t	egetation i resc	<u>F</u> 163	_ NO
✓ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
Nemans.				



Providence, F	KI 02904									
SOIL										
Profile Descri	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the a	absend	ce of indicators.)	
Depth	Matrix			dox Fe						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Textu	re	Remarks
0-7	10YR 4/1	95	10YR 4/6	5	С	PL	SAI	NDY L	.OAM	
7-14	10YR 3/2	30	10YR 5/1 10YR 4/6	60 10	D C	M M	SAI	NDY L	LOAM	
Type: C=Con	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	l or Coated Grai	ins.	² Location: PL=	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pr	roblematic Hydric Soils³:
☐ Histosol (A1)			Polyvalı	ue Below	Surface (S	88) (LRR R,		☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
_ `	pedon (A2)			ЛLŔA 1		,	, ,			e Redox (A16) (LRR K, L, R)
☐ Black His			Пт	Γhin Da	rk Surfac	e (S9) (LR	R R, MLRA 149	9B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)	,		e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed M		(2141414, 2)		_	elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1		-	d Matrix (_	urface (S9) (LRR K, L)
_ :	k Surface (A12)	(, (,			Dark Surfa					nese Masses (F12) (LRR K, L, R)
_	ucky Mineral (S1)		_			urface (F7)			_	oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)				Depressio					c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re			Ь,	(GUUX I	Jepi essio) iis (i o)				
Ξ ΄	Matrix (S6)									Material (F21)
		MI D/	\ 140P\						_ :	v Dark Surface (TF12)
	ace (S7) (LRR R		and wetland hydro							in in Remarks)
Restrictive Lay	er Present?		Yes 🔽 No	пυ	nknown					
		_							lydric Soil Prese	ent? ☑ Yes ☐ No
								•	iyane com i rese	163 140
Remarks:										
itemarks.										
D			A .: D: ::							
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:				
Wetland Quali	h∉ □ Lligh	П	Madarata 🗖	Low			Isolated Wetla	lond?	□ Voc □	No Unknown
Welland Quan	ty:	Ц'	Moderate ✓	LOW			isolateu vvett	iaiiu?	☐ Yes 🗹	No Unknown
General Comm	ents:									





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WETLAND DETERMINATION FORM - Norti	ncentral	and Nor	theast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	T ransmiss	sion Line	Other	
Project/Site: NED Milepost: 114198.3 Coun	ty: Fra	anklin	Date:	08/11/2015
Applicant/Owner: Kinder Morgan State	MA	Sampli	ng Point: NO-M-W0	004-PSS
Investigators: CM Quad Name: Northfield Town	ship: No	orthfield		
Logbook No.: 6M Logbook Pg.: 118 Tract: 21164				
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☑ Conca	ave 🔲 C	onvex None	Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.637596	Long:	-72.4352	214	Datum: NAD83
Soil Map Unit Name: Canton fine sandy loam, 8 to 15 percent slopes, very stony			NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	. □ No ((If no, explain	in in Remarks.)	
Are Vegetation Soil □ or Hydrology □ significantly disturbed? □ N	o Are "No	lormal" Circu	mstances present?	✓ Yes □ No
Are Vegetation □ Soil □ or Hydrology □ naturally problematic? ☑ N				
Are vegetation coil or rigulology naturally problematic: iv	O			
SUMMARY OF FINDINGS - Attach site map showing sampling po	int location	ons, trans	sects, important	features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No				
Hydric Soil Present? ☑ Yes ☐ No	Is the S	Sampled A a Wetland	Area ₁₂ ☑ Yes □] No
Wetland Hydrology Present? ☑ Yes ☐ No	***************************************	a weatana	••	
Field Wetland Classification: PSS				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		<u>Se</u>	condary Indicators (2	or more required)
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		$\overline{\checkmark}$	Drainage Patterns (E	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines (B1	16)
☐ Saturation (A3) ☐ Marl Deposits (B15)			Dry-Season Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			Crayfish Burrows (C	8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along L	iving Roots ((C3)	Saturation Visible or	n Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)			Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (C6)	$\overline{\checkmark}$	Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)			Shallow Aquitard (D	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			Microtopographic Re	elief (D4)
Sparsely Vegetated Concave Surface (B8)		$\overline{\mathbf{V}}$	FAC-Neutral Test (D	95)
Field Observations:				
Surface Water Present?				
Water Table Present? ☐ Yes ☑ No Depth (inches):	We	etland Hydro	ology Present?	Vac 🗖 Na
Saturation Present?			V	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	inspections),), if available)):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name	%	% Cover	Dominant	Indicator Status
		20	YES	FAC
Tsuga canadensis		10	YES	FACU
Total Co	over:	30		



Herb Stratum Plot Size: 5 Scientific Name Osmunda claytoniana Fragaria virginiana	al Cover:	D Cover 10 15 10 10 10 10 55	Dominant YES YES YES YES YES YES YES	Indicator Status FACW FAC FACU FACW FACW FAC
Scientific Name Spiraea alba Rhamnus cathartica Tsuga canadensis Vaccinium corymbosum Acer rubrum Tota Herb Stratum Plot Size: 5 Scientific Name Osmunda claytoniana Fragaria virginiana	al Cover:	10 15 10 10 10 10 55	YES YES YES YES YES	FACW FAC FACU FACW
Spiraea alba Rhamnus cathartica Tsuga canadensis Vaccinium corymbosum Acer rubrum Tota Herb Stratum Plot Size: 5 Scientific Name Osmunda claytoniana Fragaria virginiana	al Cover:	10 15 10 10 10 10 55	YES YES YES YES YES	FACW FAC FACU FACW
Rhamnus cathartica Tsuga canadensis Vaccinium corymbosum Acer rubrum Tota Herb Stratum Plot Size: 5 Scientific Name Osmunda claytoniana Fragaria virginiana		15 10 10 10 10 55	YES YES YES YES	FAC FACU FACW
Herb Stratum Plot Size: 5 Scientific Name Osmunda claytoniana Fragaria virginiana		55	'	
Herb Stratum Plot Size: 5 Scientific Name Osmunda claytoniana Fragaria virginiana				
Plot Size: 5 Scientific Name Osmunda claytoniana Fragaria virginiana	9/	6 Cover		
Scientific Name Osmunda claytoniana Fragaria virginiana	9/	6 Cover		
Osmunda claytoniana Fragaria virginiana	70	o Cover	Dominant	Indicator Ctatus
Fragaria virginiana		25	YES	Indicator Status FAC
Tota		10	YES	FACU
	al Cover:	35		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	%	6 Cover	Dominant	Indicator Status
Tota	al Cover:			
Dominance Test Worksheet: Pre-	valence Index W	orksheet:		
That Are OBL_FACW_or FAC: 6 (A)	al % Cover of:		Multiply by:	
OBI	_ Species:	0	x 1 = <u>0</u>	
Species Across All Strata: 9 (B)	CW Species:		x 2 = <u>40</u>	
FAC	C Species:		x 3 = <u>210</u>	
That Are OBL, FACW, or FAC: 67 (A/B)	CU Species:		x 4 = <u>120</u>	
	_ Species:	_	$x 5 = \underline{0}$	
Coll		120 (A)	<u>370 (B)</u>	
	Preval	ence Index =	B/A = <u>3.08</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0		D	0 F V F	7. No.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	drophytic Vegeta	ition Present	? ☑ Yes □] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
Tomano.				
Remarks:				



Providence, F	KI 02904									
SOIL										
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm t	he absen	ce of indicators.)	
Depth	Matrix				atures					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure	Remarks
0.6	, ,		` ′		C			CANDY	LOAM	
0-6	10YR 4/1	95	10YR 4/6	5		PL		SANDY	LOAM	
6-12	10YR 3/2	30	10YR 5/1 10YR 4/6	60	D C	M M		SANDY	LOAM	
			1011(4/0			"				
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	, CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess otl	herwise n	oted.)			Indicators for Pi	roblematic Hydric Soils³:
☐ Histosol (A	A1)			Polvval	ue Below	Surface (S	88) (LRR R,		☐ 2 cm Muck ((A10) (LRR K, L, MLRA 149B)
_ `	pedon (A2)			/ILŔA 1		(-	-/(,			e Redox (A16) (LRR K, L, R)
☐ Black Hist			П 1	hin Da	ark Surface	e (S0) (I P	R R, MLRA	1/0R)	_	Peat or Peat (S3) (LRR K, L, R)
								1430)		
	Sulfide (A4)		_	-	-		(LRR K, L)			e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed M				_	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	•	ed Matrix (·				urface (S9) (LRR K, L)
	k Surface (A12)				Dark Surfa				☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))	▼ □	Peplete	ed Dark Su	urface (F7)			☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		☐ F	Redox	Depression	ns (F8)				c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)								☐ Red Parent	Material (F21)
☐ Stripped I	Matrix (S6)								□ Very Shallov	v Dark Surface (TF12)
□ Dark Surf	ace (S7) (LRR R	, MLR	A 149B)						Other (Expla	ain in Remarks)
3Indicators of I	ovdrophytic vede	tation a	and wetland hydro	ology n	nust he nr	esent unle	ess disturbe	d or prob	lematic	
Remarks:										
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Con	nments:				
Wetland Qualit	ty: High		Moderate 🗹	Low			Isolated	Wetland?	☐ Yes 🗹	No Unknown
General Comm	ients:									





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WETLAND DETERMINATION FORM - Nort	hcent	ral and No	ortheast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Tran	smission Line	Other	
Project/Site: NED Milepost: 114025.1 Cour	nty:	Franklin	Date:	08/11/2015
Applicant/Owner: Kinder Morgan State	e: MA	Samp	pling Point: NO-M-W	004-UPL
Investigators: CM Quad Name: Northfield Town	nship:	Northfield	<u> </u>	_
Logbook No.: 6M Logbook Pg.: 115 Tract: 21164				
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:		Concave 🗹	Convex None	Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.637134	L	.ong: -72.43	85377	Datum: NAD83
Soil Map Unit Name: Canton fine sandy loam, 8 to 15 percent slopes, very stony			NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Ye	s П	No (If no, exp	lain in Remarks.)	
Are Vegetation Soil □ or Hydrology □ significantly disturbed? □ N	vo — No Ar	re "Normal" Cir	cumstances present?	✓ Yes ☐ No
	No		·	
SUMMARY OF FINDINGS - Attach site map showing sampling po	oint loc	cations, tra	nsects. important	features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No				
Hydric Soil Present? ☐ Yes ☑ No	Is	the Sampled	I Area □ Yes ☑	1 No
Wetland Hydrology Present? ☐ Yes ☑ No	wit	thin a Wetlaı	nd? Lies L	_ NO
Field Wetland Classification: UPLAND PLOT				
	1 W003	Dee		
Remarks: Vegetation disturbed due to powerline maintenance. Share with NO-N	VI-VVUU3-I	F33		
HYDROLOGY			2 1 1 1 1 (2)	
Wetland Hydrology Indicators:		<u> </u>	Secondary Indicators (2	
Primary Indicators (minimum of one required; check all that apply)		[Surface Soil Cracks	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		_	Drainage Patterns (•
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		[Moss Trim Lines (B	•
☐ Saturation (A3) ☐ Marl Deposits (B15)		[Dry-Season Water	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			Crayfish Burrows (C	•
Sediment Deposits (B2) Oxidized Rhizospheres along	Living Ro	-	<u> </u>	n Aerial imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	!)		Stunted or Stressed	, ,
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled	d Soils (C	C6) L	Geomorphic Positio	` ′
Iron Deposits (B5) Thin Muck Surface (C7)		L	Shallow Aquitard (D	•
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		L	Microtopographic R	
Sparsely Vegetated Concave Surface (B8)		L	FAC-Neutral Test (I	J5)
Field Observations:				
Surface Water Present?				
Water Table Present? ☐ Yes ☑ No Depth (inches):		Wetland Hyd	drology Present?	V
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)			Ц	Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	s inspecti	ions), if availab	le):	
VEGETATION				
Tree Stratum				
Plot Size: 30		· · ·		
Scientific Name		% Cover	Dominant	Indicator Status
Tsuga canadensis Quercus rubra		45 20	YES YES	FACU FACU
Total C	over.	20 65	TES	1 400
lotal o				



Sapling/Shrub Stratum						
Plot Size: 15	1		,			
Scientific Name		% Cover	Dominant	Indicator Status		
Tsuga canadensis Acer pensylvanicum Quercus rubra		10 10 10	YES YES YES	FACU FACU FACU		
	Total Cover:	30				
Herb Stratum						
Plot Size: 5						
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Woody Vine Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:				
Number of Dominant Species	Total % Cover	of:	Multiply by:			
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>			
Species Across All Strata: 5 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>95</u>	x 4 = <u>380</u>			
	UPL Species:	<u>0</u>	x 5 = <u>0</u>			
	Column Totals:	<u>95 (A)</u>	380 (B)			
	1	Prevalence Index :	$= B/A = \underline{4.00}$			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
2 - Dominance Test is > 50%						
☐ 3 - Prevalence Index is ≤ 3.0	Hydrophytic Vegetation Present? ☐ Yes ☑ No					
4 - Morphological Adaptations¹ (Provide supporting						
data in Remarks or on a separate sheet)						
Decklered in History but in Versate in 1 (Final in)						
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Remarks:						



Providence, R	1 02904												
SOIL													
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the ir	ndicator o	r confirm th	e absen	nce of indicators.))			
Depth	Matrix		Redox Features										
(inches)	Color (moist) %		Color (moist)	% Type¹		Loc²		Texture			Remarks		
0-9	10YR 4/4	70	10YR 5/6	30	С	М		SILT LOAM					
9-18	10YR 6/8	70	10YR 5/6	30	С	М	SANDY LOAM						
¹Type: C=Cond	entration D=De	epletion	l n, RM=Reduced	Matrix	CS=Cov	ered Sand	or Coated (Grains	² Location: PL:	 =Pore Lining	n M=Ma	trix	
**			o all LRR's, unle				. c. ccatca		Indicators for P				
		cable t				-	'0\				•		
Histosol (A	,			oiyvaii ILRA 1		Surrace (S	88) (LRR R,		2 cm Muck (
_	pedon (A2)					(00) (1.5		op)	Coast Prairi				
☐ Black Hist			_				R R, MLRA	149B)	5 cm Mucky			KK K, L, K)	
	Sulfide (A4)		_	-	-		(LRR K, L)		☐ Dark Surfac		•		
_	_ayers (A5)		_	-	Gleyed Ma				Polyvalue B			-	
	Below Dark Surfa	ace (A1	_	•	d Matrix (•			☐ Thin Dark S	urface (S9)	(LRR K, I	L)	
	Surface (A12)		_		Dark Surfa	, ,						_RR K, L, R)	
	cky Mineral (S1)			eplete	d Dark Su	urface (F7)			☐ Piedmont FI	loodplain So	ils (F19)	(MLRA 149B)	
_	eyed Matrix (S4)			Redox I	Depressio	ns (F8)				ic (TA6) (ML	.RA 144A	A, 145, 149B)	
☐ Sandy Re	dox (S5)								☐ Red Parent	Material (F2	<u>'</u> 1)		
☐ Stripped N	Matrix (S6)								☐ Very Shallov	w Dark Surfa	ace (TF12	2)	
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	ain in Rema	rks)		
3Indicators of h	ydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	d or prob	lematic.				
Remarks:									Hydric Soil Prese	ent?	Yes [☑ No	
Nemarks.													
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:							
Wetland Qualit	y: High	_ r	Moderate	Low			Isolated V	Vetland?	☐ Yes ☐	No 🗆	Unkno	wn	
General Comm	ents:												
	AKEN ON CENT	FRI IN	F										
2,			_										





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WETLAND DETERMINATION FORM - Northcentral and Northeast Region								
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	☐ Tra	ansmission	Line	☐ Other				
Project/Site: NED Milepost: 121680.0 Coun	nty:	Frankli	in		Date:	08/08/2015		
Applicant/Owner: Kinder Morgan State	e: M	1A	Sampl	ing Point:	NO-M-W0	01-PEM		
Investigators: CM Quad Name: Northfield Town	nship:	Northfi	ield					
Logbook No.: 6M Logbook Pg.: 99 Tract: 21118								
Landform (hillslope, terrace, etc.): Depression Local Relief:	V	Concave		Convex	None	Slope%.:	0	
Subregion (LRR): Middle Atlantic Lat: 42.656620		Long: -	-72.426	477		Datum: NAD8	33	
Soil Map Unit Name: Millsite-Woodstock complex, 25 to 60 percent slopes, very rock	ky	NWI Classification: Not mapped					ped	
Are climatic / hydrologic conditions on the site typical for this time of year?:	es 🗀	No (If no	o, expla	in in Remark	s.)			
Are Vegetation ☑ Soil □ or Hydrology □ significantly disturbed? □ N	No	Are "Norma	al" Circu	umstances pr	esent?	✓ Yes	☐ No	
Are Vegetation $\ \square$ Soil $\ \square$ or Hydrology $\ \square$ naturally problematic? $\ \square$ N	No							
SUMMARY OF FINDINGS - Attach site map showing sampling po	oint l	ocations	tran	sects im	nortant	features (etc	
Hydrophytic Vegetation Present? ✓ Yes ☐ No		Ocations	, traii	30013, 1111	portant	Toutures, v		
Hydric Soil Present? ✓ Yes ☐ No		s the San			Yes □	No		
Wetland Hydrology Present? ✓ Yes ☐ No	V	within a W	Vetland	d? 💆	163 🗀	NO		
Field Wetland Classification: PEM								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:			Se	econdary Indi	cators (2 c	or more require	ed)	
Primary Indicators (minimum of one required; check all that apply)			\checkmark	Surface So	oil Cracks	(B6)		
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)		☐ Drainage Patterns (B10)						
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		✓ Moss Trim Lines (B16)						
☐ Saturation (A3) ☐ Marl Deposits (B15)		□ Dry-Season Water Table (C2)						
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)						
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along L	Living	ng Roots (C3) Saturation Visible on Aerial imagery (C9)					ry (C9)	
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	4)	Stunted or Stressed Plants (D1)						
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	d Soils	Soils (C6) Geomorphic Position (D2)						
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		✓ Shallow Aquitard (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)				elief (D4)			
✓ Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)						
Field Observations.								
Field Observations: Surface Water Present? ✓ Yes ✓ No Depth (inches):								
	Wetland Hydrolom, Present?							
	Wetland Hydrology Present? ✓ Yes □ No			No				
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)								
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):								
W-2								
VEGETATION								
Tree Stratum								
Plot Size: 30		1 0/ 0		5	nant	J	Ctat::-	
	`ovo=:	1		YE	3	FAC	U	
i otal Co	over:	П	J					
Scientific Name Tsuga canadensis Total Co	Cover:	% Cc)	Domi		Indicator FAC		



T TOVIGETICE, TH 02004				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus Tsuga canadensis Spiraea alba		5 5 5	YES YES YES	FACU FACU FACW
	Total Cover:	15		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Scirpus cyperinus Scirpus microcarpus Juncus effusus		40 5 5	YES NO NO	OBL OBL OBL
	Total Cover:	50	-	1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>50</u>	x 1 = <u>50</u>	
Total Number of Dominant	FACW Species	: <u>5</u>	x 2 = <u>10</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species	FACU Species:	<u>20</u>	x 4 = <u>80</u>	
That Are OBL, FACW, or FAC: 40 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>75 (A)</u>	140 (B)	
		Prevalence Index =	= B/A = <u>1.87</u>	
Lludrankutia Varatatian Indiantara.		Tovalorioo iridox -	- <u>1.01</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				-
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Presen	nt? ☑ Yes [] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm the abse	nce of indicators.)	
Depth (inches)	Matrix		Re	dox Fe	atures		Ta.,	ture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	ı ex	ture	remarks
0-4	10YR 4/1	75	10YR 3/3 10YR 4/6	15 10	OO	M PL	SILT	LOAM	
4-8	GLEY1 7/N	85	2.5Y 3/1 10YR 4/6	10 5	C	M M	COARSE SA	ANDY LOAM	
8-12	10YR 5/4	80	7.5YR 5/6	20	С	М	COARS	E SAND	
¹Type: C=Cond	centration, D=De	epletion	I n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	L =Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Applie	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils ³ :
Black Hist Hydrogen Stratified I Depleted Thick Dari Sandy Mt Sandy Gle Sandy Re Stripped I Dark Surf	bedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surfactor (A12) icky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	, MLRA	T	Thin Da Loamy I Loamy	49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	e (S9) (LRI neral (F1) (atrix (F2) F3) ace (F6) urface (F7) ns (F8)	8) (LRR R, R R, MLRA 149B) (LRR K, L)	Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark St Iron-Mangan Piedmont Fle Mesic Spodi Red Parent I Very Shallov Other (Expla	(A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) oodplain Soils (F19) (MLRA 149B) ic (TA6) (MLRA 144A, 145, 149B) Material (F21) w Dark Surface (TF12) ain in Remarks) Pent? Yes No
•	Habitat Characte		Aquatic Diversity	or Gei	neral Com	nments:			
			Moderate	Low			Isolated Wetland	?	No 🗹 Unknown
General Comm	ents:								





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WETLAND DETERMINATION FORM - North	central and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 121639.2 Count	/: Franklin Date: 08/08/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: NO-M-W001-PFO
Investigators: CM Quad Name: Northfield Towns	hip: Northfield
Logbook No.: 6M Logbook Pg.: 98 Tract: 21118	
Landform (hillslope, terrace, etc.): Depression Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.656466	Long: -72.426431 Datum: NAD83
Soil Map Unit Name: Millsite-Woodstock complex, 25 to 60 percent slopes, very rocky	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☑ Soil ☐ or Hydrology ☐ naturally problematic? ☐ No	
CLIMMADY OF FINDINGS. Attach site man chausing compling wai	nt leastions transacts immertant factures at
SUMMARY OF FINDINGS - Attach site map showing sampling poi	in locations, transects, important leatures, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	Is the Sampled Area
Hydric Soil Present? ✓ Yes ☐ No Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetland? Yes No
Field Wetland Classification: PFO	
Remarks:	
Keniano.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Li	ving Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	✓ Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	☑ Yes □ No
(includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous i	nspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Betula lenta	30 YES FACU
Acer rubrum Tsuga canadensis	10 NO FAC 15 YES FACU
Total Co	ver: 55



X verticillata 5	NO
A cover Dominant Indicate	NO
A	NO
### #################################	NO
th Stratum of Size: 5 ientific Name % Cover Dominant Indicators: Total Cover: 50	PES OBL Dominant Indicator Status
to Size: 5 identific Name	PES OBL Dominant Indicator Status ultiply by: 1 = 50 2 = 20 3 = 45 4 = 500 5 = 0 615 (B)
Second S	PES OBL Dominant Indicator Status
Total Cover: 50 Total Cov	PES OBL Dominant Indicator Status
Total Cover: 50 Sody Vine Stratum Size: 30	Dominant Indicator Status ultiply by: 1 = 50 2 = 20 3 = 45 4 = 500 5 = 0 615 (B)
Total Cover: Tot	ultiply by: 1 = 50 2 = 20 3 = 45 4 = 500 5 = 0 615 (B)
to Size: 30 identific Name Cover Dominant Indicators:	ultiply by: 1 = 50 2 = 20 3 = 45 4 = 500 5 = 0 615 (B)
Total Cover: Prevalence Index Worksheet: Total % Cover of: Multiply by: M	ultiply by: 1 = 50 2 = 20 3 = 45 4 = 500 5 = 0 615 (B)
Total Cover: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 50	ultiply by: 1 = 50 2 = 20 3 = 45 4 = 500 5 = 0 615 (B)
Prevalence Index Worksheet: Index of Dominant Species Inter of Domin	1 = 50 2 = 20 3 = 45 4 = 500 5 = 0 615 (B)
Prevalence Index Worksheet: Index of Dominant Species Inter of Domin	1 = 50 2 = 20 3 = 45 4 = 500 5 = 0 615 (B)
Total % Cover of: Multiply by: OBL Species: 50	1 = 50 2 = 20 3 = 45 4 = 500 5 = 0 615 (B)
Decided Across All Strata: 1 (A) Decides Across All Strata: 5 (B) FACW Species: 10	1 = 50 2 = 20 3 = 45 4 = 500 5 = 0 615 (B)
OBL Species: 50	2 = 20 $ 3 = 45 $ $ 4 = 500 $ $ 5 = 0 $ $ 615 (B)$
FAC Species: 15	3 = 45 4 = 500 5 = 0 615 (B)
FACU Species: 125 x 4 = 500 UPL Species: 0 x 5 = 0 Column Totals: 200 (A) Prevalence Index = B/A = 3.08 rdrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes No	4 = 500 5 = 0 615 (B)
at Are OBL, FACW, or FAC: 20 (A/B) UPL Species: 0	5 = <u>0</u> 615 (B)
Column Totals: 200 (A) 615 (B) Prevalence Index = B/A = 3.08 Indrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes ☐ No	615 (B)
Prevalence Index = B/A = 3.08 vdrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes ☐ No	
rdrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes ☐ No	A = <u>3.06</u>
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes ☐ No	
2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting	
3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes ☐ No	
4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes 🗆 No	
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes LI No	
	☑ Yes ∐ No
Problematic Hydrophytic Vegetation¹ (Explain)	
dicators of hydric soil and wetland hydrology must be esent, unless disturbed or problematic.	
······································	
emarks:	
adicators of hydric soil and wetland hydrology must be esent, unless disturbed or problematic.	V



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	confirm the abser	nce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		Text	hure	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	160	iui G	iveniaivs
0-3	10YR 3/2	100					ORG	ANIC	
3-8	10YR 5/1	30	10YR 6/2 10YR 5/6	60 10	D C	M M	FINE SAN	DY LOAM	
8-14	10YR 6/2	80	10YR 5/6	20	С	M	FINE SAN	DVIOAM	
0-14	10110/2	80	10113/0	20		IVI	I INC SAIN	DT LOAW	
¹Type: C=Cond	centration, D=De	l epletion	l n, RM=Reduced l	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	 =Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils³:
☐ Histosol (A	A1)		□ P	olyvalı	ue Below S	Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		N	ILRA 1	49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
☐ Black Hist	ic (A3)		□⊤	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)		□ L	oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	(1) 🗹 D	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		☐ R	edox [Dark Surfa	ce (F6)		☐ Iron-Mangar	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown				
								Hydric Soil Prese	ent? ☑ Yes ☐ No
Remarks:							I		
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	ments:			
·		,	, ,						
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetland?	Yes 🗆	No 🔽 Unknown
Conoral Comm	onto								
General Comm	ents:								





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WETLAND DETERMINATION FORM - North	central an	d Northeast	Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission	Line	er	
Project/Site: NED Milepost: 121705.9 County	: Frankl	lin	Date:	08/08/2015
Applicant/Owner: Kinder Morgan State:	MA	Sampling Point:	NO-M-W0	01-UPL
Investigators: CM Quad Name: Northfield Towns	hip: Northf	ield		
Logbook No.: 6M Logbook Pg.: 100 Tract: 21118				
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave	☑ Convex	None	Slope%.: 10
Subregion (LRR): Middle Atlantic Lat: 42.656661	Long:	-72.426384		Datum: NAD83
Soil Map Unit Name: Millsite-Woodstock complex, 25 to 60 percent slopes, very rocky		NWI Cla	ssification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If n	o, explain in Rema	rks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? 🔽 No	Are "Norm	al" Circumstances	present?	✓ Yes □ No
Are Vegetation ☑ Soil ☐ or Hydrology ☐ naturally problematic? ☐ No				
SUMMARY OF FINDINGS - Attach site map showing sampling point	nt locations	s. transects. ii	mportant	features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No		,,		
Hydric Soil Present? ☐ Yes ☑ No	Is the Sar	npled Area	Yes ✓	Í No
Wetland Hydrology Present? ☐ Yes ☑ No	within a V	Vetland? □	103 🖸	110
Field Wetland Classification: UPLAND PLOT				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		Secondary Ir	ndicators (2 d	or more required)
Primary Indicators (minimum of one required; check all that apply)		☐ Surface	Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		□ Drainag	e Patterns (E	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		☐ Moss Tr	im Lines (B1	6)
☐ Saturation (A3) ☐ Marl Deposits (B15)		☐ Dry-Sea	son Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish	Burrows (Ca	8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Liv	ring Roots (C3)	☐ Saturati	on Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		☐ Stunted	or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	Soils (C6)	☐ Geomor	phic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		☐ Shallow	Aquitard (D3	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		☐ Microtor	ographic Re	elief (D4)
Sparsely Vegetated Concave Surface (B8)		☐ FAC-Ne	utral Test (D	(5)
Field Observations:				
Surface Water Present? ☐ Yes ☑ No Depth (inches):				
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetlar	nd Hydrology Pre	sent?	
Saturation Present?				Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	nspections), if a	available):		
		•		
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name	% Co	over Do	minant	Indicator Status
Quercus alba	20		'ES	FACU
Tsuga canadensis	39	ı	'ES	FACU
Total Cov	er: 5	5		



T TOVIGETICS, TAT 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Tsuga canadensis Quercus rubra Betula lenta		10 10 20	YES YES YES	FACU FACU FACU
Deluia Ierria	Total Cover:	40	123	TACO
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species:	. <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>o</u>	x 3 = <u>0</u>	
Percent of Dominant Species	FACU Species:	<u>95</u>	x 4 = <u>380</u>	
That Are OBL, FACW, or FAC: 0 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	95 (A)	380 (B)	
	_	Prevalence Index		
H. Loud, Manager L. Posta		Tevalence macx	<u> </u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Prese	nt? ☑ Yes □] No
✓ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: Terrace on a steep cliff				



SOIL Popular Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Popular Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Popular Description: (Description: (Description: Robert Reduce Returns: Redox Features: Texture Remarks: Remarks: Redox Features: Redox Features: Remarks: R	T TOVIGETICE, T	02304																	1.5
Depth (inches) Matrix Redox Features Texture Remarks	SOIL																		
Color (moist)	Profile Descrip	tion: (Describe	the de	pth neede	ed to d	locum	ent the in	dicator o	r confirm	he abser	nce o	indica	ators.)					
Color (most)		Matrix			Red	lox Fe	atures			Tax	uro						 D^	orka	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. **Location: PL=Pore Lining, M=Matrix* Hydric Soil Indicators: (Applicable to all LRR*s, unless otherwise noted.) Histiosol (A1)	(inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc ²		rext	ure					_	vem_	aiks	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	0-6	2.5YR 2.5/3	100							ORGA	ANIC				Rock	refu	sal a	at 6",	bedrock
Histosol (A1)	¹Type: C=Cond	centration, D=De	epletion	, RM=Rec	duced I	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2	ocation	n: PL:	 =Pore	Lining	 j, M=	=Ma	trix	
Histic Epipedon (A2)	Hydric Soil Ind	licators: (Appli	cable to	o all LRR's	s, unle	ss oth	erwise n	oted.)			Ind	cators	for P	robler	natic	Hyd	ric S	ioils³	:
Remarks: DUFF LAYER OVER BEDROCK OUTCROP Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality:	Histic Epip Black Hist Hydrogen Stratified I Depleted I Thick Darl Sandy Mu Sandy Gle Sandy Re Dark Surfa Jandicators of F Restrictive Lay	bedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surfactor (A12) locky Mineral (S1) leyed Matrix (S4) dox (S5) Matrix (S6) lace (S7) (LRR Reconstructions)	, MLRA	1) 149B) and wetland	M TI Le D R R A A A A A A A A A A A	hin Da pamy (eplete edox [edox [edox [odox [49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	e (S9) (LR neral (F1) atrix (F2) F3) ace (F6) arface (F7) ns (F8)	R R, MLRA	. 149B) ed or prob		Coast 5 cm f Dark \$ Polyva Thin D Iron-M Piedm Mesic Red P Very \$ Other tic.	Prairi Mucky Mucky Surface Sur	e Redde Peat of the Peat of th	ox (A1 or Peace (LRR (LRR (Surface (S9) (Masses (Masse	6) (L K, L e (S8 (LRR (LRR 1) (LRR 1)	LRR 3) (L ., M) 8) (L R K, I 12) (I 1444 TF1:	K, L, RR K RR K L) LRR I (MLR 145	R) (, L, R) (, L, R) (K, L, R) (RA 149B) (5, 149B)
DUFF LAYER OVER BEDROCK OUTCROP Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown General Comments:											. i y u i	10 0011	1103			16	5 [<u>v</u>	NO
Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality:	Remarks:																		
Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown General Comments:		OVER BEDROC	K OUT	CROP															
General Comments:	Description of I	Habitat Characte	eristics,	Aquatic Di	versity	or Gei	neral Com	nments:											
	Wetland Qualit	y: High		/loderate		_ow			Isolated	Wetland?	· [] Ye	s 🗖	No		Un	ıkno	wn	
DATA PLOT TAKEN ON CENTERLINE AT CLIFF FACE	General Comm	ents:																	
	DATA PLOT T	AKEN ON CENT	ERLINI	E AT CLIF	F FAC	E													





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WET	LAND DET	TERMINA	ATION F	ORM - N	Northc	entral an	d No	ortheast	Region		
☑ Centerline ☐ Re-Rout	e 🔲 Acce	ss Road	☐ Ancilla	ary Facility		Transmission	n Line	☐ Othe	er		
Project/Site: NED		Milepo	ost: 1224	45.6	County:	Frankl	lin		Date:	08/10/201	5
Applicant/Owner: Kinder Morga	n				State:	MA	Samp	oling Point:	NO-M-W	002A-PEM	
Investigators: CM	Quad N	ame: North	field		Township	p: Northf	field				
Logbook No.: 6M	Logbook Pg	j.: 106	Trac	t: 21118	'						
Landform (hillslope, terrace, etc): Depre	ssion	<u> </u>	Local Re	elief: v	Concave		Convex	None	Slope%.:	0
Subregion (LRR): Middle A	tlantic		Lat: 42.65	58341		Long:	-72.42	4839		Datum: NA	D83
Soil Map Unit Name: Wood	stock-Millsite-R	ock outcrop	complex, 8	to 15 percei	nt slopes			NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic condition	ns on the site t	ypical for this	time of year	ar?: ▽	¶ Yes	☐ No (If n	o, expl	lain in Rema	rks.)		
Are Vegetation ✓ Soil ✓	or Hydrolog	y √ sign	ificantly dist	urbed?	□ No	Are "Norm	al" Circ	cumstances	present?	 ✓ Yes	☐ No
Are Vegetation ☐ Soil ☐			rally proble		— ☑ No						
SUMMARY OF FINDING	S - Attach	cite man	showing	eamplin	a noint	locations	e tra	neacte ii	mnortani	t foatures	etc
		Yes	No	Sampini	ig point	liocations	5, II a	1136613, 11	пропан	i reatures	., e.c.
Hydrophytic Vegetation Present		=				Is the Sar	mpled	Area 🗔	. V	7 N	
Hydric Soil Present?	☑	Yes	No No			within a V	Netlar	nd? ✓	Yes [] No	
Wetland Hydrology Present?	<u></u>	Yes	No								
Field Wetland Classification:	PEM	VET: 4115									
Remarks: ACCESS RC	AD BISECTS V	VETLAND									
HYDROLOGY											
Wetland Hydrology Indicators							<u> </u>	Secondary Ir	ndicators (2	or more requ	uired)
Primary Indicators (minimum of	one required; o	heck all that	apply)					Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)		√ ∨	/ater-Staine	d Leaves (E	39)			☐ Drainag	e Patterns ((B10)	
☐ High Water Table (A2)		□ A	quatic Faun	ia (B13)				☐ Moss Tr	im Lines (B	16)	
☐ Saturation (A3)		□ N	larl Deposits	s (B15)				☐ Dry-Sea	son Water	Table (C2)	
■ Water Marks (B1)		□н	ydrogen Su	lfide Odor (C1)			Crayfish	Burrows (0	C8)	
☐ Sediment Deposits (B2)		☑ C	xidized Rhi	zospheres a	along Livin	ng Roots (C3)) [☐ Saturation	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)		 P	resence of I	Reduced Iro	on (C4)			Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)		☐ R	ecent Iron F	Reduction in	Tilled So	ils (C6)		Geomor	phic Position	on (D2)	
☐ Iron Deposits (B5)		□⊤	hin Muck St	urface (C7)			5	✓ Shallow	Aquitard (D	03)	
☐ Inundation Visible on Aeria	Imagery (B7)		ther (Explai	n in Remarl	ks)			Microtop	ographic R	elief (D4)	
☐ Sparsely Vegetated Conca	ve Surface (B8)						☐ FAC-Ne	utral Test (I	D5)	
Field Observations:											
Surface Water Present?	Yes √ ∣	No Depth	(inches):								
Water Table Present?	: = .	•	(inches):			Wetlar	nd Hvd	Irology Pres	sent?		
Saturation Present? (includes capillary fringe)	: <u> </u>	•	(inches):	14				3,		Yes □	No
Remarks (Describe Recorded D	nto (etroem ===	no monitorio	a woll com-	I photos ==	ovious is-	noctions) if =	nvoilat	lo):			
Remarks (Describe Recorded D	ila (Siream gag	je, monitorinį	y well, aeria	i priotos, pre	evious iris	pections), ii a	avallab	ie).			
VEGETATION											
Tree Stratum											
Plot Size: 30											
Scientific Name						% C	over	Do	minant	Indicate	or Status
				To	otal Cover	r:					



pling/Shrub Stratum				
ot Size: 15				
ientific Name		% Cover	Dominant	Indicator Status
tula alleghaniensis		10	YES	FAC
rix laricina Ilmia latifolia		2 5	NO NO	FACW FACU
er rubrum		2	NO	FAC
accinium corymbosum		10	YES	FACW
	Total Cover:	29		
rb Stratum				
ot Size: 5				
ientific Name		% Cover	Dominant	Indicator Status
irpus cyperinus oodwardia virginica		5 5	YES YES	OBL OBL
arex lurida		5	YES	OBL
	Total Cover:	15	'	•
pody Vine Stratum				
ot Size: 30				
eientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
ominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
umber of Dominant Species nat Are OBL_FACW_or FAC: 5 (A)	Total % Cover	of:	Multiply by:	
nat Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>15</u>	x 1 = <u>15</u>	
otal Number of Dominant	FACW Species	: <u>12</u>	x 2 = <u>24</u>	
pecies Across All Strata: 5 (B)	FAC Species:	<u>12</u>	x 3 = <u>36</u>	
ercent of Dominant Species	FACU Species		x = 4 = 4 = 4 = 4 = 4 = 4 = 4 = 4 = 4 =	
nat Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>o</u>	x = 0	
	Column Totals:	, ,	<u>95 (B)</u>	
		Prevalence Index	= B/A = <u>2.16</u>	
ydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	egetation Prese	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)		_		_
Problematic Hydrophytic Vegetation¹ (Explain)				
ndicators of hydric soil and wetland hydrology must be esent, unless disturbed or problematic.				
emarks:				



2011	02004								The second of the second
SOIL									
•		the d				dicator o	r confirm the abs	sence of indicators.)	·
Depth (inches)	Matrix			dox Fe			Te	exture	Remarks
(Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			. tomane
0-7	10YR 2/2	100					OR	GANIC	
7-14	10YR 4/1	30	10YR 6/1	60	D	М	VERY F	FINE SAND	
			10R 5/8	10	С	M,PL			
14-16	2.5Y 4/2	40	2.5Y 5/2	50	D	М	COARSE	SANDY LOAM	Refusal at 16"
			2.5Y 5/6	10	С	PL			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains	s. ² Location: PL=	=Pore Lining, M=Matrix
			o all LRR's, unle						roblematic Hydric Soils ³ :
Histosol (/						-	8) (LRR R,		(A10) (LRR K, L, MLRA 149B)
_ `	pedon (A2)			ILRA 1		Surface (S	o) (LKK K,		e Redox (A16) (LRR K, L, R)
				hin Do	rk Surface	, (SO) (LD)	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
☐ Black Hist			_			` ' '	,	= '	, , , , , , , , , , , , , , , , , , , ,
	Sulfide (A4)			-	-		(LRR K, L)	_	e (S7) (LRR K, L, M)
	Layers (A5)	200 (44		-	Gleyed Ma				elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A	_	-	d Matrix (I	•			urface (S9) (LRR K, L)
_	k Surface (A12)				Dark Surfa			_ ,	nese Masses (F12) (LRR K, L, R)
_	icky Mineral (S1)		_	-		ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		□ F	Redox L	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re								_	Material (F21)
	Matrix (S6)							= '	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
³ Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology m	nust be pr	esent, unle	ess disturbed or pr	roblematic.	
Restrictive Lay	er Present?	☑ '	Yes 🔲 No	□ U	nknown				
ROCK								Hydric Soil Prese	ent? ☑ Yes 🗆 No
16									
Remarks:							1		
Description of	Hahitat Characte	rietice	Aquatic Diversity	or Ge	neral Com	ments:			
•	WITH NO-AC3-\		Aquatic Diversity	01 00	noral con	inionis.			
			Moderate	Low			Isolated Wetlan	nd? 🗹 Ves 🗖	No. Unknown
Welland Qualit	y. 🔽 Ingn	ч.	vioderate	LOW			isolated Wetlan	iu: 🚺 ies 🔟	No Unknown
General Comm	ents:								





NE



WE	TLAND	DETE	ERMIN	ATION	FORM -	Northc	entral an	d No	ortheast	Region		
☑ Centerline ☐ Re-Ro	oute 🔲	Access	s Road	☐ An	cillary Facility		Transmission	n Line	☐ Oth	er		
Project/Site: NED			Milep	ost: 12	22404.5	County:	Frank	lin		Date:	08/10/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	oling Point	NO-M-W	002A-UPL	
Investigators: CM	С	Quad Nar	me: North	field		Townshi	p: Northf	field				
Logbook No.: 6M	Logb	ook Pg.:	107	Т	ract: 21118	•						
Landform (hillslope, terrace, e	tc.):	Hilltop			Local R	elief:	Concave	$\overline{\checkmark}$	Convex	None	Slope%.:	10
Subregion (LRR): Middle	e Atlantic			Lat: 4	2.658256		Long:	-72.42	4943		Datum: NA	D83
Soil Map Unit Name: Wo	odstock-Mil	llsite-Ro	ck outcrop	complex	, 8 to 15 perce	ent slopes			NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic condi	tions on the	e site typ	ical for thi	s time of	year?:	7 Yes	☐ No (If n	o, expl	lain in Rema	arks.)		
Are Vegetation ✓ Soil	or Hy	drology	☐ sigr	nificantly	disturbed?	□ No	Are "Norm	al" Circ	cumstances	present?	✓ Yes	☐ No
Are Vegetation Soil	or Hy	drology	nati	urally pro	blematic?	✓ No						
SUMMARY OF FINDIN	IGS - Att	tach si	ite map	showi	ng samplir	ng point	locations	s, tra	nsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Prese	nt?		Yes 🗹	No								
Hydric Soil Present?			Yes 🗹	No			Is the Sar within a V	mpled Netlar	l Area nd? □] Yes ⊡	∐ No	
Wetland Hydrology Present?			Yes 🗹	No								
Field Wetland Classification:	UPLA	ND PLC	T									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	rs:							5	Secondary I	ndicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum o	of one requ	uired; che	eck all tha	t apply)					Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)				Vater-Sta	ined Leaves (B9)			☐ Drainag	je Patterns (B10)	
☐ High Water Table (A2)				Aquatic F	auna (B13)				☐ Moss T	rim Lines (B	16)	
☐ Saturation (A3)				/larl Depo	osits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
□ Water Marks (B1)			□ +	Hydrogen	Sulfide Odor	(C1)				n Burrows (C	•	
☐ Sediment Deposits (B2)				Oxidized I	Rhizospheres	along Livir	ng Roots (C3)) [Saturati	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)			□ F	Presence	of Reduced Ir	on (C4)					d Plants (D1)	
☐ Algal Mat or Crust (B4)			☐ F	Recent Iro	on Reduction is	n Tilled So	ils (C6)			rphic Positio	, ,	
☐ Iron Deposits (B5)			י ם	hin Mucl	Surface (C7)					Aquitard (D	•	
☐ Inundation Visible on Ae	rial Imagery	y (B7)		Other (Ex	plain in Remai	rks)		L		pographic R		
Sparsely Vegetated Con	cave Surfa	ce (B8)						L	_ FAC-N∈	eutral Test (I	D5)	
Field Observations:												
Surface Water Present?	☐ Yes	✓ No	o Depth	n (inches)):							
Water Table Present?	☐ Yes	✓ No	•	(inches)			Wetlar	nd Hyd	Irology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ No	o Depth	n (inches)): 14						ies 🗹	NO
Remarks (Describe Recorded	Data (strea	am gage,	, monitorin	g well, a	erial photos, pi	revious ins	pections), if a	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Do	minant	Indicate	or Status
Quercus rubra Acer rubrum Tsuga canadensis							1, 1, 4	0		NO NO YES	F	ACU AC ACU
					Т	otal Cove	1	60	I	-	.,	



1 Tovidence, IXI 02504				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Kalmia latifolia Viburnum lantanoides Tsuga canadensis Hamamelis virginiana Betula lenta		5 15 10 10 5	NO YES YES YES NO	FACU FACU FACU FACU FACU
	Total Cover:	45		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Vaccinium angustifolium		5	YES	FACU
	Total Cover:	5	'	•
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 0 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>100</u>	x 4 = <u>400</u>	
That the OBE, I NOW, OI THO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>110 (A)</u>	430 (B)	
		Prevalence Index :	= B/A = <u>3.91</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	∐ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Profile Describe the depth needed to document the indicator or confirm the absence of indicators.) Describe	Providence, F	1 02904																			
Depth (inches)	SOIL																				
Color (moist)	Profile Descrip	otion: (Describe	the de	pth need	ed to	docum	ent the ir	ndicator o	r confirm	he absen	nce of	f indi	cato	rs.)							
Occident (moist)		Matrix			Re	dox Fe	atures														
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. **Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Hydrogen Sulfide (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F3) Iron-Manganese Masses (F12) (LRR K, L) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Surface (S7) (LRR K, L) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface	(inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc²		Text	ure							Rem	narks		
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)	0-3	5YR 3/2	100							ORGA	ANIC					Ве	edro	ock re	efusa	l at 3"	
Histosol (A1)	¹Type: C=Cond	L centration, D=De	pletion	, RM=Red	duced	Matrix,	CS=Cov	ered Sand	l I or Coated	Grains.	2[_ocati	ion: I	 PL=P	ore L	ining	, M	 1=Мг	atrix		
Histosol (A1)																				3.	
DUFF LAYER OVER EXPOSED BEDROCK SHELF Description of Habitat Characteristics, Aquatic Diversity or General Comments: DATA PLOT TAKEN ON CENTERLINE Wetland Quality:	Histic Epip Black Hist Hydrogen Stratified I Depleted Thick Darl Sandy Mt Sandy Gle Stripped I Dark Surfi	bedon (A2) iic (A3) Sulfide (A4) Layers (A5) Below Dark Surfack Surface (A12) iicky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	, MLRA	1) \ 149B) and wetland		MLŔA 1 Thin Da Loamy I Loamy (Deplete Redox I Deplete Redox I	49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	e (S9) (LR) neral (F1) atrix (F2) F3) ace (F6) urface (F7) ns (F8)	R R, MLRA	a 149B)		Coa: 5 cm Dark Poly Thin Iron- Pied Mes Red Very Othe	st Practical States of the States of	airie F cky Pe face (Belo Surfa ganes t Flood odic (ent Ma kylain	Redox Redox S7) (S7) (See Ma dplai TA6) Dark in Re	x (A1) r Pea (LRR (S9) (assessin Soi) (MLI Surfaal (F2)	(I6) (In the second sec	(LRR (LRR) (L, M) (S8) (L (R K, (12) ((F19) (TF1) (TF1)	K, L, LRR F) LRR K L) (L) (MLF (MLF 2)	R) (, L, R) (, L) K, L, R) RA 149B) 5, 149B)	
DATA PLOT TAKEN ON CENTERLINE Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown		OVER EXPOSE	D BEDF	ROCK SHI	ELF																
	·			•	versity	y or Ge	neral Com	nments:													
General Comments:	Wetland Qualit	y: High		/loderate		Low			Isolated	Wetland?	· [□ Y	es/		No		U	nkno	wn		
	General Comm	ents:																			





NE



WETLAND DETERMINATION FORM - N	orthcentral and Northeast Region
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 125891.5	County: Franklin Date: 05/28/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: NO-L-W006-PSS
Investigators: BH AK Quad Name: Northfield	Township: Northfield
Logbook No.: 2 Logbook Pg.: 11118 Tract: 21115	
Landform (hillslope, terrace, etc.): Slope - mid Local Re	ief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.666422	Long: -72.418191 Datum: NAD83
Soil Map Unit Name: Woodstock-Millsite-Rock outcrop complex, 8 to 15 percer	t slopes NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	No Are "Normal" Circumstances present? ☑ Yes ☐ No
Are Vegetation Soil or Hydrology naturally problematic?	₫ No
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	
Hydric Soil Present? ✓ Yes ☐ No	Is the Sampled Area
Wetland Hydrology Present? ✓ Yes ☐ No	Willia Walana
Field Wetland Classification: PSS	
Remarks: USE NO-L-W007-UPL AS REPRESENTATIVE UPLAND PLOT	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B	9)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (0	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres a	ong Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	n (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	s) Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present?	Wetland Hydrology Present?
Saturation Present?	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pre	vious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
To	tal Cover:



Providence, RI 02904				7460111
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Salix nigra		40 45	YES	OBL
Spiraea alba Rubus idaeus		15 10	YES NO	FACW FACU
	Total Cover:	65	!	1
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Osmundastrum cinnamomeum		76 COVE	NO	FACW
Euthamia graminifolia		5	NO	FAC
Onoclea sensibilis Carex crinita		15 5	YES NO	FACW OBL
	Total Cover:	30	ı	I
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Vitis labrusca		10	YES	FACU
	Total Cover:	10	I	I
Dominance Test Worksheet:	Provalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	01. <u>45</u>	$x 1 = \frac{45}{}$	
Total Number of Dominant	FACW Species		$x = \frac{45}{45}$ $x = \frac{70}{45}$	
Species Across All Strata: 4 (B)	FAC Species:	5. <u>55</u>	$x 3 = \frac{15}{15}$	
Percent of Dominant Species	FACU Species.		x 4 = 80	
That Are OBL, FACW, or FAC: 75 (A/B)	UPL Species:	. <u>20</u> <u>0</u>	x 5 = 0	
	Column Totals:		210 (B)	
		Prevalence Index	= B/A = 2.00	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	egetation Prese	nt? ☑ Yes I	□ No
add in Normanic of the a coparate officer,				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, F	(102904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		-	dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
0.6	, ,		, ,				CLAVI	LOAM	
0-6	10YR 4/1	80	10YR 4/6 10YR 5/8	15 5	C	M M	CLAY I	LOAM	
6-14	10YR 5/1	70	10YR 5/6 10YR 2/1	10 20	C	M M	FINE SANI	DY LOAM	
1Type: C-Con	contration D-D	oplotion	PM-Poducod	Matrix	CS-C0V	orod Sano	or Coated Grains.	2l ocation: DI -	 =Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	·	·				Tor Coaled Grains.		
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle			•			roblematic Hydric Soils ³ :
Histosol (/	A1)			olyvalı ILRA 1		Surface (S	88) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		IV	ILIXA I	1490)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	tic (A3)		П Т	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mi	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	 11)	eplete	d Matrix (F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
	k Surface (A12)		_	-	` Dark Surfa				nese Masses (F12) (LRR K, L, R)
	ıcky Mineral (S1))	_			urface (F7)			podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)			-	Depressio			_	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re			ш.	todox i	Doprocoio	// (i 0)			
								_	Material (F21)
	Matrix (S6)								v Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	in in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	er Present?	√ `	Yes 🔲 No	□ U	Inknown				
COBBL								Hydric Soil Prese	ent? ☑ Yes 🛚 No
E									
14							ı		
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: High		Moderate ✓	Low			Isolated Wetland?	Yes 🗹	No Unknown
	. <u> </u>								
General Comm	ents:								





SF



WETLAND DETERM	MINATION FORM - N	orthcentral and N	Northeast Region	
✓ Centerline ☐ Re-Route ☐ Access Roa	ad	☐ Transmission Lin	e Other	
Project/Site: NED	Milepost: 125970.5	County: Franklin	Date:	05/28/2015
Applicant/Owner: Kinder Morgan	5	State: MA Sai	mpling Point: NO-L-W0	08-PSS
Investigators: BH AK Quad Name:	Northfield	Township: Northfield		
Logbook No.: 2 Logbook Pg.: 116	Tract: 21115			
Landform (hillslope, terrace, etc.): Slope - mid	Local Reli	ief: 🗹 Concave 🗖	Convex None	Slope%.: 5
Subregion (LRR): Middle Atlantic	Lat: 42.666670	Long: -72.	418174	Datum: NAD83
Soil Map Unit Name: Millsite-Woodstock complex	, 15 to 25 percent slopes, very	rocky	NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for	or this time of year?:	Yes No (If no, e.	xplain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐	significantly disturbed?	No Are "Normal" (Circumstances present?	✓ Yes □ No
Are Vegetation Soil or Hydrology	naturally problematic?] No		
SUMMARY OF FINDINGS - Attach site n	nap showing sampling	g point locations, to	ransects, important	features, etc.
Hydrophytic Vegetation Present? ✓ Yes	□ No			
Hydric Soil Present? ✓ Yes	☐ No	Is the Sample within a Wet	ed Area ☑ Yes □	l No
Wetland Hydrology Present? ✓ Yes	□ No	within a wet	allu:	
Field Wetland Classification: PSS				
Remarks: USE NO-L-W007-UPL AS REPRES	SENTATIVE UPLAND PLOT			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (2	or more required)
Primary Indicators (minimum of one required; check a	II that apply)		☐ Surface Soil Cracks	(B6)
	Water-Stained Leaves (B9	3)	✓ Drainage Patterns (F	310)
II	Aquatic Fauna (B13)	·)	☐ Moss Trim Lines (B1	6)
_	Marl Deposits (B15)		☐ Dry-Season Water T	able (C2)
<u> </u>	Hydrogen Sulfide Odor (C	1)	☐ Crayfish Burrows (C	8)
=	Oxidized Rhizospheres ald		☐ Saturation Visible or	Aerial imagery (C9)
	☐ Presence of Reduced Iron		☐ Stunted or Stressed	Plants (D1)
-	Recent Iron Reduction in	,	☐ Geomorphic Position	n (D2)
	☐ Thin Muck Surface (C7)	(,	☐ Shallow Aquitard (D	3)
	Other (Explain in Remarks)	s)	☐ Microtopographic Re	elief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	_	•	☐ FAC-Neutral Test (D	95)
Field Observations:				
	Depth (inches):			
	Depth (inches): 0	Wetland H	ydrology Present?	
	Depth (inches): 0	Wettand		Yes □ No
(includes capillary fringe)				
Remarks (Describe Recorded Data (stream gage, mon	itoring well, aerial photos, pre\	vious inspections), if avail	able):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Tot	tal Cover:		



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer saccharum Ulmus americana Rubus idaeus Quercus rubra Salix nigra		5 10 5 5 30	NO NO NO NO YES	FACU FACW FACU FACU OBL
Salix Higia	 Total Cover:	55	TES	OBL
	Total Gover.			
Herb Stratum				
Plot Size: 5			ı	ı
Scientific Name		% Cover	Dominant	Indicator Status
Carex crinita Onoclea sensibilis		60 10	YES NO	OBL FACW
	Total Cover:	70		1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
			1	
	Total Cover:		1	1
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	90	x 1 = 90	
Total Number of Dominant	FACW Species		x 2 = 40	
Species Across All Strata: 2 (B)	FAC Species:	<u> </u>	x 3 = <u>0</u>	
Percent of Dominant Species	FACU Species:		x 4 = <u>60</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	125 (A)	<u>190 (B)</u>	
		Prevalence Index	= B/A = 1.52	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	egetation Prese	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)	7,5,5,7,5	- 5		
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
remarks.				



Providence, F	RI 02904								
SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	nce of indicators.)	
Depth	Matrix			dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
0-6	10YR 4/2	90	10YR 4/6	10	С	М	CLAY	LOAM	
6-14	2.5Y 5/2	80	10YR 6/6 10YR 4/6	10 10	C C	M M	FINE SAN	DY LOAM	
Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
lydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	noted.)		Indicators for Pi	roblematic Hydric Soils³:
☐ Histosol (/	A1)			Polyvalu	ue Below	Surface (S	8) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
	pedon (A2)			/ILŔA 1					e Redox (A16) (LRR K, L, R)
☐ Black Hist			Пт	hin Da	rk Surfac	e (S9) (LR	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed M		(=: :: : : ; =)	_	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1		-	d Matrix (urface (S9) (LRR K, L)
_ '	k Surface (A12)	(-	Dark Surfa				nese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		_			urface (F7)			oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	•	Depressio	, ,		_	c (TA6) (MLRA 144A, 145, 149B)
Sandy Re	-		_			- (- /		_ '	Material (F21)
	Matrix (S6)								v Dark Surface (TF12)
	ace (S7) (LRR R	MI RA	A 149B)						in in Remarks)
			•	ology m	nuet he nr	recent unl	ess disturbed or prob		
estrictive Lay					nknown				
COBBL E	er i resent:	☑ `	Yes ☐ No	⊔ °	TIKITOWIT			Hydric Soil Prese	ent? ☑ Yes ☐ No
14							1		
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: 🔲 High	V	Moderate	Low			Isolated Wetland?	? ☐ Yes ☑	No 🔲 Unknown
General Comm	ents:								





NORTH



WE	TLAN	D DE	ΓERN	IINATI	ON FORM -	Northce	entral an	d No	ortheast l	Region		
✓ Centerline ☐ Re-R	oute [_ Acce	ess Roa	ad 🔲	Ancillary Facility	· 🗖 '	Transmission	n Line	☐ Other	r		
Project/Site: NED				Milepost:	146402.3	County:	Frankl	lin		Date:	08/04/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	ling Point:	WK-M-W	001-PFO	
Investigators: CM MN		Quad N	lame:	Northfield	I	Township	o: Warwi	ick				
Logbook No.: 6M	Lo	gbook P	g.: 64		Tract: 21234							
Landform (hillslope, terrace, e	etc.):	Depre	ession	<u> </u>	Local F	Relief: 🔽	Concave		Convex [None	Slope%.:	1
Subregion (LRR): Middl	e Atlantic			Lat	t: 42.718494		Long:	-72.40	5391		Datum: NA	D83
Soil Map Unit Name: Sw	ansea mı	ıck, 0 to	1 perce	ent slopes	3				NWI Clas	sification:	Not ma	apped
Are climatic / hydrologic cond	litions on	the site t	ypical f	or this tim	ne of year?:	√ Yes	☐ No (If n	o, expl	ain in Remar	ks.)		
Are Vegetation Soil	☐ or l	Hydrolog	у 🗖	significa	antly disturbed?	☑ No	Are "Norm	al" Circ	cumstances p	resent?	✓ Yes	☐ No
Are Vegetation Soil	or I	Hydrolog	у 🗆	naturally	y problematic?	No						
 			_			_						
SUMMARY OF FINDIN	NGS - A	ttach	site r	nap sh	owing sampli	ng point	locations	s, trai	nsects, in	portant	features	, etc.
Hydrophytic Vegetation Prese	ent?	$\overline{\checkmark}$	Yes	☐ No	0		Is the Sar	mnlad	Area			
Hydric Soil Present?		\checkmark	Yes	☐ No	0		within a V			Yes 🗆] No	
Wetland Hydrology Present?		$\overline{\mathbf{Q}}$	Yes	□ No	0							
Field Wetland Classification:	PF	0										
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	rs:							<u>S</u>	Secondary Inc	dicators (2	or more requ	uired)
Primary Indicators (minimum	of one re	quired;	check a	II that app	oly)				Surface S	Soil Cracks	(B6)	
☐ Surface Water (A1)			[√ Wate	r-Stained Leaves	(B9)			Drainage	Patterns (B10)	
☐ High Water Table (A2)			I	☐ Aqua	itic Fauna (B13)				Moss Tri	m Lines (B	16)	
☐ Saturation (A3)			I	Marl	Deposits (B15)				Dry-Seas	on Water	Table (C2)	
☐ Water Marks (B1)			I	Hydro	ogen Sulfide Odor	(C1)			Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2)			[√ Oxidi	zed Rhizospheres	along Livin	g Roots (C3)) [Saturatio	n Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)			[√ Prese	ence of Reduced I	ron (C4)			☐ Stunted of	or Stressed	l Plants (D1)	
☐ Algal Mat or Crust (B4)			I	Rece	ent Iron Reduction	in Tilled Soi	ls (C6)		Geomorp	hic Positio	n (D2)	
☐ Iron Deposits (B5)			[Thin	Muck Surface (C7	")			☐ Shallow /	Aquitard (D	03)	
☐ Inundation Visible on A	rial Imag	ery (B7)	I	Othe	r (Explain in Rema	arks)		<u> </u>	Microtope	ographic R	elief (D4)	
☐ Sparsely Vegetated Cor	ncave Sur	face (B8	3)					<u> </u>	☑ FAC-Neu	ıtral Test ([D5)	
Field Observations:												
Surface Water Present?	☐ Ye	s 🗹	No	Depth (inc	ches):							
Water Table Present?	☐ Ye	s 🗹	No	Depth (ind	ches):		Wetlar	nd Hyd	Irology Pres		_	
Saturation Present? (includes capillary fringe)	☐ Ye	s 🗹	No	Depth (inc	ches):					✓	Yes □	No
Remarks (Describe Recorded	Data (str	eam gaç	ge, mor	nitoring we	ell, aerial photos, p	previous insp	pections), if a	availabl	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30					· · · · · · · · · · · · · · · · · · ·	· · · · · ·						<u> </u>
Scientific Name							% C	over	Don	ninant	Indicate	or Status
Quercus rubra Acer rubrum Quercus michauxii							10 55 20	5	YI	IO ES ES	F.	ACU AC .CW
						Total Cover:	ı	5	1		1	



Providence, RI 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Kalmia latifolia		10	NO	FACU
Hamamelis virginiana Ilex laevigata		15 20	NO YES	FACU OBL
Vaccinium corymbosum		35	YES	FACW
	Total Cover:	80		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Osmundastrum cinnamomeum		30	YES	FACW
	Total Cover:	30	1	1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Scientific Name		76 COVEI	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence In	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>20</u>	x 1 = <u>20</u>	
Total Number of Dominant	FACW Species	s: <u>85</u>	x 2 = <u>170</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>55</u>	x 3 = <u>165</u>	
Percent of Dominant Species	FACU Species	: <u>35</u>	x 4 = <u>140</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals		495 (B)	
		Prevalence Index	= B/A = 2.54	
Hydrophytic Vocatation Indicators			<u> </u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic	egetation Preser	nt? ☑ Yes [□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, r	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	e the d	epth needed to	docum	ent the ir	ndicator o	r confirm the abs	sence of indicators.	
Depth	Matrix		-		atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	T€	exture	Remarks
0.40	` ′		, ,				CII 7	FLOAM	
0-12	10YR 2/1	80	10YR 4/1 10YR 5/6	15 5	D C	M PL	SILI	ΓLOAM	
12-18	10YR 4/1	30	10YR 6/1 10YR 4/6	60 10	D C	M M	FINE SA	NDY LOAM	
1Type: C-Con	ontration D-D	oplotion	PM-Poducod	Matrix	CS-C0	orod Sano	or Coated Grains	2l ocation: DI	 =Pore Lining, M=Matrix
			·				Tor Coaled Grains		
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle			•		Indicators for P	roblematic Hydric Soils ³ :
Histosol (A1)			olyvalı ILRA 1		Surface (S	8) (LRR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
☐ Histic Epi	pedon (A2)		IV	ILIXA I	1430)			☐ Coast Prairi	e Redox (A16) (LRR K, L, R)
■ Black Hist	tic (A3)		□ ⊺	hin Da	rk Surfac	e (S9) (LR	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)			oamy	Mucky Mi	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			oamy	Gleyed M	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	I1) 🔲 🖸	eplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		_ 	Redox I	Dark Surfa	ace (F6)			nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))		eplete	d Dark Su	urface (F7)			oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)			-	Depressio				ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re						()			Material (F21)
	Matrix (S6)							_	
		MID	\ 440D\						w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, IVILK	A 149B)					☐ Other (Expl	ain in Remarks)
maioatoro or i	Tydropriytio vogo	tation c	and wottand my and	Jiogy II	ndot bo pi	oooni, anii	ess disturbed or pr	- Colomatio.	
Remarks:								Hydric Soil Prese	ent? ☑ Yes ☐ No
· · ·			Aquatic Diversity	or Ge	neral Con	nments:			
	1 LOCATED IN \		_					_	_
Wetland Quali	ty: 🔽 High		Moderate	Low			Isolated Wetlan	d? ☐ Yes 🔽	No Unknown
General Comm	ents:								





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WETLAND DETERMINATION FORM - Northce	entral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ T	ransmission Line
Project/Site: NED Milepost: 146413.2 County:	Franklin Date: 08/04/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: WK-M-W001-UPL
Investigators: CM MN Quad Name: Northfield Township	: Warwick
Logbook No.: 6M Logbook Pg.: 65 Tract: 21234	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave 🗹 Convex 🔲 None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.718597	Long: -72.405703 Datum: NAD83
Soil Map Unit Name: Chatfield-Hollis complex, 3 to 8 percent slopes, rocky	NWI Classification: PSS1E
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area within a Wetland? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No	within a wettand:
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	g Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soil	ls (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	pections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Pinus strobus Tsuga canadensis	30 YES FACU 45 YES FACU
Quercus rubra Total Cover:	15 NO FACU 90



Providence, Rt 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer pensylvanicum Betula lenta Fagus grandifolia Vaccinium angustifolium	Total Cover:	15 10 25 10	YES NO YES NO	FACU FACU FACU FACU
Herb Stratum				
Plot Size: 5				
Scientific Name	ı	% Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	mulcator Status
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>150</u>	x 4 = <u>600</u>	
That Are OBL, FACW, OF FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	150 (A)	600 (B)	
		Prevalence Index :	= B/A = 4.00	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydronhytic \	egetation Preser	nt? ☐ Yes ဩ	 No
data in Remarks or on a separate sheet)	Trydrophlytic V	egetation i reser	L les L	<u>. 140</u>
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
Tomano.				







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WETLAND DETERMINATION FORM - Northcentral and Northeast Region						
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other					
Project/Site: NED Milepost: 353.8	County: Middlesex Date: 06/09/2015					
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: DR-J-W004-PEM					
Investigators: TT JW Quad Name: Lowell	Township: Dracut					
Logbook No.: 2015-1 Logbook Pg.: 34 Tract: 5357						
Landform (hillslope, terrace, etc.): Flat Local F	elief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 0					
Subregion (LRR): Middle Atlantic Lat: 42.685865	Long: -71.264599 Datum: NAD83					
Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes NWI Classification: Not mapped						
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.)						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No					
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No					
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point locations, transects, important features, etc.					
Hydrophytic Vegetation Present?						
Hydric Soil Present?	Is the Sampled Area					
Wetland Hydrology Present?						
Field Wetland Classification: PEM						
Remarks: USE DR-J-W003-UPL AS REPRESENTATIVE UPLAND PLOT						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)					
Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6)						
✓ Surface Water (A1) ✓ Water-Stained Leaves	✓ Drainage Patterns (B10)					
✓ High Water Table (A2) ✓ Aquatic Fauna (B13)	Moss Trim Lines (B16)					
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)					
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Crayfish Burrows (C8)						
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Saturation Visible on Aerial image.						
☐ Drift Deposits (B3) ☐ Presence of Reduced I	on (C4) Stunted or Stressed Plants (D1)					
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Geomorphic Position (D2						
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7	☐ Shallow Aquitard (D3)					
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	rks) Microtopographic Relief (D4)					
☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)						
Field Observations:						
Surface Water Present? ✓ Yes No Depth (inches): 5						
Water Table Present?	Wetland Hydrology Present?					
Saturation Present?	☑ Yes □ No					
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspections), if available):					
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name	% Cover Dominant Indicator Status					
Total Cover:						



Sapling/Shrub Stratum					
Plot Size: 15					
Scientific Name		% Cover	Dominant	Indicator Status	
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	20	maisaisi siatas	
	Total Cover:				
Herb Stratum					
Plot Size: 5			l -	1	
Scientific Name		% Cover	Dominant	Indicator Status	
Lythrum salicaria Typha latifolia		2 100	NO YES	OBL OBL	
"	Total Cover:	102	I	I	
Woody Vine Stratum					
Plot Size: 30					
Scientific Name		% Cover	Dominant	Indicator Status	
	Total Cover:		I	1	
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:			
Number of Dominant Species That Are OBL FACW or FAC: 1 (A)	Total % Cover	of:	Multiply by:		
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>102</u>	x 1 = <u>102</u>		
Total Number of Dominant Species Across All Strata: 1 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>		
Species Across All Strata.	FAC Species:	<u>0</u>	x 3 = <u>0</u>		
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species	: <u>0</u>	x 4 = <u>0</u>		
That Ale OBL, I AGW, OF I AC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>		
	Column Totals:	102 (A)	<u>102 (B)</u>		
		Prevalence Index :	= B/A = <u>1.00</u>		
Hydrophytic Vegetation Indicators:					
1 - Rapid Test for Hydrophytic Vegetation					
✓ 2 - Dominance Test is > 50%					
✓ 3 - Prevalence Index is ≤ 3.0					
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Preser	nt? ☑ Yes □	7 No	
data in Remarks or on a separate sheet)				_ 110	
☐ Problematic Hydrophytic Vegetation¹ (Explain)					
1Indicators of hydric soil and wetland hydrology must be					
present, unless disturbed or problematic.					
Remarks:					



1 TOVIGETICE, I	(1 0200+								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the in	dicator o	r confirm the abse	nce of indicators.)	1
Depth	Matrix		Red	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Tex	ture	Remarks
0-9	10YR 2/1	100					ORG	ANIC	
9-14	10YR 4/2	100					FINE SAN	IDY LOAM	
•									
¹Type: C=Con	entration D-De	nletion	PM-Paducad	Matrix	CS-Cov	ered Sand	or Coated Grains.	2l ocation: DI -	 =Pore Lining, M=Matrix
	<u> </u>	•	<u> </u>				or Coaled Grains.		
-		cable t	o all LRR's, unle			-			roblematic Hydric Soils ³ :
Histosol (/	•			olyval ILRA 1		Surface (S	8) (LRR R,	_	(A10) (LRR K, L, MLRA 149B)
✓ Histic Epip	pedon (A2)				, , ,			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	1) 🔲 🗅	eplete	d Matrix (I	F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□R	edox l	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Fl	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallov	w Dark Surface (TF12)
	ace (S7) (LRR R	. MLRA	(149B)					_ '	ain in Remarks)
_			•	ology n	nuet ha nr	ecent unla	ess disturbed or pro		,
Remarks:								Hydric Soil Prese	ent? ☑ Yes □ No
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetland	? ☐ Yes ☑	No 🔲 Unknown
General Comm	ents:								







WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 402.0	County: Middlesex Date: 06/09/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: DR-J-W004-PSS
Investigators: TT JW Quad Name: Lowell	Township: Dracut
Logbook No.: 2015-1 Logbook Pg.: 33 Tract: 5357	
Landform (hillslope, terrace, etc.): Slope - toe Local R	elief: Concave Convex Mone Slope%.: 10
Subregion (LRR): Middle Atlantic Lat: 42.685778	Long: -71.264464 Datum: NAD83
Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	 ☑ No
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	
Hydric Soil Present?	Is the Sampled Area ☑ Yes ☐ No within a Wetland?
Wetland Hydrology Present? ✓ Yes ☐ No	within a wetiand?
Field Wetland Classification: PSS	
Remarks: USE DR-J-W003-UPL AS REPSENTATIVE UPLAND PLOT	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (_
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	
Drift Deposits (B3)	<u> </u>
Algal Mat or Crust (B4)	<u> </u>
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present?	Wetland Hydrology Present?
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)	✓ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
-	otal Cover:



1 TOVIGETICE, TRI 02004				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Spiraea alba Frangula alnus		2 30	NO YES	FACW FAC
r rangula amus	Total Cover:	32	123	170
11.1.0		-		
Herb Stratum				
Plot Size: 5	1	24.2	1	1
Scientific Name		% Cover	Dominant	Indicator Status
Anemone quinquefolia Rubus hispidus		10 15	NO YES	FACU FACW
Frangula alnus Solidago rugosa		5 30	NO YES	FAC FAC
Symplocarpus foetidus		10	NO	OBL
	Total Cover:	70		
Woody Vine Stratum				
Plot Size: 30	1		1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of	of:	Multiply by:	
	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species		x 2 = <u>34</u>	
Percent of Dominant Species	FAC Species:	<u>65</u>	x 3 = <u>195</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = 40	
	UPL Species: Column Totals:	<u>0</u> 102 (A)	x = 0	
			279 (B)	
		Prevalence Index	= B/A = <u>2.74</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				_
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☑ Yes [」 No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Depth (Inches) Matrix Redox Features Remarks
Depth (inches) Matrix Redox Features Texture Remarks
Depth (inches) Matrix Redox Features Texture Remarks
O-9 10YR 2/1 100
9-14 5YR 3/2 100 SILT LOAM Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. *Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)
Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Coast Prairie Redox (A16) (LRR K, L, R) Coast Prairie Redox (A16) Coast Prairie Redox (A11) Coast Authorise Redox (A11) Coast Authorise Redox (A11) Coast Authorise Redox (A11) Coast Authorise Redox (A17) Coast Autho
MLRA 149B)
Black Histic (A3)
Hydrogen Sulfide (A4)
Stratified Layers (A5)
Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Other (Explain in Remarks) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes ☑ No □ Unknown □ Hydric Soil Present? ☑ Yes □ No
Thick Dark Surface (A12)
Sandy Mucky Mineral (S1)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? Yes No Unknown Hydric Soil Present? Yes No
Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Dother (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?
Stripped Matrix (S6)
□ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes ☑ No □ Unknown Hydric Soil Present? ☑ Yes □ No
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? ☐ Yes ☑ No ☐ Unknown Hydric Soil Present? ☑ Yes ☐ No
Restrictive Layer Present? ☐ Yes ☑ No ☐ Unknown Hydric Soil Present? ☑ Yes ☐ No
Hydric Soil Present? ☑ Yes ☐ No
Remarks:
Description of Habitat Characteristics, Aquatic Diversity or General Comments:
Wetland Quality: ☐ High ☑ Moderate ☐ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown
General Comments:







WE	TLAN	ND DE	TER	MINAT	ION I	FORM -	Northc	ent	tral an	d No	ortheas	t Regior	1	
☑ Centerline ☐ Re-R	oute	☐ Acc	ess Ro	ad 🗀	Ancil	lary Facility		Trar	nsmission	Line	☐ Otl	her		
Project/Site: NED				Milepost	631	5.1	County:		Middle	esex		Date:	: 06/05/201	15
Applicant/Owner: Kinder Mo	rgan						State:	MA		Samp	oling Poin	t: DR-J-W	003-PFO	
Investigators: TT JW		Quad	Name:	Lowell			Townshi	p:	Dracu	t				
Logbook No.: 2015-1	L	ogbook F	g.: 29		Tra	ict: 5357	•							
Landform (hillslope, terrace,	etc.):	Depr	ession	'		Local R	Relief:	7 (Concave		Convex	☐ None	Slope%.:	10
Subregion (LRR): Middl	e Atlanti	ic		La	t: 42.6	685516		I	Long:	-71.26	64015		Datum: NA	D83
Soil Map Unit Name: Sw	ansea n	nuck, 0 to	1 perc	ent slope	S						NWI C	lassification:	Not ma	apped
Are climatic / hydrologic cond	litions or	n the site	typical	for this tir	ne of ye	ear?:	✓ Yes		No (If n	o, exp	lain in Rem	narks.)		
Are Vegetation Soil	or	r Hydrolo	ду 🗖	signific	antly dis	sturbed?	☑ No	Α	re "Norm	al" Cir	cumstance	s present?	✓ Yes	□ No
Are Vegetation Soil	□ or	r Hydrolo	ду 🗖	natural	y proble	ematic?	☑ No							
SUMMARY OF FINDI	NGS -	Attach	site ı	map sh	owing	g sampli	ng point	t lo	cations	s, tra	nsects,	importan	t features	s, etc.
Hydrophytic Vegetation Prese	ent?	✓	[Yes		lo									
Hydric Soil Present?		√	Yes		lo				the Sar ithin a V			☑ Yes [□ No	
Wetland Hydrology Present?		✓	[Yes		lo									
Field Wetland Classification:	Р	FO												
Remarks:														
HYDROLOGY														
Wetland Hydrology Indicate	ors:									5	Secondary	Indicators (2	2 or more requ	uired)
Primary Indicators (minimum	of one	required;	check a	all that ap	ply)					[Surfac	e Soil Crack	s (B6)	
☐ Surface Water (A1)				√ Wat	er-Stain	ed Leaves ((B9)			[☐ Draina	ige Patterns	(B10)	
─ High Water Table (A2)				— ☑ Aqua	atic Fau	ına (B13)				[☐ Moss	Trim Lines (E	316)	
✓ Saturation (A3)				☐ Marl	Deposi	its (B15)					☐ Dry-Se	eason Water	Table (C2)	
☐ Water Marks (B1)				☐ Hyd	ogen S	ulfide Odor	(C1)			[Crayfis	sh Burrows (C8)	
☐ Sediment Deposits (B2)				☐ Oxio	ized Rh	nizospheres	along Livir	ng R	oots (C3)	, [☐ Satura	tion Visible	on Aerial imag	gery (C9)
☐ Drift Deposits (B3)				☐ Pres	ence of	f Reduced II	ron (C4)				Stunte	d or Stresse	d Plants (D1)	
☐ Algal Mat or Crust (B4)				☐ Rec	ent Iron	Reduction i	in Tilled So	ils (C6)	<u> </u>	✓ Geom	orphic Positi	on (D2)	
☐ Iron Deposits (B5)				☐ Thin	Muck S	Surface (C7))				Shallo	w Aquitard (I	D3)	
☐ Inundation Visible on A	erial Ima	gery (B7		☐ Othe	er (Expla	ain in Rema	ırks)					opographic F	` ,	
✓ Sparsely Vegetated Cor	ncave Si	urface (B	8)							[☐ FAC-N	leutral Test ((D5)	
Field Observations:														
Surface Water Present?	□ Y	es 🗹	No	Depth (in	ches):									
Water Table Present?	✓ Y	es 🔲		Depth (in	,	10			Wetlar	nd Hyd	drology Pr		ĭ Yes □	No
Saturation Present? (includes capillary fringe)	☑ Y	es 🔲	No	Depth (ir	ches):	2						<u> </u>	ies 🗀	140
Remarks (Describe Recorded	l Data (s	stream ga	ge, moi	nitoring w	ell, aeri	al photos, p	revious ins	pec	tions), if a	availab	le):			
VEGETATION														
Tree Stratum														
Plot Size: 30														
Scientific Name									% C	over	0	ominant	Indicat	or Status
Acer rubrum Quercus rubra									7(2)			YES YES		ACU
						-	Total Cove	r:	9:	5				



Providence, Ri 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rhamnus alnifolia Vaccinium corymbosum		20 40	YES YES	OBL FACW
vaccinium corymbosum	Total Cover:	60	ILS	TACW
Herb Stratum				
Plot Size: 5	1		ı	ı
Scientific Name		% Cover	Dominant	Indicator Status
Osmunda regalis Osmundastrum cinnamomeum		2 25	NO YES	OBL FACW
	Total Cover:	27	I	l
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		ı	
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>22</u>	x 1 = <u>22</u>	
Total Number of Dominant	FACW Species:	<u>65</u>	x 2 = <u>130</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>70</u>	x 3 = <u>210</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)	FACU Species:	<u>25</u>	x 4 = <u>100</u>	
That Are OBL, FACW, or FAC: 80 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>182 (A)</u>	462 (B)	
	F	Prevalence Index =	= B/A = <u>2.54</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
☐ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	nt? ☑ Yes [1 No
data in Remarks or on a separate sheet)	,,	-9	<u></u> <u></u>	
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture	Remarks
0-7	10YR 2/1	100					LOA	AM	
7-14	2.5Y 5/2	75	10YR 5/6	25	С	M	LOA	AM	
Type: C=Cond	L centration, D=De	pletion	l n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
lvdric Soil Ind	licators: (Applie	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pi	oblematic Hydric Soils ³ :
☐ Histosol (A			·			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILRA 1			-, (,	_	e Redox (A16) (LRR K, L, R)
☐ Black Hist			ПТ	hin Da	rk Surface	(S9) (LR	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)		_	-	Gleyed Ma		(=: ; =)		elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	d Matrix (I				urface (S9) (LRR K, L)
	k Surface (A12)	,	_		Dark Surfa				lese Masses (F12) (LRR K, L, R)
	ıcky Mineral (S1)		_			rface (F7)			podplain Soils (F19) (MLRA 149B)
_ ′	eyed Matrix (S4)		_	-	Depressio			_	c (TA6) (MLRA 144A, 145, 149B)
Sandy Re	, ,		_			- (- /			Material (F21)
	Matrix (S6)							_	v Dark Surface (TF12)
	ace (S7) (LRR R	. MLRA	\ 149B)					_ ′	in in Remarks)
			·	ology p	aust bo pr	ocent unle	ess disturbed or prob		III realist
								Hydric Soil Prese	nt? ☑ Yes ☐ No
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No
	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:		Hydric Soil Prese	nt? ☑ Yes □ No
Description of I			Aquatic Diversity		neral Com	nments:		Hydric Soil Prese	nt? ☑ Yes □ No
Description of I	DR-AC3-VP003	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I	DR-AC3-VP003	LOCA	ATED IN WETLAI		neral Com	nments:	Isolated Wetland?		nt?
Description of I	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	ments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		
Description of I /ERNAL POOL Wetland Qualit	_ DR-AC3-VP003 y: ☐ High	LOCA	ATED IN WETLAI	ND	neral Com	nments:	Isolated Wetland?		





NORTH



WETLAND DETERMINATION FORM - 1	Northcentral and Northeast Region
Centerline	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 554.6	County: Middlesex Date: 06/05/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: DR-J-W003-UPL
Investigators: TT JW Quad Name: Lowell	Township: Dracut
Logbook No.: 2015-1 Logbook Pg.: 30 Tract: 5357	<u> </u>
Landform (hillslope, terrace, etc.): Flat Local Re	elief: Concave Convex V None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.685763	Long: -71.264189 Datum: NAD83
Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No
	y No
Are vegetation Soil of Hydrology hatdraily problematics	<u>v</u> 110
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No within a Wetland?
Wetland Hydrology Present? ☐ Yes ☑ No	Titalia a Tolialia i
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B	Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	Contraction Visible on Assisting and (CO)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remar	Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ☑ No
Saturation Present? Yes Mo Depth (inches): (includes capillary fringe)	I les E le
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	evious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Т	otal Cover:

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



1 10VIde1166, 1(1 02304				the second second
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Solidago rugosa		25	YES	FAC
Potentilla simplex Frangula alnus		30 15	YES NO	FACU FAC
RUBUS OCCIDENTALIS Anthoxanthum odoratum		3 15	NO NO	UPL FACU
Antiloxanthum odoratum	Total Cover:	88	I NO	TACO
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
Coloniale Name		70 00001	Borrinana	maiodioi Otalao
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = 0	
Total Number of Dominant	FACW Species		x 2 = <u>0</u>	
Species Across All Strata: 2 (B)	FAC Species:	<u>-</u> 40	x 3 = 120	
Percent of Dominant Species	FACU Species:		x 4 = <u>180</u>	
That Are OBL, FACW, or FAC: 50 (A/B)	UPL Species:	3	x 5 = 15	
	Column Totals:	88 (A)	315 (B)	
		Prevalence Index =	= B/A = 3.58	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Presen	nt? ☑ Yes [7 No
data in Remarks or on a separate sheet)	,,		<u></u> 100 <u>.</u> .	
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



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SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture	Remarks
0-6	10YR 3/2	100					FINE SANI	DY LOAM	
6-14	10YR 4/6	100					SANDY	LOAM	
Type: C=Cond	L centration, D=De	l epletion	l n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	l =Pore Lining, M=Matrix
**	· · · · · · · · · · · · · · · · · · ·	·	to all LRR's, unle						roblematic Hydric Soils³:
☐ Histosol (/			•			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
_	pedon (A2)			MLRA 1		oundo (o	o) (Littert,	_	e Redox (A16) (LRR K, L, R)
☐ Black Hist			_ T	Thin Da	irk Surface	- (S9) (LRI	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)					neral (F1) (·		e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed Ma		LIKIK IK, L)	_	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	ed Matrix (urface (S9) (LRR K, L)
	k Surface (A12)	(**)	· –	•	Dark Surfa	•			nese Masses (F12) (LRR K, L, R)
_	icky Mineral (S1)		_			ırface (F7)			podplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)		_		Depressio			_	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re			.	10001	2 op. 000.0	(. 0)		_ :	Material (F21)
_ ·	Matrix (S6)							_	v Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	A 149R)					_ ′	in in Remarks)
			•	-1			ess disturbed or prob		in in resinance)
Remarks:							I		
Description of	Habitat Characte	ristics,	Aquatic Diversity	y or Ge	neral Com	nments:			
Wetland Qualit	y: High	_ r	Moderate	Low			Isolated Wetland?	Yes 🗆	No Unknown
General Comm	ents:								





NW



WETLAND DETERMINATION FORM - North	theontral and Northeast Pegion
WEILAND DETERMINATION FORM - NOTE	incentral and Northeast Region
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 23110.3 Cour	nty: Essex Date: 07/29/2015
Applicant/Owner: Kinder Morgan State	e: MA Sampling Point: AN-K-W002-PFO
Investigators: PF JW Quad Name: Lawrence Town	nship: Andover
Logbook No.: 2015-1 Logbook Pg.: 104 Tract: 3922	
Landform (hillslope, terrace, etc.): Depression Local Relief:	☐ Concave ☐ Convex ☐ None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.644262	Long: -71.226834 Datum: NAD83
Soil Map Unit Name: Pipestone loamy sand, 0 to 3 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	es 🔲 No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ N	No Are "Normal" Circumstances present?
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ N	No
SUMMARY OF FINDINGS - Attach site map showing sampling po	oint locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Is the Sampled Area
Hydric Soil Present?	within a Wetland?
Wetland Hydrology Present? Yes No	
Field Wetland Classification: PFO	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
✓ Saturation (A3)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along I	
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	·
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	<u> </u>
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present?	Wetland Hydrology Present?
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	s inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Fraxinus pennsylvanica	20 YES FACW
Acer rubrum Pinus strobus	60 YES FAC 10 NO FACU
Total Co	Cover: 90



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Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Frangula alnus Ilex verticillata		5 20	YES YES	FAC FACW
nex verucinata	Total Cover:	25	ILS	TAOW
Herb Stratum				
Plot Size: 5	1		1	I
Scientific Name		% Cover	Dominant	Indicator Status
Osmunda spectabilis Osmundastrum cinnamomeum		20 10	YES NO	OBL FACW
Symplocarpus foetidus Toxicodendron radicans		15 30	YES YES	OBL FAC
Toxicodo Haria Hadicano	Total Cover:	75	120	17.0
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		I	
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 7 (A)	OBL Species:	3 <u>5</u>	x 1 = 35	
Total Number of Dominant	FACW Species		x 2 = 100	
Species Across All Strata: 7 (B)	FAC Species:	<u>95</u>	x 3 = <u>285</u>	
Percent of Dominant Species	FACU Species:		x 4 = <u>40</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	190 (A)	460 (B)	
		Prevalence Index =	= B/A = 2.42	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	/egetation Preser	nt? ☑ Yes □] No
data in Remarks or on a separate sheet)			<u></u> 100 <u>.</u> .	
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:	I			



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SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix			dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
0-12	10YR 2/1	100					ORGA	ANIC	
12-18	2.5Y 4/2	80	10YR 3/4	20	С	М	FINE SANI	DY LOAM	STONE REFUSAL AT 18 INCHES
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
Histosol (/			•			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
	pedon (A2)			/ILRA 1			-, (=,	_	e Redox (A16) (LRR K, L, R)
☑ Black Hist			П Т	hin Da	ırk Surface	e (S9) (LRI	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)					neral (F1)	·		e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed Ma			_	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	d Matrix (urface (S9) (LRR K, L)
	k Surface (A12)		· —	•	Dark Surfa	,			nese Masses (F12) (LRR K, L, R)
	ıcky Mineral (S1)		_			urface (F7)			podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	•	Depressio	, ,			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	, ,					(, ,			Material (F21)
_	Matrix (S6)							_	v Dark Surface (TF12)
_ ''	ace (S7) (LRR R	MI RA	\ 149B)					_ ′	in in Remarks)
			·	ology n	nuet ha nr	esent unla	ess disturbed or prob		
Restrictive Lay					Inknown			Jonano.	
								Hydric Soil Prese	nt? ☑ Yes ☐ No
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y:	✓ I	Moderate	Low			Isolated Wetland?	P ☐ Yes ☑	No Unknown
General Comm	ents:								





NW



WETLAND DETERMINATION FORM - North	cent	tral an	d No	rtheast R	egion		
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐] Tran	nsmission	Line	☐ Other			
Project/Site: NED Milepost: 23133.8 Count	ty:	Essex			Date:	07/29/2015	
Applicant/Owner: Kinder Morgan State:	MA		Samp	ling Point:	AN-K-W0	02-UPL	
Investigators: PF JW Quad Name: Lawrence Towns	ship:	Andov	er				
Logbook No.: 2015-1 Logbook Pg.: 105 Tract: 3922							
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:		Concave		Convex 🔽	None	Slope%.:	10
Subregion (LRR): Middle Atlantic Lat: 42.644340	L	_ong:	-71.226	6613		Datum: NAD	83
Soil Map Unit Name: Udorthents, smoothed				NWI Classi	fication:	Not map	pped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes		No (If no	o, expla	ain in Remarks	s.)		
Are Vegetation $\ \square$ Soil $\ \square$ or Hydrology $\ \square$ significantly disturbed? $\ \square$ No	о А	re "Norma	al" Circ	umstances pr	esent?	✓ Yes	☐ No
Are Vegetation $\ \square$ Soil $\ \square$ or Hydrology $\ \square$ naturally problematic? $\ \square$ No	0						
SUMMARY OF FINDINGS - Attach site map showing sampling poi	int lo	cations	tran	sects imi	oortant	features	etc
Hydrophytic Vegetation Present? ☐ Yes ☑ No		-	, a				
Hydric Soil Present? ☐ Yes ☑ No		the San			Yes ✓	1 No	
Wetland Hydrology Present? ☐ Yes ☑ No	wi	ithin a V	Vetlan	d? □	103 <u>(*</u>	, 140	
Field Wetland Classification: UPLAND PLOT							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:			S	econdary Indi	cators (2	or more requi	red)
Primary Indicators (minimum of one required; check all that apply)] Surface So	oil Cracks	(B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)				Drainage F	Patterns (E	B10)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)				Moss Trim	Lines (B1	16)	
☐ Saturation (A3) ☐ Marl Deposits (B15)				Dry-Seaso	n Water T	Table (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)				Crayfish B	urrows (C	(8)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Li	iving R	oots (C3)] Saturation	Visible or	n Aerial image	ery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)] Stunted or	Stressed	Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (0	C6)] Geomorph	ic Position	n (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)				Shallow Ad	quitard (D	3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)] Microtopog	graphic Re	elief (D4)	
☐ Sparsely Vegetated Concave Surface (B8)				FAC-Neutr	al Test (D	05)	
Field Observations:							
Surface Water Present? ☐ Yes ✓ No Depth (inches):							
Water Table Present? ☐ Yes ☑ No Depth (inches):		Wetlan	nd Hydr	rology Presei	nt?		
Saturation Present?			•	0,		Yes ☑	No
(includes capillary fringe)							
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	inspect	tions), if a	vailable	e):			
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name	-	% Co	over	Domi	nant	Indicator	Status
Acer rubrum	_	5		NC		FA	
Fraxinus pennsylvanica Pinus strobus		5 60		NC YES		FAC FAC	
Acer saccharum		30		YES		FAC	
Total Co	ver:	10	00				



Springs/shub Stratum	Plot Size: 15 Scientific Name Fraxinus pennsylvanica				
Scientific Name	Scientific Name Fraxinus pennsylvanica				
Faction Fac	Fraxinus pennsylvanica				
Frangula alnus Total Cover: 20			% Cover	Dominant	Indicator Status
Hefb Stratum	Trangala amas				
Piot Stratum		Total Cover:	l	123	TAC
Plot Size: 5 Scientific Name					
Scientific Name					
Total Cover: Total Cover: Bominant Species Total Number of Dominant Species Across All Strata: Total Number of Dominant Species Total Number of Dominant Spe			l « o	1 5	1
Malainthemum racemosum Rubus Blagelaris Rubus Blagelaris Rubus Blagelaris (Malainthemum canadense) 20 YES FACU FACU FACU FACU FACU FACU FACU FACU					
Maianthemum canadense 30	Maianthemum racemosum				FACU
Total Cover: 80					
Plot Size: 30 Scientific Name		Total Cover:	I.	1	1
Scientific Name	Woody Vine Stratum				
Total Cover: Dominance Test Worksheet: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species OBL Species: Q	Plot Size: 30				
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total % Cover of: Multiply by: OBL Species: 0 x 1 = 0 OBL Species: 15 x 2 = 30 FACW Species: 25 x 3 = 75 FACU Species: 160 x 4 = 640 UPL Species: 0 x 5 = 0 Column Totals: 200 (A) 745 (B) Prevalence Index = B/A = 3.73 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?	Scientific Name		% Cover	Dominant	Indicator Status
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 7 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B) Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is \$ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Prevalence Index Worksheet: Total % Cover of: Multiply by: Author Species: 0					
Total % Cover of: Multiply by: Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Z(B) Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B) Prevalence Index = B/A = 3.73 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Total % Cover of: Multiply by: OBL Species: 0 x 1 = 0 FACW Species: 15 x 2 = 30 FAC Species: 25 x 3 = 75 FACU Species: 160 x 4 = 640 UPL Species: 0 x 5 = 0 Column Totals: 200 (A) T45 (B) Prevalence Index = B/A = 3.73 Hydrophytic Vegetation Present?		Total Cover:	I	1	1
That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 7 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B) Percent of Dominant Species 25 x3 = 75 FACU Species: 15 x2 = 30 FAC Species: 25 x3 = 75 FACU Species: 160 x4 = 640 UPL Species: 0 x5 = 0 Column Totals: 200 (A) 745 (B) Prevalence Index = B/A = 3.73 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?	Dominance Test Worksheet:	Prevalence In	dex Worksheet:		
OBL Species: 0 x1 = 0 FACW Species: 15 x2 = 30 FAC Species: 25 x3 = 75 Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B) Prevalence Index = B/A = 3.73 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) OBL Species: 0 x1 = 0 FACW Species: 150 x2 = 30 FAC Species: 25 x3 = 75 FACU Species: 160 x4 = 640 UPL Species: 0 x5 = 0 Column Totals: 200 (A) 745 (B) Prevalence Index = B/A = 3.73 Hydrophytic Vegetation Present?	Number of Dominant Species	Total % Cover	of:	Multiply by:	
Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 29 (A/B) FAC Species: 25 x 3 = 75 FACU Species: 160 x 4 = 640 UPL Species: 0 x 5 = 0 Column Totals: 200 (A) Prevalence Index = B/A = 3.73 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes ✓ No	That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
FAC Species: 25 x 3 = 75 FACU Species: 160 x 4 = 640 UPL Species: 0 x 5 = 0 Column Totals: 200 (A) 745 (B) Prevalence Index = B/A = 3.73 Hydrophytic Vegetation Indicators: □ 1 - Rapid Test for Hydrophytic Vegetation □ 2 - Dominance Test is > 50% □ 3 - Prevalence Index is ≤ 3.0 □ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Yes ☑ No		FACW Species	s: <u>15</u>	x 2 = <u>30</u>	
That Are OBL, FACW, or FAC: 29 (A/B) UPL Species: 0 x5 = 0 Column Totals: 200 (A) 745 (B) Prevalence Index = B/A = 3.73 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes ✓ No	Species Across All Strata:	FAC Species:	<u>25</u>	x 3 = <u>75</u>	
UPL Species: 0 x 5 = 0 Column Totals: 200 (A) 745 (B) Prevalence Index = B/A = 3.73 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?		FACU Species	: <u>160</u>	x 4 = <u>640</u>	
Hydrophytic Vegetation Indicators:	That Are OBL, I AGW, OF I AC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
Hydrophytic Vegetation Indicators:		Column Totals	: <u>200 (A)</u>	<u>745 (B)</u>	
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?			Prevalence Index	$= B/A = \underline{3.73}$	
2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?	Hydrophytic Vegetation Indicators:				
3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?	1 - Rapid Test for Hydrophytic Vegetation				
□ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Yes ☑ No	☐ 2 - Dominance Test is > 50%				
data in Remarks or on a separate sheet)	☐ 3 - Prevalence Index is ≤ 3.0				
	4 - Morphological Adaptations¹ (Provide supporting	g Hydrophytic	Vegetation Prese	nt? 🔲 Yes 🔽	 No
☐ Problematic Hydrophytic Vegetation¹ (Explain)	data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)					
	Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be	¹Indicators of hydric soil and wetland hydrology must be	9			
present, unless disturbed or problematic.	present, unless disturbed or problematic.				
Remarks:	Remarks:				

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T TOVIGETICE, I	1 02304																	
SOIL																		
Profile Descrip	otion: (Describe	the d	epth need	ed to d	docum	ent the in	ndicator o	r confirm	the abser	nce of	indica	ators.)					
Depth	Matrix			Red	dox Fe	atures			_						_			
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Text	ture					R	Rema	arks	
0-8	10YR 3/3	100							SILT L	_OAM			R	OCK I	REFL	JSAI	L AT	8 INCHES
¹Type: C=Cond	centration, D=De	pletion	n, RM=Re	duced	Matrix,	CS=Cov	ered Sand	or Coated	d Grains.	2[.ocatio	n: PL	=Pore	Lining	j, M=		rix	
Hydric Soil Inc	licators: (Appli	cable t	to all LRR'	s, unle	ess oth	nerwise n	oted.)			Indi	cators	for F	robler	natic	Hydr	ic S	oils³	:
Black Hist Hydrogen Stratified I Depleted Thick Dari Sandy Mt Sandy Gle Sandy Re Stripped I Dark Surf	bedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surfac k Surface (A12) icky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	, MLRA	A 149B) and wetland	M L L L L L L L L L L L L L L L L L L L	Thin Da oamy I oamy I oamy (Deplete Redox E Deplete Redox E	49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	e (S9) (LR neral (F1) atrix (F2) F3) ace (F6) urface (F7) ns (F8)		ed or prob		Coast 5 cm I Dark S Polyva Thin D Iron-M Piedm Mesic Red P Very S Other	Prair Mucky Surface Surface Dark S Ilanga Sont F Spool arent (Expl	ce (S7) Below S Burface nese N loodpla lic (TA6 Mater w Dark ain in F	ox (A1 or Peace (LRR (LRR (Surface (S9) (Masses (Masse	6) (Li at (S3 K, L, e (S8 (LRR s (F12 ils (F7 RA 1 il) acce (T	RR I M) M) (LF K, L 2) (L 19) (44A	K, L, RR K RR K L) LRR H (MLR (MLR	R) (, L, R)
Remarks:																		
Description of	Habitat Characte	ristics,	Aquatic D	iversity	or Ge	neral Com	nments:											
Wetland Qualit	y: High	<u> </u>	Moderate		Low			Isolated	Wetland?	? [] Ye	s 🗀] No		Unl	knov	vn	
General Comm	ents:																	







WETLAND DETERMINATION FORM - North	central a	nd No	ortheast	Region		
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission	on Line	☐ Othe	er		
Project/Site: NED Milepost: 23701.7 Count	y: Esse	ex		Date:	07/29/201	5
Applicant/Owner: Kinder Morgan State:	MA	Samp	oling Point:	AN-K-W	003-PFO	
Investigators: CG JW Quad Name: Lawrence Towns	ship: And	over				
Logbook No.: 2015-1 Logbook Pg.: 46 Tract: 3922						
Landform (hillslope, terrace, etc.): Depression Local Relief:	☑ Concav	e 🔲	Convex	☐ None	Slope%.:	2
Subregion (LRR): Middle Atlantic Lat: 42.643160	Long:	-71.22	5222		Datum: NAI	D83
Soil Map Unit Name: Ridgebury and Leicester fine sandy loams, 0 to 3 percent slopes	s, extremely st	ony	NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	□ No (If	no, exp	lain in Rema	rks.)		
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Nor	mal" Cire	cumstances	present?	✓ Yes	☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No)					
SUMMARY OF FINDINGS - Attach site map showing sampling poi	nt location	ns, tra	nsects, ir	nportant	features	, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No						
Hydric Soil Present? ☑ Yes ☐ No	Is the Sa within a	ampled Wetlar	l Area nd? ☑	Yes 🗆] No	
Wetland Hydrology Present?						
Field Wetland Classification: PFO						
Remarks: Stunted vegetation - buttressed tree roots						
HYDROLOGY						
Wetland Hydrology Indicators:		5	Secondary In	ndicators (2	or more requ	uired)
Primary Indicators (minimum of one required; check all that apply)		[Surface	Soil Cracks	(B6)	
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)		5	✓ Drainage	e Patterns (B10)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		[☐ Moss Tr	im Lines (B	16)	
☐ Saturation (A3) ☐ Marl Deposits (B15)			☐ Dry-Sea	son Water ⁻	Table (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Li	ving Roots (C	3) [☐ Saturation	on Visible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		<u> </u>	✓ Stunted	or Stressed	l Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (C6)	<u> </u>	☑ Geomor	phic Positio	n (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		[Shallow	Aquitard (D	03)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		[Microtop	ographic R	elief (D4)	
☐ Sparsely Vegetated Concave Surface (B8)			☐ FAC-Ne	utral Test ([O5)	
Field Observations:						
Surface Water Present?						
Water Table Present? Yes V No Depth (inches):	Wetl	and Hyd	Irology Pres		Yes □	No
Saturation Present?				<u>⊾</u>	res 🗀	NO
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	nspections), i	f availab	le):			
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name	%	Cover	Do	minant	Indicato	or Status
Acer rubrum Pinus strobus		25 40		ES ES		AC \CU
Total Co	ver:	65				



T TOVIGETICE, TRI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Frangula alnus		10	YES	FAC
Vaccinium corymbosum	T-4-1 O	15	YES	FACW
	Total Cover:	25		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Toxicodendron radicans		30	YES	FAC
Impatiens capensis Solanum dulcamara		55 15	YES NO	FACW FAC
Parthenocissus quinquefolia		20	NO	FACU
	Total Cover:	120		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		'	'
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species		x 2 = <u>140</u>	
Species Across All Strata: 6 (B)	FAC Species:	<u></u> <u>80</u>	x 3 = 240	
Percent of Dominant Species	FACU Species:		x 4 = 240	
That Are OBL, FACW, or FAC: 83 (A/B)	UPL Species:	<u>0</u>	$x \cdot 5 = 0$	
	Column Totals:		620 (B)	
		, ,	, ,	
	1	Prevalence Index =	= B/A = <u>2.95</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	nt? ☑ Yes 🛭] No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				

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SOIL																	
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the ir	ndicator o	r confirm	the abser	nce of	indicato	ors.)					
Depth	Matrix			Re	dox Fe	atures									,		
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc2		Text	ure					Re	mark	5
0-6	7.5YR 3/1	90	7.5YR	5/6	10	С	М		SILT L	OAM			RC	OCK F	REFUS	SAL A	T 6 INCHES
¹Type: C=Cond	centration, D=De	epletion	n, RM=Re	duced	Matrix,	CS=Cov	ered Sand	or Coated	d Grains.	2	ocation:	PL=P	ore L	ining	, M=N	/latrix	
Hydric Soil Inc	licators: (Appli	cable	to all LRR'	s, unl	ess oth	nerwise n	oted.)			Indi	ators fo	or Pro	blem	atic I	Hydric	Soil	S³:
☐ Histosol (/	A1)						Surface (S	8) (LRR R	,		2 cm Mu	ick (A	10) (L	.RR k	ζ, L, M	ILRA	149B)
☐ Histic Epip	pedon (A2)			ľ	MLRA 1	49B)					Coast P	rairie F	Redox	к (A1	6) (LR	R K, I	_, R)
■ Black Hist	ic (A3)				Γhin Da	rk Surface	e (S9) (LR	R R, MLRA	A 149B)		5 cm Mu	icky P	eat o	r Pea	t (S3)	(LRR	K, L, R)
☐ Hydrogen	Sulfide (A4)				_oamy l	Mucky Mi	neral (F1)	(LRR K, L)	1		Dark Su	rface ((S7) (LRR	K, L, I	M)	
☐ Stratified I	_ayers (A5)			ا 🗆	oamy o	Gleyed Ma	atrix (F2)				Polyvalu	ie Belo	ow Su	ırface	(S8)	(LRR	K, L)
☐ Depleted	Below Dark Surfa	ace (A	11)		Deplete	d Matrix (F3)				Thin Dai	rk Surf	face (S9) (LRR k	(, L)	
☐ Thick Dar	k Surface (A12)			√	Redox [Dark Surfa	ace (F6)				Iron-Mar	ngane	se Ma	asses	(F12)	(LRF	k K, L, R)
☐ Sandy Mu	icky Mineral (S1))			Deplete	d Dark Su	urface (F7)				Piedmor	nt Floo	dplaii	n Soi	s (F19	9) (ML	.RA 149B)
= '	eyed Matrix (S4)				Redox I	Depressio	ns (F8)				Mesic S	podic	(TA6)	(MLI	RA 14	4A, 14	15, 149B)
☐ Sandy Re										_	Red Par						
	Matrix (S6)									_	Very Sh					- 12)	
_	ace (S7) (LRR R		•								Other (E	xplain	in Re	emarl	(s)		
3Indicators of h	nydrophytic vege	tation a	and wetlan	d hydr	ology n	nust be pr	esent, unle	ess disturb	ed or prob	lemati	C.						
Restrictive Lay	er Present?		Yes √	No	<u> </u>	nknown				Hydri	c Soil P	resen	t?	V	Yes		No
Remarks:																	
Description of	Habitat Characte	ristics,	Aquatic D	iversit	y or Ge	neral Con	nments:										
Wetland Qualit	y: High	\square	Moderate		Low			Isolated	Wetland?] Yes		No	☑	Unkı	nown	
General Comm	ents:																





NORTH



WE	TLANI	D DE1	ΓERN	IINATI	ION FORM -	Northce	entral and	d No	rtheast	Region		
☑ Centerline ☐ Re-Re	oute [] Acce	ss Roa	nd 🔲	Ancillary Facility	п т	ransmission	Line	☐ Othe	r		
Project/Site: NED				Milepost:	23647.1	County:	Essex			Date:	07/29/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	ling Point:	AN-K-W	003-UPL	
Investigators: PF JW		Quad N	ame:	Lawrence	Э	Township	: Andov	er				
Logbook No.: 2015-1	Log	book Po	g.: 106		Tract: 3922							
Landform (hillslope, terrace, e	etc.):	Slope	- mid		Local R	Relief:	Concave		Convex [✓ None	Slope%.:	10
Subregion (LRR): Middle	e Atlantic			La	t: 42.643190		Long: -	-71.22	5463		Datum: NA	D83
Soil Map Unit Name: Rid	gebury ar	d Leice:	ster fine	e sandy lo	pams, 0 to 3 perce	nt slopes, ex	xtremely ston	ny	NWI Clas	sification:	Not ma	apped
Are climatic / hydrologic cond	itions on t	he site t	ypical f	or this tim	ne of year?:	✓ Yes [☐ No (If no	o, expl	ain in Remar	rks.)		_
Are Vegetation	□ or H	ydrolog	у 🗖	significa	antly disturbed?	☑ No	Are "Norma	al" Circ	cumstances p	oresent?	☑ Yes	☐ No
Are Vegetation Soil	or F	ydrolog	у 🗖	naturally	y problematic?	✓ No						
SUMMARY OF FINDIN	NGS - A	ttach	site n	nap sh	owing sampli	ng point	locations	s, trar	nsects, in	nportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	□ N	0				_			
Hydric Soil Present?			Yes	√ N	0		Is the San within a W	npled Vetlan	Area □	Yes ☑	₫ No	
Wetland Hydrology Present?			Yes	☑ N	0							
Field Wetland Classification:	UPL	AND PI	_OT									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	rs:							<u>S</u>	Secondary In	dicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one red	quired; c	heck a	ll that app	oly)				Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)			[☐ Wate	er-Stained Leaves ((B9)			☐ Drainage	Patterns (B10)	
☐ High Water Table (A2)			[☐ Aqua	atic Fauna (B13)				Moss Tri	m Lines (B	16)	
☐ Saturation (A3)			[☐ Marl	Deposits (B15)				Dry-Seas	son Water	Table (C2)	
□ Water Marks (B1)			[☐ Hydr	ogen Sulfide Odor	(C1)			Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2)			[Oxidi	ized Rhizospheres	along Living	g Roots (C3)] Saturation	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)			[Pres	ence of Reduced I	ron (C4)] Stunted	or Stressec	d Plants (D1)	
☐ Algal Mat or Crust (B4)			[Rece	ent Iron Reduction i	in Tilled Soil	ls (C6)		☐ Geomorp	ohic Positio	n (D2)	
☐ Iron Deposits (B5)				Thin	Muck Surface (C7))] Shallow	Aquitard (D	03)	
☐ Inundation Visible on Ae	rial Image	ry (B7)		Othe	r (Explain in Rema	arks)			Microtop	ographic R	elief (D4)	
☐ Sparsely Vegetated Cor	cave Surf	ace (B8)						☐ FAC-Neu	utral Test ([D5)	
Field Observations:												
Surface Water Present?	☐ Yes	$\overline{\mathbf{A}}$	No I	Depth (ind	ches):							
Water Table Present?	☐ Yes	$\overline{\mathbf{A}}$		Depth (ind	-		Wetlan	nd Hyd	rology Pres		Yes ✓	No
Saturation Present? (includes capillary fringe)	☐ Yes	V	No I	Depth (inc	ches):					Ц	ies 🗹	NO
Remarks (Describe Recorded	Data (stre	eam gag	je, mon	itoring we	ell, aerial photos, p	revious insp	ections), if a	ıvailabl	e):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% Cc	over	Dor	ninant	Indicate	or Status
Acer rubrum Pinus strobus Acer saccharum							25 60 10)	Y	ES ES IO	FA	AC \CU \CU
Acor Subonarum					-	Total Cover:	ı		1 '		1	



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Frangula alnus Rhamnus cathartica		60 20	YES YES	FAC FAC
Miaillius Caulaiuca	Total Cover:	80	ILS	IAC
Herb Stratum				
Plot Size: 5	ı	a. a. I	5	1
Scientific Name		% Cover	Dominant	Indicator Status
Toxicodendron radicans Maianthemum canadense		60 10	YES NO	FAC FACU
Trientalis borealis Parthenocissus quinquefolia		25 5	YES NO	FAC FACU
Taranonososo quinquorona	Total Cover:	100		17.00
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:	'		I
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species		x 2 = <u>0</u>	
Species Across All Strata: 6 (B)	FAC Species:	<u>190</u>	x 3 = <u>570</u>	
Percent of Dominant Species That Are OBL FACW or FAC: 83 (A/B)	FACU Species:	: <u>85</u>	x 4 = <u>340</u>	
That Are OBL, FACW, or FAC: 83 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>275 (A)</u>	<u>910 (B)</u>	
		Prevalence Index =	B/A = <u>3.31</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Presen	t? ☑ Yes □] No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	1			



i ioviderice, i	11 02307								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures			-	_
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture	Remarks
0-6	10YR 4/3	100					SILT L	OAM	
6-10	10YR 5/6	100					SILT L	_OAM	ROCK REFUSAL AT 10 INCHES
¹Type: C=Cond	centration, D=De	epletion	ı, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	=Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	to all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils ³ :
☐ Histosol (A	A1)		ПБ	Polyval	ue Below :	Surface (S	8) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
_	pedon (A2)			ИLŔA 1		,		_	e Redox (A16) (LRR K, L, R)
☐ Black Hist			י ם	Γhin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)		L	oamy	Mucky Mir	neral (F1)	LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			-	Gleyed Ma		,	☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	11) 🔲 [Deplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		_ F	Redox I	Dark Surfa	ace (F6)			nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			Deplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	4 149B)					Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydr	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ '	Inknown			Hydric Soil Prese	ent? ☐ Yes ☑ No
								,	🗀 100 🖭 110
Remarks:									
Description of I	Habitat Characto	rictics	Aquatic Diversity	, or Go	noral Com	monte:			
Description of t	nabilal Characle	ristics,	Aqualic Diversity	y or Ge	nerai Con	imenis.			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland?	P ☐ Yes ☐	No 🔲 Unknown
Wolland Quant	,,. 🗀g	ш.	viouoidio 🛅	2011			looiatoa vvotiaria.		THE CHIMINE
General Comm	ents:								





NORTH



WETLAND	DETERMIN	ATION FORM - N	Northcen	tral and No	ortheast Region	
☑ Centerline ☐ Re-Route ☐	Access Road	☐ Ancillary Facility	☐ Tra	ansmission Line	Other	
Project/Site: NED	Milep	oost: 24568.4	County:	Essex	Date:	07/30/2015
Applicant/Owner: Kinder Morgan	<u> </u>		State: MA	A Samp	oling Point: TK-K-W0	02-PFO
Investigators: CG JW Q	uad Name: Lawr	ence	Township:	Andover		
Logbook No.: 2015-1 Logbo	ook Pg.: 59	Tract: 4314				
Landform (hillslope, terrace, etc.):	Depression	Local Re	elief: 🗹	Concave	Convex None	Slope%.: 2
Subregion (LRR): Middle Atlantic		Lat: 42.641509		Long: -71.22	3464	Datum: NAD83
Soil Map Unit Name: Scarboro mucky	y fine sandy loam	, 0 to 3 percent slopes			NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the	site typical for th	is time of year?:	Yes 🔲	No (If no, exp	lain in Remarks.)	
Are Vegetation Soil or Hyd	drology 🔲 sig	nificantly disturbed?	✓ No A	Are "Normal" Cire	cumstances present?	☑ Yes ☐ No
Are Vegetation	drology 🔲 nat	urally problematic?	√ No			
SUMMARY OF FINDINGS - Atta	ach site map	showing samplin	g point lo	ocations, tra	nsects, important	features, etc.
Hydrophytic Vegetation Present?	✓ Yes 🗆	No				
Hydric Soil Present?	✓ Yes 🗆	No		s the Sampled vithin a Wetlar] No
Wetland Hydrology Present?	✓ Yes □	No No				
Field Wetland Classification: PFO						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:				9	Secondary Indicators (2	or more required)
Primary Indicators (minimum of one requi	ired; check all tha	t apply)			☐ Surface Soil Cracks	(B6)
☐ Surface Water (A1)	V	Water-Stained Leaves (E	39)	<u> </u>	✓ Drainage Patterns (B10)
☐ High Water Table (A2)		Aquatic Fauna (B13)		[Moss Trim Lines (B	16)
✓ Saturation (A3)		Marl Deposits (B15)		[☐ Dry-Season Water	Table (C2)
☐ Water Marks (B1)		Hydrogen Sulfide Odor (C1)	[Crayfish Burrows (C	(8)
☐ Sediment Deposits (B2)		Oxidized Rhizospheres a	along Living R	Roots (C3)	☐ Saturation Visible or	n Aerial imagery (C9)
☐ Drift Deposits (B3)		Presence of Reduced Iro	on (C4)	[☐ Stunted or Stressed	Plants (D1)
✓ Algal Mat or Crust (B4)		Recent Iron Reduction in	Tilled Soils ((C6)	Geomorphic Positio	n (D2)
☐ Iron Deposits (B5)		Thin Muck Surface (C7)			☐ Shallow Aquitard (D	3)
☐ Inundation Visible on Aerial Imagery	(B7)	Other (Explain in Remark	ks)		☐ Microtopographic R	elief (D4)
☐ Sparsely Vegetated Concave Surface	e (B8)			[FAC-Neutral Test (E	05)
Field Observations:						
Surface Water Present?	✓ No Dept	h (inches):				
Water Table Present?	✓ No Dept	h (inches):		Wetland Hyd	drology Present?	Voc. 🗆 No.
Saturation Present?	☐ No Dept	h (inches): 8			V I	Yes □ No
Remarks (Describe Recorded Data (stream	m gage, monitorir	ng well, aerial photos, pro	evious inspec	ctions), if availab	le):	
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name				% Cover	Dominant	Indicator Status
Acer rubrum Pinus strobus				60 20	YES YES	FAC FACU
		T	otal Cover:	80		



Providence, Rt 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Ulmus americana Ilex verticillata Viburnum dentatum		15 20 30	YES YES YES	FACW FACW FAC
	Total Cover:	65	1	'
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Impatiens capensis Osmunda regalis Onoclea sensibilis		30 40 15	YES YES NO	FACW OBL FACW
	Total Cover:	85	•	1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)	Total % Cover of	of:	Multiply by:	
	OBL Species:	<u>40</u>	x 1 = <u>40</u>	
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species	: <u>80</u>	x 2 = <u>160</u>	
	FAC Species:	<u>90</u>	x 3 = <u>270</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 86 (A/B)	FACU Species:		x 4 = <u>80</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>230 (A)</u>	<u>550 (B)</u>	
	F	Prevalence Index	= B/A = <u>2.39</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Preser	nt? ☑ Yes [] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



SOIL												
Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.)												
Depth (inches)	Matrix		Redox Features				Texture		Remarks			
(11101162)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	rext	ui C	IZIIIIINƏ			
0-2	7.5YR 3/2	100					ORG <i>A</i>	ANIC				
2-14	10YR 2/1	100					SILT LOAM					
44.40.	0.57/.0/4		40VD E/0	15			FINE SANDY LOAM					
14-18+	2.5Y 6/1	85	10YR 5/8	15	С	M	FINE SAND	DY LOAM				
¹Type: C=Con	centration D=De	enletion	RM=Reduced	Matrix	CS=Cov	ered Sand	or Coated Grains	2l ocation: Pl =	Pore Lining M=Matrix			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. ² Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :												
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)												
	pedon (A2)			ILRA 1			-, (=,	Coast Prairie Redox (A16) (LRR K, L, R)				
☐ Black Hist			ПΤ	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)			
	Sulfide (A4)		_				(LRR K, L)		e (S7) (LRR K, L, M)			
Stratified	Layers (A5)			oamy	Gleyed Ma	atrix (F2)	,	☐ Polyvalue Be	elow Surface (S8) (LRR K, L)			
✓ Depleted	Below Dark Surfa	ace (A1		-	d Matrix (_	urface (S9) (LRR K, L)			
☐ Thick Dar	k Surface (A12)		_ R	edox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)			
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo				
☐ Sandy Gl	eyed Matrix (S4)		□ F	edox l	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)			
☐ Sandy Re	dox (S5)							☐ Red Parent	Red Parent Material (F21)			
☐ Stripped I	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)			
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)			
3Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.				
Restrictive Lay	er Present?		res √ No	□ U	Inknown							
_			_					Hydric Soil Prese	nt? ✓ Yes 🗆 No			
Remarks:							I					
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
·			, ,									
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland?	Yes 🔽	No Unknown			
General Comm	ents:											







WETLAND DETERMINATION FORM	- Northcentral and Northeast Region				
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facili	ty Transmission Line Other				
Project/Site: NED Milepost: 24505.3	County: Essex Date: 07/30/2015				
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: TK-K-W002-UPL				
Investigators: CG JW Quad Name: Lawrence	Township: Andover				
Logbook No.: 2015-1 Logbook Pg.: 60 Tract: 4314					
Landform (hillslope, terrace, etc.): Slope - mid Loca	Relief: Concave C Convex None Slope%.: 4				
Subregion (LRR): Middle Atlantic Lat: 42.641553	Long: -71.223553 Datum: NAD83				
Soil Map Unit Name: Scarboro mucky fine sandy loam, 0 to 3 percent slope	s NWI Classification: Not mapped				
Are climatic / hydrologic conditions on the site typical for this time of year?:	✓ Yes ☐ No (If no, explain in Remarks.)				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	☑ No Are "Normal" Circumstances present? ☑ Yes □ No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No				
SUMMARY OF FINDINGS - Attach site map showing samp	ling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? ☐ Yes ☑ No	to the Operated Associ				
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area				
Wetland Hydrology Present? ☐ Yes ☑ No					
Field Wetland Classification: UPLAND PLOT					
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)				
☐ Surface Water (A1) ☐ Water-Stained Leave	s (B9) Drainage Patterns (B10)				
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)				
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)				
☐ Water Marks (B1) ☐ Hydrogen Sulfide Od) Crayfish Burrows (C8)				
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospher	ong Living Roots (C3) Saturation Visible on Aerial imagery (C9)				
☐ Drift Deposits (B3) ☐ Presence of Reduced	n (C4) Stunted or Stressed Plants (D1)				
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	Filled Soils (C6) Geomorphic Position (D2)				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C	Shallow Aquitard (D3)				
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rer	narks) Microtopographic Relief (D4)				
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present?					
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ☑ No				
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	163 16 160				
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos	previous inspections), if available):				
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name	% Cover Dominant Indicator Status				
Fraxinus americana Acer rubrum Pinus strobus	10 NO FACU 30 YES FAC 30 YES FACU				
	Total Cover: 70				



Providence, RI 02904				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Frangula alnus Ilex verticillata		30 10	YES YES	FAC FACW		
nex verucinata	Total Cover:	40	TES	FACV		
	Total Cover.					
Herb Stratum						
Plot Size: 5						
Scientific Name		% Cover	Dominant	Indicator Status		
Dennstaedtia punctilobula Parthenocissus quinquefolia		15 40	NO YES	UPL FACU		
Euonymus alatus		10	NO	UPL		
Maianthemum canadense	Total Cover:	40 105	YES	FACU		
Manada Vina Otrativa	Total Cover.	103				
Woody Vine Stratum						
Plot Size: 30	1	0/ 0		landing Co.		
Scientific Name		% Cover	Dominant	Indicator Status		
	T + 10					
	Total Cover:					
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:				
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of	of:	Multiply by:			
	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species:	: <u>10</u>	x 2 = <u>20</u>			
	FAC Species:	<u>60</u>	x 3 = <u>180</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species:	<u>120</u>	x 4 = <u>480</u>			
	UPL Species:	<u>25</u>	x 5 = <u>125</u>			
	Column Totals:	<u>215 (A)</u>	<u>805 (B)</u>			
	F	Prevalence Index =	$= B/A = \underline{3.74}$			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
2 - Dominance Test is > 50%						
☐ 3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☐ Yes ☑ No					
data in Remarks or on a separate sheet)						
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹ Indicators of hydric soil and wetland hydrology must be						
present, unless disturbed or problematic.						
Remarks:						



T TOVIGETICE, I	(1 0200+												
SOIL													
Profile Descrip	tion: (Describe	the de	epth needed to d	ocum	ent the in	dicator o	r confirm t	he absen	ce of indicators.)				
Depth	Matrix		Red	lox Fe	atures								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure		Re	marks	
0-2	7.5YR 3/2	100	, ,		7.			ORGA	MIC				
0-2	7.5TR 3/2	100						OKGA	AINIC				
2-8	10YR 3/2	100						SILT L	OAM				
8-12	10YR 4/3	100						SILT L	OAM	ROCK	REFUS	AL AT 10 INCH	IES
1T 0.0		1	DM D 1 11					0 :	al « Di	Б 1		• • •	
		<u> </u>	n, RM=Reduced I				or Coated	Grains.	² Location: PL=				
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)			Indicators for Pr	oblematic	Hydric	Soils ³ :	
☐ Histosol (A	A1)					Surface (S	8) (LRR R		2 cm Muck (A10) (LRR	K, L, M	LRA 149B)	
☐ Histic Epip	pedon (A2)		N	LRA 1	49B)				☐ Coast Prairie	Redox (A	16) (LR	R K, L, R)	
☐ Black Hist	ic (A3)		Пт	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)	5 cm Mucky	Peat or Pe	at (S3)	(LRR K, L, R)	
	Sulfide (A4)		_			. , .	LRR K, L)	,	☐ Dark Surface		` '		
	Layers (A5)		_	•	•	. ,						•	
		(14		-	Gleyed Ma				Polyvalue Be				
	Below Dark Surfa	ace (A1	_	•	d Matrix (I	•			☐ Thin Dark Su		•	•	
☐ Thick Darl	k Surface (A12)		□ R	edox [Dark Surfa	ice (F6)			☐ Iron-Mangan	ese Masse	s (F12)	(LRR K, L, R)	
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain So	oils (F19	9) (MLRA 149B))
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox I	Depressio	ns (F8)				c (TA6) (MI	_RA 144	4A, 145, 149B)	
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F2	21)		
☐ Stripped N	Matrix (S6)								─ Very Shallov	v Dark Surf	ace (TF	:12)	
	ace (S7) (LRR R	MIDA	\ 1/0R\						Other (Expla			,	
_			·						_	iiii iii ixeiiia	iko)		
Indicators of h	nydrophytic vege	tation a	and wetland hydro	logy n	nust be pre	esent, unle	ess disturbe	ed or prob	lematic.				
Restrictive Lay	er Present?		Yes ☑ No	J U	nknown								
									Hydric Soil Prese	nt?	Yes	☑ No	
Remarks:													
rtomanto.													
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:							
Wetland Qualit	y: High		Moderate	_ow			Isolated	Wetland?	☐ Yes ☐	No 🔲	Unkr	nown	
General Comm	ents:												





NORTH



WE	TLAN	D DE	TERM	IINATI	ON F	FORM -	Northc	ent	ral and	d No	ortheas	t Region	l	
☑ Centerline ☐ Re-R	oute	☐ Acc	ess Ro	ad 🔲	Ancill	ary Facility		Tran	smission	Line	☐ Oth	ner		
Project/Site: NED				Milepost:	3050	08.1	County:		Middle	sex		Date:	08/06/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA		Samp	oling Poin	t: TK-K-W	001-PFO	
Investigators: CG JW		Quad N	Name:	Lawrence)		Townshi	p:	Tewks	bury				
Logbook No.: 2015-1	Lo	gbook P	g.: 65		Tra	ct: 7845								
Landform (hillslope, terrace,	etc.):	Depre	ession			Local R	Relief:	7 0	Concave		Convex	☐ None	Slope%.:	0
Subregion (LRR): Middl	e Atlantic	;		Lat	t: 42.6	32998		L	ong: -	-71.20	6016		Datum: NA	D83
Soil Map Unit Name: Fre	etown m	uck, 0 to	1 perc	ent slopes	3						NWI CI	assification:	PFO1E	
Are climatic / hydrologic cond	litions on	the site	typical	for this tim	ne of ye	ar?:	✓ Yes		No (If no	o, expl	lain in Rem	arks.)		
Are Vegetation Soil	□ or	Hydrolog	ау П	significa	antly dis	sturbed?	— ✓ No	Aı	re "Norma	al" Circ	cumstance	s present?	✓ Yes	☐ No
Are Vegetation Soil	_	Hydrolog	_	naturall	•		☑ No							
		,	,		, μ									
SUMMARY OF FINDI	NGS - A	Attach	site r	nap sh	owing	g sampli	ng point	t lo	cations	s, tra	nsects,	importan	t features	, etc.
Hydrophytic Vegetation Prese	ent?	\checkmark	Yes	□ N	0			1-	tha Can					
Hydric Soil Present?		\checkmark	Yes	□ N	0				the San thin a W			☑ Yes [□ No	
Wetland Hydrology Present?		✓	Yes	□ N	0									
Field Wetland Classification:	PF	0												
Remarks:														
HYDROLOGY														
Wetland Hydrology Indicate	ors:									5	Secondary	Indicators (2	or more requ	uired)
Primary Indicators (minimum	of one re	equired;	check a	all that app	oly)						Surface	e Soil Crack	s (B6)	
☐ Surface Water (A1)				√ Wate	r-Stain	ed Leaves ((B9)				☐ Draina	ge Patterns	(B10)	
─ High Water Table (A2)				— □ Aqua	itic Fau	na (B13)					☐ Moss 7	rim Lines (E	316)	
✓ Saturation (A3)				☐ Marl	Deposi	ts (B15)					☐ Dry-Se	ason Water	Table (C2)	
■ Water Marks (B1)				☐ Hydr	ogen S	ulfide Odor	(C1)				☐ Crayfis	h Burrows (C8)	
☐ Sediment Deposits (B2)				☐ Oxidi	zed Rh	izospheres	along Livir	ng Ro	oots (C3)		☐ Satura	tion Visible o	on Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Pres	ence of	Reduced II	ron (C4)				Stunte	d or Stresse	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Rece	nt Iron	Reduction i	in Tilled So	oils (C	C6)	5	☑ Geomo	orphic Position	on (D2)	
☐ Iron Deposits (B5)				☐ Thin	Muck S	Surface (C7))				Shallov	v Aquitard ([D3)	
☐ Inundation Visible on A	erial Imag	ery (B7)		☐ Othe	r (Expla	ain in Rema	arks)				Microto	pographic F	Relief (D4)	
☐ Sparsely Vegetated Cor	ncave Su	rface (B8	3)								☐ FAC-N	eutral Test (D5)	
Field Observations:														
Surface Water Present?	☐ Ye	s 🗹	No	Depth (inc	ches).									
Water Table Present?	☑ Ye	_		Depth (inc		10			Wetlan	d Hvd	Irology Pro	esent?		
Saturation Present?	∀ Y€	_		Depth (inc	,	0							∫ Yes □	No
(includes capillary fringe)		_		-1 - (,									
Remarks (Describe Recorded	l Data (st	ream ga	ge, mor	nitoring we	ell, aeria	al photos, p	orevious ins	pect	ions), if a	vailab	le):			
VEGETATION														
Tree Stratum														
Plot Size: 30														
Scientific Name									% Co	over	D	ominant	Indicate	or Status
Quercus alba									5			NO		VCU
Acer rubrum						-	Total Cover	r.	80		l	YES	F.	AC
							Total Cove	1.	85	J				



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rosa multiflora		25	YES	FACU
Viburnum dentatum		10	YES	FAC
	Total Cover:	35		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Symplocarpus foetidus		30	YES	OBL
Osmundastrum cinnamomeum Impatiens capensis		40 40	YES YES	FACW FACW
mpatorio caporiole	Total Cover:	110	120	17.017
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	indicator Status
	Total Cover:			1
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	л. <u>30</u>	x 1 = 30	
Total Number of Dominant	FACW Species		x = 30 x = 160	
Species Across All Strata: 6 (B)		. <u>80</u> 90		
Percent of Dominant Species	FACUS pecies:			
That Are OBL, FACW, or FAC: 83 (A/B)	FACU Species:		x 4 = <u>120</u>	
	UPL Species:	<u>0</u>	x 5 = 0	
	Column Totals:		<u>580 (B)</u>	
	F	Prevalence Index =	= B/A = <u>2.52</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	ıt? ☑ Yes [□ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:	I			



Popular	SOII									
Depth	JOIL									
Color (moist) % Color (moist) % Type* Loc² Organic Organic Organic Texture Remarks Organic Sand Sand Sand Sand Sand Type: C_Concentration, D_Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C_Concentration, D_Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C_Concentration, D_Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C_Concentration, D_Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C_Concentration, D_Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C_Concentration, D_Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C_Concentration, D_Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Thid (Catrix (A10) (LRR K, L, R) (LRR K, L, R) Dark Surface (S7) (LRR K, L, R) Dark Surface (S7) (LRR K, L, R) Depleted Below Gurface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Matrix (S4) Sandy Gelow Matrix (S4) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Phydric Soil Present? Yes No Dinknown Hydric Soil Present? Yes No Dinknown No Depleted Matrix (S6) Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Dinknown	Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm the abse	nce of indicators.)	
16-24	Depth	Matrix		Re	dox Fe	atures				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. *Location: PL=Pore Lining, M=Matrix *Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Tex	ture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, unless otherwise noted.) Histosol (A1)	0-16	7.5YR 2.5/1	100					ORG	ANIC	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, unless otherwise noted.) Histosol (A1)										
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.	16-24	10YR 5/2	100					SAI	ND	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)										
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	Type: C=Cond	L centration. D=De	pletion	. RM=Reduced	Matrix.	CS=Cov	L ered Sand	lor Coated Grains.	²Location: PL=	l =Pore Lining. M=Matrix
Histosol (A1)	**	· · · · · · · · · · · · · · · · · · ·	·							
Histic Epipedon (A2) Histic Epipedon (A2)	<u>-</u>			·			•	:8) (I RR R		-
Black Histic (A3)	:	•					oundo (o	(2) (2) (1)	_	
Hydrogen Sulfide (A4)				Пт	hin Da	rk Surface	e (S9) (I RI	R R MI RA 149B)	_	
Stratified Layers (A5)										
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Other (Explain in Remarks) □ Normal Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Normal Dark Surface (S9) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Normal Dark Surface (S9) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Normal Dark Surface (S9) (LRR K, L) □ Normal Dark Surface (S9) (LR K, L) □ Normal Dark					-	=		(LIKICIK, L)		
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Piedmont Floodplain Soils (F19) (MLRA 149B) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☐ Sandy Redox (S5) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12) ☐ Dark Surface (S7) (LRR R, MLRA 149B) ☐ Other (Explain in Remarks) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? ☐ Yes ☑ No ☐ Unknown Hydric Soil Present? ☑ Yes ☐ No Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Mesic Spodic (TA6) (MLRA 144B) Mesic Spodic (TA6) (MLRA 149B) Mesic Spodi			ace (A1	_	-	-				
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ And County Present? □ Yes ☑ No □ Unknown □ Hydric Soil Present? ☑ Yes □ No □ No □ Remarks: □ Description of Habitat Characteristics, Aquatic Diversity or General Comments: □ Wetland Quality: □ High ☑ Moderate □ Low □ Isolated Wetland? □ Yes ☑ No □ Unknown	_ _ :			· —	•		,			
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes ☑ No □ Unknown Hydric Soil Present? ☑ Yes □ No Wetland Quality: □ High ☑ Moderate □ Low Isolated Wetland? □ Yes ☑ No □ Unknown Isolated Wetland? □ Yes ☑ No □ Unknown		, ,		_						
Sandy Redox (S5)				_	-					
Stripped Matrix (S6)	_	, ,		ш.		2 op. 000.0	(. 0)			
□ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes ☑ No □ Unknown Hydric Soil Present? ☑ Yes □ No Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: □ High ☑ Moderate □ Low Isolated Wetland? □ Yes ☑ No □ Unknown									<u> </u>	
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?			MIRA	149B)						
Restrictive Layer Present?	_			•	مبسماء			and disturbed or arel		an in Romano)
Wetland Quality: ☐ High ☑ Moderate ☐ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown						-	osoni, ume	ace distalled of pro-		ent? ☑ Yes ☐ No
	Restrictive Lay					-		and and a section pro-		ent? ☑ Yes □ No
	Restrictive Lay	ver Present?		∕es ☑ No		Inknown				ent? ☑ Yes □ No
General Comments:	Restrictive Lay Remarks: Description of I	rer Present? Habitat Characte	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Restrictive Lay Remarks: Description of I	rer Present? Habitat Characte	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte Ty: High	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte Ty: High	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte Ty: High	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte Ty: High	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte Ty: High	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte Ty: High	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte y:	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte y:	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte y:	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte y:	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte y:	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte y:	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte y:	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte y:	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte y:	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	
	Remarks: Description of I	rer Present? Habitat Characte y:	ristics,	/es ☑ No Aquatic Diversity	or Ge	Inknown			Hydric Soil Prese	





ΝE



WETLAND DETERMINATION FORM - Northcer	ntral and Northeast Region
 ☑ Centerline	ansmission Line
Project/Site: NED Milepost: 30565.3 County:	Middlesex Date: 08/06/2015
Applicant/Owner: Kinder Morgan State: M.	
Investigators: CG JW Quad Name: Lawrence Township:	Tewksbury
Logbook No.: 2015-1 Logbook Pg.: 67 Tract: 7845	
Landform (hillslope, terrace, etc.): Hilltop Local Relief:	Concave ☑ Convex ☐ None Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.632909	Long: -71.205842 Datum: NAD83
Soil Map Unit Name: Freetown muck, 0 to 1 percent slopes	NWI Classification: PFO1E
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point to	ocations transacts important features etc
Hydrophytic Vegetation Present?	ocations, transects, important reatures, etc.
	s the Sampled Area
	within a Wetland? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No Field Wetland Classification: UPLAND PLOT	
Remarks:	
Ivenidias.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
Saturation (A3) Marl Deposits (B15)	□ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres along Living I	Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils	(C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
	☐ Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
Sparsely vegetated Concave Surrace (B8)	_ ` ` '
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspe	ections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Acer rubrum Quercus rubra	10 NO FAC 15 NO FACU
Quercus alba	30 YES FACU
Pinus strobus	30 YES FACU
Total Cover:	85



1 TOVIGETICE, TRI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus Acer rubrum		50 10	YES NO	FACU FAC
Acei Tubidiii	Total Cover:	60	INO.	170
Herb Stratum				
Plot Size: 5	I	0/ 0	1 5	l , , , , , , , , , , , , , , , , , , ,
Scientific Name		% Cover	Dominant	Indicator Status
Quercus alba Osmunda regalis		10 20	NO YES	FACU OBL
Osmundastrum cinnamomeum Lycopodium obscurum		40 10	YES NO	FACW FACU
-7	Total Cover:	80	1	1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		ı	I
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>20</u>	x 1 = <u>20</u>	
Total Number of Dominant	FACW Species	: <u>40</u>	x 2 = <u>80</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)	FACU Species:	<u>145</u>	x 4 = <u>580</u>	
That Ale ODE, I AGW, OF AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	225 (A)	740 (B)	
		Prevalence Index :	= B/A = <u>3.29</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	∐ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
present, unless disturbed or problematic.				
Remarks:				



Providence, R	(1 02904								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	confirm the a	bsence of indicators.)	
Depth	Matrix		•	dox Fe				•	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Texture	Remarks
0-2	7.5YR 3/3	100					0	RGANIC	
2-12	7.5YR 2.5/2	100					SI	ILT LOAM	
12-16	7.5YR 4/6	100					FINE S	SANDY LOAM	
16-18	10YR 5/3	100					FINE S	SANDY LOAM	
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grai	ns. ² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		N	/ILRA 1	49B)			☐ Coast Prairie	Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ¹	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149	B) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen								□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified L	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔲 🛭	Deplete	d Matrix (I	F3)		☐ Thin Dark Su	ırface (S9) (LRR K, L)
☐ Thick Dark	k Surface (A12)		□ F	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ndy Mucky Mineral (S1)						☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)	
☐ Sandy Gle	eyed Matrix (S4)			Redox I	Depressio	ns (F8)		☐ Mesic Spodio	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)		_						Material (F21)
☐ Stripped N	Matrix (S6)								/ Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	. 149R)						in in Remarks)
_	nydrophytic vege		·	ology n	nuet he nr	ecent unle	see dieturhed or	_	iii iii rediiidiie)
					•	eserii, uriie	sss disturbed of	problematic.	
Restrictive Lay	er Present?	□ Y	′es [∕] No	<u></u> п	nknown			Hydric Soil Prese	nt? ☐ Yes ☑ No
Remarks:							<u> </u>		
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetla	and? 🔲 Yes 🔲	No 🔲 Unknown
General Comm	ents:								





EAST



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	Transmission Line
Project/Site: NED Milepost: 38549.0	County: Essex Date: 08/03/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: AN-K-W006-PFO
Investigators: PF JW Quad Name: Wilmington	Township: Andover
Logbook No.: 2015-1 Logbook Pg.: 113 Tract: 4624	
Landform (hillslope, terrace, etc.): Depression Local F	Relief: Concave Convex None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.621906	Long: -71.182212 Datum: NAD83
Soil Map Unit Name: Hinckley loamy sand, 8 to 15 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	✓ Yes ☐ No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	✓ No
The vegetation con or rightnoisty naturally problematic:	IV.
SUMMARY OF FINDINGS - Attach site map showing sampli	ing point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area
Wetland Hydrology Present?	Willia a Welland.
Field Wetland Classification: PFO	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves	(B9) ☑ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	C(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	s along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced I	Iron (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	arks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	✓ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	previous inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
	80 YES FAC
Pinus strobus	10 NO FACU
	Total Cover: 90



				4_CON
oling/Shrub Stratum				
et Size: 15				
entific Name		% Cover	Dominant	Indicator Status
ınus serotina bus allegheniensis er rubrum		5 30 20	NO YES YES	FACU FACU FAC
uus strobus	Total Cover:	5 60	NO	FACU
rb Stratum				
ot Size: 5				
ientific Name		% Cover	Dominant	Indicator Status
mundastrum cinnamomeum mplocarpus foetidus yopteris marginalis xicodendron radicans		30 30 10 10	YES YES NO NO	FACW OBL FACU FAC
	Total Cover:	80	!	ı
ody Vine Stratum				
ot Size: 30				
ientific Name		% Cover	Dominant	Indicator Status
lastrus orbiculatus is sp		15 10	YES NA	FACU NA
ominance Test Worksheet:	Total Cover: Prevalence Inde	25		
	Total % Cover of		Multiply by	
Imber of Dominant Species at Are OBL, FACW, or FAC: 4 (A)			Multiply by:	
tal Number of Dominant	OBL Species: FACW Species:	<u>30</u>	x 1 = 30 x 2 = 60	
pecies Across All Strata: 6 (B)	FAC Species:	<u>30</u>	x 2 = 60 x 3 = 330	
ercent of Dominant Species	FACU Species:	<u>110</u> 75	$x 4 = \frac{300}{4}$	
at Are OBL, FACW, or FAC: 67 (A/B)	UPL Species:	<u>75</u> 0	x = 500 x = 0	
	Column Totals:	<u>o</u> 245 (A)	720 (B)	
			, ,	
	r	revalence index	= B/A = <u>2.94</u>	
rdrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Ve	egetation Prese	nt? ☑ Yes [] No
Problematic Hydrophytic Vegetation¹ (Explain)				
dicators of hydric soil and wetland hydrology must be esent, unless disturbed or problematic.				
emarks:				



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	r confirm the	absence of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures			Texture	Remarks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Texture	Nemarks
0-4	10YR 2/1	100					(ORGANIC	
4-8	10YR 4/2	80	7.5YR 4/6	20	С	М		SAND	
8-20	10YR 2/1	100					,	ORGANIC	
0-20	1011 2/1	100					`	ORGANIC	
¹Type: C=Cond	centration. D=De	pletion	, RM=Reduced I	Matrix.	CS=Cov	ered Sand	or Coated Gra	ains. ² Location: PL=	Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	<u> </u>	o all LRR's, unle						oblematic Hydric Soils³:
✓ Histosol (A						-	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILŔA 1		(-	-/(Redox (A16) (LRR K, L, R)
☐ Black Hist			Пт	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149		Peat or Peat (S3) (LRR K, L, R)
_	Sulfide (A4)						(LRR K, L)		(S7) (LRR K, L, M)
	_ayers (A5)		_	•	Gleyed Ma	` '	. ,,		low Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1		-	d Matrix (f				rface (S9) (LRR K, L)
	k Surface (A12)			-	` Dark Surfa	•		_	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)					rface (F7)			odplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		_ _ R	edox [Depression	ns (F8)		☐ Mesic Spodio	: (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)								Naterial (F21)
☐ Stripped N	Matrix (S6)							─ Very Shallow	Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Explai	n in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology m	nust be pre	esent, unle	ess disturbed o	or problematic.	
Restrictive Lay					nknown	· ·		·	
		_						Hydric Soil Prese	nt? ☑ Yes ☐ No
								,	100 110
Remarks:									
Description of I	Hahitat Characte	ristics	Aquatic Diversity	or Ge	neral Com	ments:			
Description of t	Tabilal Characte	natios,	Aquatic Diversity	OI OE	nerai con	iiiiGiito.			
Wetland Qualit	y: 🔲 High	N N	Moderate	Low			Isolated Wet	tland? ☐ Yes ☑	No Unknown
	,. <u> </u>	٠ ك							
General Comm	ents:								





SOUTH



WETLAND DETERMINATION FORM -	Northce	entral and N	lortheast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	_ T	ransmission Line	e	
Project/Site: NED Milepost: 38594.9	County:	Essex	Date:	08/03/2015
Applicant/Owner: Kinder Morgan	State: N	MA Sar	mpling Point: AN-K-W	006-UPL
Investigators: PF JW Quad Name: Wilmington	Township:			
Logbook No.: 2015-1 Logbook Pg.: 114 Tract: 4624	ı			
Landform (hillslope, terrace, etc.): Hilltop Local R	telief:	Concave ✓	Convex None	Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.621783		Long: -71.	182174	Datum: NAD83
Soil Map Unit Name: Hinckley loamy sand, 8 to 15 percent slopes			NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	7 Yes [No (If no, ex	cplain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	 ☑ No	Are "Normal" C	Circumstances present?	✓ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	✓ No			
SUMMARY OF FINDINGS - Attach site map showing sampli	na point	locations, tr	ansects, importan	t features, etc.
Hydrophytic Vegetation Present? ☐ Yes ✓ No	31.			
Hydric Soil Present? ☐ Yes ☑ No		Is the Sample	ed Area	7 No
Wetland Hydrology Present? ☐ Yes ☑ No		within a Wetl	and?	_ 110
Field Wetland Classification: UPLAND PLOT				
Remarks:				
Terrianes.				
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (2	or more required)
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cracks	
☐ Surface Water (A1) ☐ Water-Stained Leaves ((B9)		☐ Drainage Patterns (•
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines (B	•
Saturation (A3) Marl Deposits (B15)			☐ Dry-Season Water	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1)		Crayfish Burrows (0	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living	g Roots (C3)		n Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced In	ron (C4)		Stunted or Stressed	` ,
Algal Mat or Crust (B4) Recent Iron Reduction i	n Tilled Soil	ls (C6)	Geomorphic Position	, ,
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7))		Shallow Aquitard (D	•
Inundation Visible on Aerial Imagery (B7)	rks)		Microtopographic R	
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (I	J5)
Field Observations:				
Surface Water Present?				
Water Table Present? Yes No Depth (inches):		Wetland H	ydrology Present? □	Yes ☑ No
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)				163 🖳 140
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious insp	pections), if availa	able):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus Acer rubrum		40 40	YES YES	FACU FAC
	Total Cover:	ı	120	1 10



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rubus allegheniensis		10	NO	FACU
Frangula alīnus	Tatal Carray	80	YES	FAC
	Total Cover:	90		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Dryopteris marginalis		70	YES	FACU
	Total Cover:	70	•	'
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	1
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: $2(A)$	OBL Species:	<u>0</u>	x 1 = 0	
Total Number of Dominant	FACW Species		x 2 = <u>0</u>	
Species Across All Strata: 4 (B)	FAC Species:	120	x 3 = 360	
Percent of Dominant Species	FACU Species		x 4 = 480	
That Are OBL, FACW, or FAC: 50 (A/B)	UPL Species:	<u> </u>	x 5 = <u>0</u>	
	Column Totals:		840 (B)	
		Prevalence Index		
Hudanahadia Vanadadian Indiantana		T TOVAIOTIOO ITTAON	<u> </u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	egetation Prese	ent? Tyes [☑ No
,				
Desklaratia Undeski dia Varratian 1/Franki.				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
processing annoced and annoced on processing annoced and annoced annoced annoced and annoced annoc				
Remarks:				



T TOVIGETICE, I	(1 0200+								The second of the second
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the in	ndicator o	confirm the abs	ence of indicators.))
Depth	Matrix		Re	dox Fe	atures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	16	exture	Remarks
0-4	10YR 3/3	100					OR	GANIC	DUFF
4-20	2.5Y 6/4	100					FINE	SAND	
4 20	2.01 0/4	100					1 1142	- 0/ ((VD	
4T 0.0							0	a D.	
		·	·				or Coated Grains		=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		N	ILRA 1	149B)			☐ Coast Prairi	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ⊤	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)		ПЬ	oamy	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surfac	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)		_	-	Gleyed Ma		,	☐ Polyvalue B	selow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	<u> </u>	-	ed Matrix (I				furface (S9) (LRR K, L)
	k Surface (A12)	(- 1	_		Dark Surfa				nese Masses (F12) (LRR K, L, R)
_	ıcky Mineral (S1)		_			ice (i o) irface (F7)			loodplain Soils (F12) (MLRA 149B)
		•	_	•		` ,		_	. , , , , ,
	eyed Matrix (S4)		□ F	ledox	Depressio	ns (Fo)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re								_	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallov	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ss disturbed or pr	oblematic.	
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetlan	d? 🗌 Yes 🗌	No Unknown
General Comm	ents:								





EAST



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 39642.7	County: Middlesex Date: 08/04/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: TK-K-W004-PFO
Investigators: CG JW Quad Name: Wilmington	Township: Tewksbury
Logbook No.: 2015-1 Logbook Pg.: 82 Tract: 7428	1
Landform (hillslope, terrace, etc.): Depression Local R	elief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.619408	Long: -71.180139 Datum: NAD83
Soil Map Unit Name: Freetown muck, 0 to 1 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	No Are "Normal" Circumstances present? ☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampli	ng naint locations, transacts, important foatures, etc.
	ig point locations, transects, important leatures, etc.
	Is the Sampled Area
Hydric Soil Present?	within a Wetland? Yes No
Field Wetland Classification: PFO	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction is	n Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	ks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ✓ Yes ☐ No Depth (inches): 14	Wetland Hydrology Present?
Saturation Present? ☑ Yes ☐ No Depth (inches): 4 (includes capillary fringe)	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pi	revious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Pinus strobus	15 NO FACU
Quercus alba Acer rubrum	5 NO FACU 65 YES FAC
	otal Cover: 85



1 Tovidence, IXI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Frangula alnus Quercus bicolor		20 10	YES YES	FAC FACW
QUELCUS DICOIOI	Total Cover:	30	11.5	TAOW
Herb Stratum				
Plot Size: 5	1		1	I
Scientific Name		% Cover	Dominant	Indicator Status
Osmundastrum cinnamomeum Symplocarpus foetidus		25 20	YES NO	FACW OBL
Boehmeria cylindrica Glyceria striata		5 10	NO NO	OBL OBL
Impatiens capensis		60	YES	FACW
	Total Cover:	120		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC.	OBL Species:	<u>35</u>	x 1 = <u>35</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>95</u>	x 2 = <u>190</u>	
	FAC Species:	<u>85</u>	x 3 = <u>255</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = <u>80</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>235 (A)</u>	<u>560 (B)</u>	
		Prevalence Index :	= B/A = <u>2.38</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Preser	nt? ☑ Yes [] No
data in Normania of on a separate sheety				
Drablemetic I hydrophytic Vegetation 1 (Typlein)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Describes				
Remarks:				



SOIL												
Profile Descriptio	n: (Describe	the d	epth needed	l to docun	nent the ir	ndicator o	r confirm tl	he absend	ce of indicators.)	1		
Depth (inches)	Matrix			Redox Fe	eatures			Textu	ro		Rema	arke
(inches) C	olor (moist)	%	Color (moi	st) %	Type ¹	Loc ²		rexiu	ie .		Kem	arks
0-24+	10YR 2/1	100						ORGA	VIC			
¹ Type: C=Concent	tration. D=De	epletion	. RM=Redu	ced Matrix	. CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining	ı. M=Mat	rix
Hydric Soil Indica			-						Indicators for P		*	
✓ Histosol (A1)						,	88) (LRR R,		2 cm Muck (-	
☐ Histic Epiped	on (A2)		_	MLRA		(-	-, (=,		☐ Coast Prairie	, ,		,
☐ Black Histic (A			Г	1 Thin Da	ark Surface	e (S9) (LR	R R, MLRA		5 cm Mucky			•
☐ Hydrogen Sul	•			_			(LRR K, L)	,	☐ Dark Surfac			, , ,
☐ Stratified Lay	ers (A5)		_		Gleyed Ma				☐ Polyvalue B	elow Surfac	e (S8) (LI	RR K, L)
☐ Depleted Beld	ow Dark Surfa	ace (A1	- 11)	Deplete	ed Matrix (F3)			☐ Thin Dark S	urface (S9)	(LRR K, I	-)
☐ Thick Dark Su	urface (A12)			Redox	Dark Surfa	ace (F6)			☐ Iron-Mangar	nese Masse	s (F12) (L	RR K, L, R)
☐ Sandy Mucky	Mineral (S1)] Deplete	ed Dark Su	urface (F7)			☐ Piedmont Fl	oodplain So	ils (F19)	(MLRA 149B)
☐ Sandy Gleye	d Matrix (S4)] Redox	Depressio	ns (F8)				c (TA6) (ML	RA 144A	, 145, 149B)
☐ Sandy Redox	(S5)								☐ Red Parent	Material (F2	21)	
☐ Stripped Mati	rix (S6)								☐ Very Shallov	v Dark Surfa	ace (TF12	2)
□ Dark Surface	(S7) (LRR R	, MLRA	A 149B)						Other (Expla	ain in Rema	rks)	
3Indicators of hydr	ophytic veget	tation a	and wetland h	nydrology i	must be pr	esent, unle	ess disturbe	d or proble	ematic.			
Restrictive Layer	Present?	<u> </u>	Yes ☑ N	o 🔲 (Jnknown			ŀ	Hydric Soil Prese	ent? 🗹	Yes [□ No
Description of Hab	oitat Characte	_		ersity or Ge	eneral Con	nments:	Isolated \	Wetland?	☐ Yes ☑	No 🗖	Unknov	wn
General Comment	s:											





NE



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 39672.6	County: Middlesex Date: 08/04/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: TK-K-W004-UPL
Investigators: CG JW Quad Name: Wilmington	Township: Tewksbury
Logbook No.: 2015-1 Logbook Pg.: 119 Tract: 7428	1
Landform (hillslope, terrace, etc.): Flat Local R	elief: Concave Convex None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.619334	Long: -71.180088 Datum: NAD83
Soil Map Unit Name: Freetown muck, 0 to 1 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ N
	✓ No
SUMMARY OF FINDINGS - Attach site map showing sampling	ig point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	Is the Sampled Area
Hydric Soil Present? ☐ Yes ☑ No	within a Wetland?
Wetland Hydrology Present? ☐ Yes ☑ No	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3)
☐ Drift Deposits (B3) ☐ Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remar	rks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	revious inspections), if available):
	, , ,
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Quercus rubra	40 YES FACU
Acer rubrum Pinus strobus	30 YES FAC 10 NO FACU
Т	otal Cover: 80



	% Cover	Dominant	Indicator Status
	5 20 10 5	NO YES YES NO	FACW FACU FACU FAC
Total Cover:	40		
1	% Cover	Dominant	Indicator Status
	15 20	YES YES NO	FACU FAC FACU
	20	YES	FACW FACU
Total Cover:		NO	TACO
Total Gover.			
I	9/ Cover	Dominant	Indicator Ctatus
	% Cover	Dominant	Indicator Status
Total Cover:			
Prevalence Inc	dex Worksheet:		
	of:	Multiply by:	
-	<u>0</u>	x 1 = <u>0</u>	
•			
-			
•			
•			
Column Totals:	<u>205 (A)</u>	<u>725 (B)</u>	
	Prevalence Index	= B/A = <u>3.54</u>	
Hydrophytic V	egetation Preser	nt? ☐ Yes ⊡	∐ No
	Total Cover: Total Cover: Prevalence Inc Total % Cover OBL Species: FACW Species: FACU Species: UPL Species: Column Totals:	5 10 10 10 10 10 10 10	S



T TOVIGETICE, I	(1 0200+								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the in	dicator o	r confirm the ab	sence of indicators.)
Depth	Matrix		Re	dox Fe	atures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Т	exture	Remarks
0-8	10YR 3/2	100					SAN	DY LOAM	
8-20	10YR 3/4	100					SAN	DY LOAM	
0 20	1011(0, 1	100					0,	D1 20/1111	
1Tunas C. Cana	controtion D Do	nletion	DM Dadward	Matrix	CC Co.	arad Cand	or Coated Crain	a 21 apptions DI	David Lining M. Matrix
		•					or Coated Grain		=Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess otl	herwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)			olyval 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		IV.	ILIXA	1430)			☐ Coast Prairi	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ⊺	hin Da	ark Surface	e (S9) (LRI	R R, MLRA 149B) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	selow Surface (S8) (LRR K, L)
☐ Depleted I	eted Below Dark Surface (A11) Depleted Matrix (F3)							☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		□ F	edox I	Dark Surfa	ace (F6)		☐ Iron-Manga	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	ed Dark Su	ırface (F7)		_	loodplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)		_		Depressio				ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re			_		.,	- (- /		=	Material (F21)
	Matrix (S6)							_	w Dark Surface (TF12)
		MIDA	140P)						
_	ace (S7) (LRR R		•						ain in Remarks)
Indicators of r	nydrophytic vege	tation a	ind wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or p	problematic.	
Restrictive Lay	er Present?		∕es 🗹 No	<u> </u>	Jnknown			Hydric Soil Prese	ent? ☐ Yes ☑ No
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetlan	nd? 🔲 Yes 🗆	No Unknown
General Comm	ents:								
General Comm	ieriis.								





SOUTH



WETLAND DETERMINATION FORM - Northo	central and	Northeast Region	
	Transmission L	ine	
Project/Site: NED Milepost: 40646.2 County	/: Middlese	ex Date:	08/05/2015
Applicant/Owner: Kinder Morgan State:	MA S	ampling Point: TK-K-W0	05-PFO
Investigators: PF JW Quad Name: Wilmington Townsh			
Logbook No.: 2015-1 Logbook Pg.: 125 Tract: 7799			
Landform (hillslope, terrace, etc.): Depression Local Relief:	✓ Concave	☐ Convex ☐ None	Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.617729	Long: -7	1.177733	Datum: NAD83
Soil Map Unit Name: Freetown muck, 0 to 1 percent slopes		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no,	explain in Remarks.)	
Are Vegetation $\ \square$ Soil $\ \square$ or Hydrology $\ \square$ significantly disturbed? $\ \square$ No	Are "Normal"	" Circumstances present?	✓ Yes ☐ No
Are Vegetation $\ \square$ Soil $\ \square$ or Hydrology $\ \square$ naturally problematic? $\ \square$ No)		
SUMMARY OF FINDINGS - Attach site map showing sampling poir	nt locations	transects important	features etc
Hydrophytic Vegetation Present? ✓ Yes ☐ No	in ioodiioiio,	transcoto, important	
Hydric Soil Present? ✓ Yes ☐ No	Is the Samp] No
Wetland Hydrology Present? ✓ Yes ☐ No	within a We	etland?] NO
Field Wetland Classification: PFO			
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (2	or more required)
Primary Indicators (minimum of one required; check all that apply)		☐ Surface Soil Cracks	s (B6)
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)		□ Drainage Patterns (B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)			16)
✓ Saturation (A3) ☐ Marl Deposits (B15)		□ Dry-Season Water	Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish Burrows (C	28)
□ Sediment Deposits (B2) □ Oxidized Rhizospheres along Liv	ving Roots (C3)	☐ Saturation Visible o	n Aerial imagery (C9)
□ Drift Deposits (B3) □ Presence of Reduced Iron (C4)	-	☐ Stunted or Stressed	l Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	Soils (C6)	☑ Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	, ,	☐ Shallow Aquitard (□	93)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			elief (D4)
□ Sparsely Vegetated Concave Surface (B8)		☐ FAC-Neutral Test (I	D5)
Field Observations: Surface Water Present? □ Yes ☑ No Depth (inches):			
	Mada a	Uhadaalaaa Baaaaa 0	
Water Table Present?	wetiand	Hydrology Present? ✓	Yes □ No
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)		_	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	nspections), if ava	ailable):	
VEGETATION			
Tree Stratum			
Plot Size: 30	1	1	1
Scientific Name	% Cov		Indicator Status
Acer rubrum	60	YES	FAC
Total Covi	/er: 60		



% Cov 15 10 15 10 10 20 10 20 40 40 10 20 40 10 20 40 10 20 40 10 20 40 10 20 40 10 20 40 10 20 40 10 20 20 20 20 20 20 2	ver ver	Dominant YES YES Dominant NO YES NO YES YES Dominant	Indicate FA FA O FA	or Status CW CW BL AC CW CW Br Status
% Cov. % Cov. 10	ver ver ver wer wer	Pominant NO YES NO YES YES Dominant	Indicate FA FA O FA	or Status CW CW BL AC CW
% Cov. % Cov. 10	ver ver ver wer wer	Pominant NO YES NO YES YES Dominant	Indicate FA FA O FA	or Status CW CW BL AC CW
10 725 10 10 10 10 10 10 10 1	ver ver ver wheet:	Dominant NO YES NO YES YES Dominant	Indicate FA FA O FA FA	or Status CW CW BL AC CW
% Cov. 10 20 10 20 40 40 40 40 40 40 40 40 40 40 40 40 40	ver ver ver wer wer	Dominant NO YES NO YES YES Dominant	Indicate FA FA O FA	or Status CW CW BL AC CW
% Cov 10 20 10 20 40 40 40 10 10 10 10 1	ver Sheet: Mult x 1 =	NO YES NO YES YES	FA O FA	CW CW BL AC CW
### 100	ver Sheet: Mult x 1 =	NO YES NO YES YES	FA O FA	CW CW BL AC CW
### 100	ver Sheet: Mult x 1 =	NO YES NO YES YES	FA O FA	CW CW BL AC CW
### 100	ver Sheet: Mult x 1 =	NO YES NO YES YES	FA O FA	CW CW BL AC CW
20 10 20 40 40 40 40 40 40 4	ver Sheet: Mult x 1 =	YES NO YES YES	FA O FA	CW BL AC CW
20 40 40 100 % Cover of: 10 ecies: 10 ecies: 105 1	ver Sheet: Mult x 1 =	YES YES	FA FA	AC CW
40 100 % Cov. % Cov. % Cov. % Cov. % Cover of: 10 % Cover of:	ver sheet: Mult x 1 =	YES Dominant	FA	CW
% Cover of: ies: 10 ecies: 70 eies: 105	ver sheet: Mult x 1 =		Indicato	r Status
e Index Workshover of: ies: 10 ecies: 70 ies: 105	sheet: Mult x 1 =		Indicato	r Status
e Index Workshover of: ies: 10 ecies: 70 ies: 105	sheet: Mult x 1 =		Indicato	r Status
e Index Workshover of: ies: 10 ecies: 70 ies: 105	sheet: Mult x 1 =		Indicato	r Status
e Index Workslover of: ies: 10 ecies: 70 ies: 105	Mult	iply by:		
e Index Workslover of: ies: 10 ecies: 70 ies: 105	Mult	iply by:		
over of: ies: 10 ecies: 70 ies: 105	Mult	iply by:		
ies: <u>10</u> ecies: <u>70</u> ies: <u>105</u>	x 1 =	iply by:		
ecies: <u>70</u> ies: <u>105</u>				
ies: <u>105</u>	x 2 =	= <u>10</u>		
	~ _	= <u>140</u>		
ecies: <u>0</u>	<u>i</u> x 3 =	= <u>315</u>		
	x 4 =	= <u>0</u>		
ies: <u>0</u>	x 5 =	= <u>0</u>		
otals: <u>185</u>	<u>5 (A)</u>	465 (B)		
Prevalence	e Index = B/A =	= <u>2.51</u>		
tic Vegetation	Present?	☑ Yes [□ No	
/tic	: Vegetation	: Vegetation Present?	: Vegetation Present? ☑ Yes [vegetation Present? ☑ Yes ☐ No



T TOVIGETICE, I	(1 0200+												
SOIL													
Profile Descrip	otion: (Describe	the d	epth needed to d	docum	ent the in	ndicator o	r confirm the abse	ence of	indicators.	.)			
Depth	Matrix		Red	dox Fe	atures		_						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	I e:	exture			Rer	marks	
0-4	10YR 2/1	100					ORG	GANIC					
4-20	2.5Y 4/2	95	7.5YR 4/4	5	С	M	9.1	AND					
4 20	2.01 4/2		7.511(4/4			"	<i>G</i> ,	W L					
							0						
Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	. ² L	ocation: PL	.=Pore Linir	ıg, M=M	atrix ————	
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indio	ators for F	Problemation	Hydric	Soils ³ :	
Histosol (A	A1)					Surface (S	8) (LRR R,		2 cm Muck	(A10) (LRF	K, L, ML	-RA 149B)	
☐ Histic Epip	oedon (A2)		IV	ILRA 1	149B)				Coast Prair	ie Redox (A	16) (LRF	₹ K, L, R)	
■ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)		5 cm Muck	y Peat or Pe	eat (S3) (LRR K, L, R)	
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)		Dark Surfac	ce (S7) (LR	R K, L, M	l)	
☐ Stratified I	Layers (A5)		-	-	Gleyed Ma		, ,		Polvvalue E	Below Surfa	ce (S8) (I	LRR K. L)	
	Below Dark Surfa	ace (A1	<u> </u>	•	ed Matrix (I	` '		_	-	Surface (S9		•	
	k Surface (A12)			-	Dark Surfa	-					•	(LRR K, L, R)	
	ıcky Mineral (S1)		_			. ,			_				`
	•					urface (F7)				·	` ') (MLRA 149B)	•
	eyed Matrix (S4)		☐ F	(eaox i	Depressio	ns (F8)			Mesic Spoo	lic (TA6) (N	LRA 144	A, 145, 149B)	
☐ Sandy Re	dox (S5)								Red Parent	: Material (F	21)		
☐ Stripped N	Matrix (S6)								Very Shallo	w Dark Sur	face (TF	12)	
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expl	ain in Rema	arks)		
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	oblemati	c.				
Remarks:													
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:							
Wetland Qualit	y: 🔲 High	1	Moderate	Low			Isolated Wetland	d? 🗀] Yes ☑] No [] Unkn	own	
General Comm	ents:												





EAST



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 40839.4	County: Middlesex Date: 08/05/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: TK-K-W005-PEM
Investigators: CG JW Quad Name: Wilmington	Township: Tewksbury
Logbook No.: 2015-1 Logbook Pg.: 95 Tract: 7792	
Landform (hillslope, terrace, etc.): Stream fringe Local F	elief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.617502	Long: -71.177082 Datum: NAD83
Soil Map Unit Name: Freetown muck, 0 to 1 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	
Hydric Soil Present?	Is the Sampled Area
Wetland Hydrology Present?	
Field Wetland Classification: PEM	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves	B9) Drainage Patterns (B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced I	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	n Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	rks) Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present?	Wetland Hydrology Present? ☑ Yes □ No
Saturation Present?	V TeS □ NO
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
	Fotal Cover:



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
	Total Cover.			
Herb Stratum				
Plot Size: 5				
Scientific Name	1	% Cover	Dominant	Indicator Status
Eupatorium perfoliatum		5	NO	FACW
Glyceria striata		10	NO	OBL
Phragmites australis Persicaria sagittata		5 50	NO YES	FACW OBL
Cicuta maculata		10	NO	OBL
Impatiens capensis Carex Iurida		30 20	YES NO	FACW OBL
ou on and	Total Cover:	130		022
Moody Vine Chrotum				
Woody Vine Stratum Plot Size: 30				
	1		1	l
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>90</u>	x 1 = <u>90</u>	
Total Number of Dominant	FACW Species	: <u>40</u>	x 2 = 80	
Species Across All Strata: 2 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species			x 4 = 0	
That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:			
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>130 (A)</u>	<u>170 (B)</u>	
	F	Prevalence Index =	= B/A = <u>1.31</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
	Urdranhytia V	anatatian Drasan		7 No.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	nyaropnytic v	egetation Preser	nt? ☑ Yes □] No
. ,				
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



1 TOVIGETICE, I	02004																	
SOIL																		
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the ir	ndicator o	r confirm	he abser	nce o	findica	tors.)						
Depth	Matrix		Redox Features															
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc2	Textu		ure		Remarks						
0-24	10YR 2/1	100							ORGA	ANIC								
¹Type: C=Cond	centration, D=De	epletion	⊥ n, RM=Re∈	duced	Matrix,	CS=Cov	ered Sanc	or Coated	Grains.	2	ocation	: PL=	Pore	Lining	. M	 =Ma	trix	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. ² Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :																		
	`	ouble !	io un Eitit				•	8) (I PP P		_					-			
MLRA 149B)									-									
Histic Epipedon (A2) Coast Prairie Redox (A16) (LRR K,									•									
✓ Black Histic (A3) ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) ☐ 5 cm Mucky Peat or Peat (S3) ☐ Indiagram Sulface (S4) (LRR R, MLRA 149B) ☐ 5 cm Mucky Peat or Peat (S3)										Χ, L, Κ)								
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (LRR K, L) ☐ Dark Surface (S7) (LRF ☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2) ☐ Polyvalue Below Surface									•									
_		200 (A	11)		-	-				Polyvalue Below Surface (S8) (LRR K, L)								
:	Depleted Below Dark Surface (A11) Depleted Matrix (F3)								☐ Thin Dark Surface (S9) (LRR K, L) ☐ Iron-Manganese Masses (F12) (LRR K, L, R)									
	k Surface (A12)					Dark Surfa						-						-
									Piedmont Floodplain Soils (F19) (MLRA 149B)									
_	Sandy Gleyed Matrix (S4) Redox Depressions (F8)										•				144/	۱, 14	5, 149B)	
										Red Pa						۵)		
☐ Stripped Matrix (S6) ☐ Very Shallo												TF1:	2)					
☐ Dark Surfa	ace (S7) (LRR R	, MLR	4 149B)								Other (Expla	in in R	Remar	ks)			
3Indicators of h	nydrophytic vege	tation a	and wetlan	d hydro	ology m	nust be pr	esent, unle	ess disturb	ed or prob	olema	tic.							
Restrictive Lay	er Present?		Yes 🗹	No	□ U	nknown												
										Hydr	ic Soil I	Prese	nt?	$\overline{\checkmark}$	Ye	s		No
Remarks:														-				
Description of I	Habitat Characte	riction	Aquatia D	iversity	, or Co	noral Cam	amonto:											
Description of i	nabilal Characle	ensucs,	Aquatic Di	iversity	or Ge	nerai Con	iments:											
Wetland Qualit	🗖 Lliada		Madarata	_	Law			laalatad	\\/atland0		7 Vaa	. 🗖	Na	_	11.	مصادم		
welland Qualit	y: High	✓	Moderate		Low			isolated	Wetland?	L	Yes	5 ✓	No		UI	nkno	WII	
General Comm	ents:																	





SE



WETLAND DETERMINATION FORM - N	orthcentral and Northeast Region								
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other								
Project/Site: NED Milepost: 40590.9	County: Middlesex Date: 08/05/2015								
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: TK-K-W005-UPL								
Investigators: CG JW Quad Name: Wilmington	Township: Tewksbury								
Logbook No.: 2015-1 Logbook Pg.: 94 Tract: 7799									
Landform (hillslope, terrace, etc.): Hilltop Local Re	ief: Concave C Convex None Slope%.: 1								
Subregion (LRR): Middle Atlantic Lat: 42.617828	Long: -71.177902 Datum: NAD83								
Soil Map Unit Name: Freetown muck, 0 to 1 percent slopes	NWI Classification: Not mapped								
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)								
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? F									
SUMMARY OF FINDINGS - Attach site map showing samplin	n noint locations transects important features etc								
Hydrophytic Vegetation Present? ✓ Yes ☐ No	g point routions, transcoto, important routines, etc.								
Hydric Soil Present?	Is the Sampled Area								
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland? ☐ Yes ☑ No								
Field Wetland Classification: UPLAND PLOT									
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)								
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)								
☐ Surface Water (A1) ☐ Water-Stained Leaves (B	Drainage Patterns (B10)								
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)								
☐ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)								
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C									
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a									
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	<u> </u>								
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	_								
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)								
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	_								
□ Sparsely Vegetated Concave Surface (B8) □ FAC-Neutral Test (D5)									
Field Observations:									
Surface Water Present?	Wetland Hydrology Present?								
Water Table Present? ☐ Yes ☑ No Depth (inches):									
Saturation Present?	☐ Yes ☑ No								
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):									
VEGETATION									
Tree Stratum									
Plot Size: 30									
Scientific Name	% Cover Dominant Indicator Status								
Pinus strobus	80 YES FACU								
Acer rubrum	10 NO FAC tal Cover: 90								
	iai 00v6i. 30								



1 100100100, 101 02304								
Sapling/Shrub Stratum								
Plot Size: 15								
Scientific Name		% Cover	Dominant	Indicator Status				
Acer rubrum		15	YES	FAC				
	Total Cover:	15						
Herb Stratum								
Plot Size: 5								
Scientific Name	1	% Cover	Dominant	Indicator Status				
Quercus rubra		10	YES	FACU				
Frangula alnus Acer rubrum		25	YES	FAC				
Acer rubrum	Total Cover:	10 45	YES	FAC				
Mandy Vina Chrahum	Total Cover.							
Woody Vine Stratum Plot Size: 30								
	1							
Scientific Name		% Cover	Dominant	Indicator Status				
	T / 10							
	Total Cover:							
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:						
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of	of:	Multiply by:					
That Are OBL, FACW, or FAC.	OBL Species:	<u>0</u>	x 1 = <u>0</u>					
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	: <u>0</u>	x 2 = <u>0</u>					
Species Acioss Ali Strata.	FAC Species:	<u>60</u>	x 3 = <u>180</u>					
Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)	FACU Species:	<u>90</u>	x 4 = <u>360</u>					
That 740 052, 170 W, 01170.	UPL Species:	<u>0</u>	x 5 = <u>0</u>					
	Column Totals:	<u>150 (A)</u>	<u>540 (B)</u>					
	F	Prevalence Index =	= B/A = <u>3.60</u>					
Hydrophytic Vegetation Indicators:								
☐ 1 - Rapid Test for Hydrophytic Vegetation								
✓ 2 - Dominance Test is > 50%								
☐ 3 - Prevalence Index is ≤ 3.0								
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ✓ Yes ☐ No							
data in Remarks or on a separate sheet)	Trydrophytic vegetation Flesent? V Yes LI NO							
☐ Problematic Hydrophytic Vegetation¹ (Explain)								
¹Indicators of hydric soil and wetland hydrology must be								
present, unless disturbed or problematic.								
Remarks:								
Remarks.								



T TOVIGETICE, I	1 02004								
SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to o	locum	ent the in	dicator o	r confirm the	absence of indicators.)	
Depth	Matrix		Red	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texture	Remarks
0.4					71 -			ODCANIC	
0-1	7.5YR 3/3	100						ORGANIC	
1-7	10YR 6/4	90	10YR 4/6	10	С	М	F	FINE SAND	
7-12	10YR 6/2	100					F	FINE SAND	ROCK REFUSAL AT 12 INCHES
, .2	10111 0/2	100					•	1112 07 1112	ROOK KET GONE / TE INGINE
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated Gra	ains. ² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
☐ Histosol (A	A1)		□Р	olvvalı	ıe Below S	Surface (S	8) (LRR R,	☐ 2 cm Muck (/	A10) (LRR K, L, MLRA 149B)
_ `	pedon (A2)			ILRA 1			-, (=,		e Redox (A16) (LRR K, L, R)
				L:- D-	-1. O4	(CO) (LD	D D MI DA 44		
☐ Black Hist			_				R R, MLRA 14	· = ·	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
□ Depleted I	Below Dark Surfa	ace (A1	11) 🔲 D	eplete	d Matrix (I	- 3)		☐ Thin Dark Su	ırface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		□R	edox [Dark Surfa	ice (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)		_			rface (F7)		_	podplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)		_	•	Depression	, ,			. , , , , , , , , , , , , , , , , , , ,
			□ \	.euox i	Depression	115 (1 0)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re								☐ Red Parent N	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallow	/ Dark Surface (TF12)
□ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of h	nvdrophytic veae	tation a	and wetland hydro	oloav m	nust be pre	esent. unle	ess disturbed o	or problematic.	
Destrictive Lev	on Dragant?		/aa 🗖 Na 📗	<u> </u>				<u> </u>	
Restrictive Lay	er Present?	□ `	res ☑ No	□ U	nknown				
								Hydric Soil Prese	nt? ☐ Yes ☑ No
Remarks:							'		
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	ments:			
Wetland Qualit	y: 🔲 High		Moderate	Low			Isolated We	etland?	No 🔲 Unknown
General Comm	ents:								





EAST



WETLAND DETERMINATION FORM - N	orthcentral and Northeast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other	
Project/Site: NED Milepost: 46024.1	ounty: Essex Date:	08/07/2015
Applicant/Owner: Kinder Morgan	tate: MA Sampling Point: AN-K-W008	3-PFO
Investigators: CG JW Quad Name: Wilmington	ownship: Andover	 -
Logbook No.: 2015-1 Logbook Pg.: 103 Tract: 9051		
Landform (hillslope, terrace, etc.): Depression Local Re	ef: 🗹 Concave 🗌 Convex 🔲 None S	Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.604929	Long: -71.171447 D	atum: NAD83
Soil Map Unit Name: Windsor loamy sand, 3 to 8 percent slopes	NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	No Are "Normal" Circumstances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	No	
SUMMARY OF FINDINGS - Attach site map showing samplin	point locations, transects, important fe	eatures, etc.
Hydrophytic Vegetation Present?	le the Commission Avec	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area within a Wetland?	No
Wetland Hydrology Present? ✓ Yes No		
Field Wetland Classification: PFO		
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indicators (2 or	more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B	36)
☐ Surface Water (A1) ☑ Water-Stained Leaves (B	☐ Drainage Patterns (B1	0)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16))
✓ Saturation (A3)	☐ Dry-Season Water Tal	ble (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (0) Crayfish Burrows (C8)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	ng Living Roots (C3) Saturation Visible on A	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	(C4) Stunted or Stressed Pl	lants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	illed Soils (C6)	(D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	☐ Microtopographic Relie	ef (D4)
☑ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5))
Field Observations:		
Surface Water Present?		
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?	
Saturation Present?	☑ `	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pre	ous inspections), if available):	
VEGETATION		
Tree Stratum		
Plot Size: 30		
Scientific Name	% Cover Dominant	Indicator Status
Acer rubrum	80 YES	FAC
Т	al Cover: 80	



T TOVIGETICE, THE DESCRIPTION				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Frangula alnus		15 25	YES YES	FAC FAC
Trangula amac	Total Cover:	40	.20	17.0
Herb Stratum				
Plot Size: 5	ı		l	l
Scientific Name		% Cover	Dominant	Indicator Status
Frangula alnus Symplocarpus foetidus		10 10	YES YES	FAC OBL
	Total Cover:	20	I	ı
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	ı
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>130</u>	x 3 = <u>390</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	140 (A)	400 (B)	
	F	Prevalence Index =	= B/A = <u>2.86</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	nt? ☑ Yes □	1 No
data in Remarks or on a separate sheet)	,,	- J	<u></u> 100 <u>.</u> .	
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



SOIL									
rofile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm the abse	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Tex	ture	Remarks
0-2	5YR 4/2	100					ORG	ANIC	
2-18	7.5YR 3/1	100					ORG	ANIC	
I Type: C=Cond	centration. D=De	epletion	l	Matrix.	CS=Cov	L ered Sand	or Coated Grains.	²Location: PL=	Pore Lining, M=Matrix
71	,	•	o all LRR's, unle						oblematic Hydric Soils³:
✓ Histosol (A			•			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
	pedon (A2)			/ILRA 1		ounaco (o	o) (ERRY),	_	e Redox (A16) (LRR K, L, R)
Black Hist			П 1	hin Da	rk Surface	e (S9) (I RI	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)		e (S7) (LRR K, L, M)
	_ayers (A5)			-	Gleyed Ma		(LIKICIK, L)		elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	ed Matrix (I				urface (S9) (LRR K, L)
	k Surface (A12)			•	Dark Surfa	,			lese Masses (F12) (LRR K, L, R)
	icky Mineral (S1)		_			ırface (F7)			podplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)		_		Depressio			_	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re						(, ,		_ '	Material (F21)
	Matrix (S6)								v Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	\ 149R)						in in Remarks)
			·				ess disturbed or prol		in in resinance)
estrictive Lay	rer Present?	<u> </u>	∕es √ No		Jnknown			Hydric Soil Prese	nt? ☑ Yes ☐ No
-	er Present?		Yes ☑ No		-			Hydric Soil Prese	nt? ☑ Yes ☐ No
Remarks:			res ☑ No Aquatic Diversity	_	Inknown	nments:		Hydric Soil Prese	nt? ☑ Yes ☐ No
Remarks: Description of H	Habitat Characte	ristics,	Aquatic Diversity	_	Inknown	nments:	Isolated Wetland		nt? ☑ Yes ☐ No
Remarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
Remarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland?		
emarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
emarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
emarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
Remarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
emarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
emarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland?		
emarks: Description of h	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
emarks: Description of h	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
Remarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
Remarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland?		
Remarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland?		
Remarks: Description of I Wetland Qualit General Comm	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
Remarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
Remarks: Description of I	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge	Inknown	nments:	Isolated Wetland?		





NORTH



WETLAND DETERMINATION FORM - Nort	hcentral and Northeast Region
	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 46127.5 Cou	nty: Essex Date: 08/07/2015
Applicant/Owner: Kinder Morgan State	e: MA Sampling Point: AN-K-W008-UPL
Investigators: CG JW Quad Name: Wilmington Tow	nship: Andover
Logbook No.: 2015-1 Logbook Pg.: 105 Tract: 9051	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.604645	Long: -71.171397 Datum: NAD83
Soil Map Unit Name: Windsor loamy sand, 3 to 8 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	s No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ I	No Are "Normal" Circumstances present? ☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ I	No
SUMMARY OF FINDINGS - Attach site map showing sampling po	oint locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No within a Wetland?
Wetland Hydrology Present? ☐ Yes ☑ No	Within a Welland:
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
Saturation (A3) Marl Deposits (B15)	□ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	d Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	s inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Acer rubrum Quercus alba	40 YES FAC 10 NO FACU
Pinus strobus Total C	40 YES FACU over: 90



Providence, Ri 02904			1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Gaylussacia baccata Acer rubrum		15 35	YES YES	FACU FAC
Ace Tublum	Total Cover:	50	125	IAG
W 1 0				
Herb Stratum				
Plot Size: 5	ĺ		l 5 · .	l
Scientific Name		% Cover	Dominant	Indicator Status
Pteridium aquilinum Maianthemum canadense		5 15	NO YES	FACU FACU
Gaylussacia baccata	Tatal Causan	40	YES	FACU
W 1 17 0	Total Cover:	60		
Woody Vine Stratum Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	Indicator Status
	 Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lev Merkebeet		
Number of Dominant Species	Total % Cover of		Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	л. <u>0</u>	x 1 = 0	
Total Number of Dominant	FACW Species:		x = 0	
Species Across All Strata: 6 (B)	FAC Species:	. <u>s</u> 75	x = 3 = 225	
Percent of Dominant Species	FACU Species:		x 4 = 500	
That Are OBL, FACW, or FAC: 33 (A/B)	UPL Species:	<u>0</u>	x 5 = 0	
	Column Totals:	200 (A)	725 (B)	
	F	Prevalence Index =	= B/A = <u>3.63</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	nt? □ Yes ⊡	7 No
data in Remarks or on a separate sheet)	,		🗀 165 🖟	_ 110
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, I	(1 0200+											
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	r confirm t	he abser	nce of indicators.)			
Depth	Matrix		Red	edox Features								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure		Rei	marks
0-2	5YR 4/3	100						ORGA	ANIC			
2-8	10YR 5/6	100						SILT L	ΟΔΜ			
20	1011(3/0	100						OIL! L	.07 (17)			
	0.514.044	400						OU T.				
8-18+	2.5Y 6/4	100						SILT L	OAM			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced l	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	g, M=M	latrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)			Indicators for Pi	oblematio	Hydric	Soils ³ :
☐ Histosol (/	A1)		□Р	olyvalı	ue Below :	Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR	K, L, M	LRA 149B)
_ `	pedon (A2)			ILŔA 1		,	, ,		☐ Coast Prairie			•
☐ Black Hist			Пт	hin Da	ırk Surface	(S0) (LP	R R, MLRA	1/0R)	_			(LRR K, L, R)
								1430)			, ,	
	Sulfide (A4)			-	-		(LRR K, L)		_	. , .		•
	Layers (A5)		· 	-	Gleyed Ma				Polyvalue Be		. , ,	•
	Below Dark Surfa	ace (A1	_	•	d Matrix (I	•			Thin Dark Su		•	
☐ Thick Dar	k Surface (A12)		□ R	edox I	Dark Surfa	ace (F6)			☐ Iron-Mangar	ese Masse	s (F12)	(LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain S	oils (F19	9) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox l	Depressio	ns (F8)				c (TA6) (M	LRA 144	4A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent	Material (F	21)	
☐ Stripped N	Matrix (S6)								□ Very Shallov	v Dark Surf	ace (TF	12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	ırks)	
3Indicators of h	ovdrophytic vege	tation a	and wetland hydro	loav n	nust be pr	esent unle	ess disturb	ed or prob	lematic			
Restrictive Lay	er Present?		res ☑ No	U	Inknown							
									Hydric Soil Prese	nt?	Yes	✓ No
Remarks:												
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
·												
Wetland Qualit	v. 🗖 High		Moderate	ΟW			Isolated	Wetland?	Yes 🔲	No F	l Unkr	nown
Wolland Quant	.y. 🔲 1g	ш.	vioudiate				iooiatoa	wolland.	L 100 L		ı Oma	
General Comm	ents:											





SOUTH



WE	TLAND	DET	ERMINA	ATION	FORM - N	Northce	entral ar	nd No	rtheast F	Region		
Centerline Re-Ro	oute _	Acces	s Road		llary Facility		ransmissio		☐ Other		08/12/2015	
			Milep	USI: 401	42.0	County:	Esse		l'a a Dalat	Date:		1
Applicant/Owner: Kinder Mo		2 111	10/21				MA		ling Point:	AN-M-W	JU1-PEW	
Investigators: CM CG JW			me: Wilmi	_		Township	: Ando	over				
Logbook No.: 6M	Logi	ook Pg.	: 124	Tra	nct: 4143							
Landform (hillslope, terrace, e	etc.):	Depres	sion		Local Re	elief: 🔽	Concave		Convex [None	Slope%.:	1
Subregion (LRR): Middle	e Atlantic			Lat: 42.	600326		Long:	-71.167	7402		Datum: NAD	83
Soil Map Unit Name: Suc	dbury fine s	sandy loa	am, 0 to 3 p	ercent slo	pes				NWI Class	sification:	PSS1C	
Are climatic / hydrologic cond	itions on th	e site ty	pical for this	s time of ye	ear?: ✓	Yes [☐ No (If i	no, expla	ain in Remark	ks.)		
Are Vegetation	or Hy	drology	☐ sign	ificantly di	sturbed?	√ No	Are "Norn	nal" Circ	umstances p	resent?	✓ Yes	☐ No
	_	drology		ırally probl		☑ No						
SUMMARY OF FINDIN	NGS - At	tach s	ite map	showin	g samplin	ng point	location	s, tran	sects, im	portant	features,	etc.
Hydrophytic Vegetation Prese	ent?		Yes	No			Is the Sa	mnlad	Area			
Hydric Soil Present?			Yes	No			within a	•	1./1	Yes 🗆] No	
Wetland Hydrology Present?			Yes	No								
Field Wetland Classification:	PEM											
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	ors:							S	econdary Inc	dicators (2	or more requi	red)
Primary Indicators (minimum		uired: ch	neck all that	annly)				Г	Surface S	Soil Cracks	(B6)	
	or one req	uncu, on			ned Leaves (E	20)		_	- 1 Drainage	Patterns (I	B10)	
Surface Water (A1)			_			59)		_	<u> </u>	n Lines (B	•	
High Water Table (A2)				quatic Fau				_		on Water 1	·	
Saturation (A3)				farl Depos		(C4)				Burrows (C		
Water Marks (B1)			_		Sulfide Odor (n Dooto (Co	_		•	n Aerial image	erv (C9)
Sediment Deposits (B2)					nizospheres a	-	y Roots (Ca	,, <u> </u>			Plants (D1)	, ()
Drift Deposits (B3)					f Reduced Iron Reduction in		n (CC)	_ _	_	hic Positio	` ,	
Algal Mat or Crust (B4)			_			i illied Soli	s (Cb)		_	Aquitard (D		
☐ Iron Deposits (B5)	-i-1 l	(DZ)			Surface (C7)	1\		-	_	graphic R	•	
Inundation Visible on Ae	_			лпег (Ехрі	ain in Remar	KS)		<u>.</u>		tral Test (E	` ,	
Sparsely Vegetated Con	icave Suna	ice (bo)							17101100			
Field Observations:		_										
Surface Water Present?	Yes	✓ N	•	(inches):								
Water Table Present?	✓ Yes	□ N	lo Depth	(inches):	18		Wetla	and Hydr	rology Prese	ent? ☑	Yes □	No
Saturation Present? (includes capillary fringe)	✓ Yes	□ N	lo Depth	(inches):	4					<u> </u>	ies 🗀	NO
Remarks (Describe Recorded	Data (stre	am gage	e, monitorin	g well, aer	ial photos, pr	evious insp	ections), if	available	e):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	Cover	Dom	ninant	Indicator	Status
					Т	otal Cover:	ı		1		1	



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:	'		
Herb Stratum				
Plot Size: 5				
	ı	0/ 0	Dania aut	
Scientific Name		% Cover	Dominant	Indicator Status
Typha latifolia Cicuta maculata		10 10	NO NO	OBL OBL
Persicaria sagittata		45	YES NO	OBL OBL
Glyceria striata Carex lurida		15 15	NO	OBL
Impatiens capensis		30	YES	FACW
	Total Cover:	125		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>95</u>	x 1 = <u>95</u>	
Total Number of Dominant	FACW Species		x 2 = 60	
Species Across All Strata: 2 (B)	FAC Species:	<u> </u>	x 3 = <u>0</u>	
Percent of Dominant Species	FACU Species:		x 4 = 0	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>•</u> <u>0</u>	$x \cdot 5 = 0$	
	Column Totals:		155 (B)	
		, ,		
		Prevalence Index =	= B/A = <u>1.24</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	ıt? ☑ Yes 🏻] No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



1 TOVIGETICE, I	02004																	
SOIL																		
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the ir	ndicator o	r confirm	he abser	nce o	f indica	tors.)						
Depth	Matrix			Re	dox Fe	atures			_							_		
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc2		Text	ure					F	≺em	narks	
0-24+	10YR 2/1	100							ORGA	ANIC								
¹Type: C=Cond	centration, D=De	epletion	⊥ n, RM=Re∙	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2	_ocation	: PL=	Pore	Lining	. M:	 =Мг	atrix	
	licators: (Appli	•									icators							3-
Histosol (A	`			_			,	8) (LRR R		П	2 cm N				-			
_ `	pedon (A2)				/ILRA 1		ourrace (c	O) (LIXIX IX			Coast							-
	` ,				hin Do	rk Surface	- (SO) (LB	D D MIDA	140P)	_								•
☐ Black Hist				_				R R, MLRA	1490)			-						K, L, R)
	Sulfide (A4)			_	-	-		(LRR K, L)			Dark S							Z 1)
_	_ayers (A5)	200 (A	11)	_	-	Gleyed Ma					Polyva				-			Λ, L)
:	Below Dark Surfa	ACE (A	11)	_	-	d Matrix (•				Thin D						-	K I D)
	k Surface (A12)					Dark Surfa						-						K, L, R)
	icky Mineral (S1)			_	•		urface (F7)						-					RA 149B)
_	eyed Matrix (S4)			☐ F	kedox [Depressio	ns (F8)					•				144/	۹, 14	5, 149B)
☐ Sandy Re											Red Pa				•		۵,	
	Matrix (S6)										Very S				-	ſF1	2)	
☐ Dark Surfa	ace (S7) (LRR R	, MLR	4 149B)								Other (Expla	in in R	≀emar	ks)			
3Indicators of h	nydrophytic vege	tation a	and wetlan	d hydro	ology m	nust be pr	esent, unle	ess disturb	ed or prob	olema	tic.							
Restrictive Lay	er Present?		Yes 🗹	No	□ U	nknown												
										Hydr	ic Soil	Prese	nt?	\checkmark	Ye	s		No
Remarks:														-				
Description of I	Habitat Characte	riction	Aquatia D	ivereit	, or Co	noral Cam	amonto:											
Description of t	Habitat Characte	ristics,	Aquatic Di	iversity	or Ge	nerai Con	intents.											
Wetland Qualit	🗖 Lliada		Madarata	_	Law			laalatad	\\/atland0	, F	7 Vas	. 🗖	Na	_	11.	ممادم		
welland Qualit	y: High	✓	Moderate		Low			isolated	Wetland?	Ĺ	Yes	. ✓	No		UI	nkno	WH	
General Comm	ents:																	





NE



WE.	TLAND) DET	ERN	IINA	TIO	N FORM	- North	cen	ntral an	d N	orthea	st Re	gion	ı	
	ute _	Acce	ss Roa	ıd [⊐ A	ncillary Facili	ty 🔲	Tra	ansmission	n Line		Other			
Project/Site: NED			I	Milepos	st: 4	48182.7	County	/ :	Essex	(Date:	08/12/20	15
Applicant/Owner: Kinder Mor	gan						State:	M	Α	Sam	pling Po	int: A	N-M-W	001-UPL	
Investigators: CM CG JW	(Quad N	ame: \	Wilming	gton		Towns	hip:	Andov	/er					
Logbook No.: 6M	Logb	ook Pg	.: 125			Tract: 4143									
Landform (hillslope, terrace, et	tc.):	Flat, h	illtop			Local	Relief:		Concave		Convex	$\overline{\mathbf{A}}$	None	Slope%.:	1
Subregion (LRR): Middle	Atlantic			L	.at:	42.600091			Long:	-71.16	67511			Datum: NA	D83
Soil Map Unit Name: Sud	bury fine s	sandy lo	am, 0	to 3 per	rcent	slopes					NWI	Classifi	cation:	Not m	apped
Are climatic / hydrologic condit	tions on th	e site ty	pical f	or this t	ime d	of year?:	✓ Yes		No (If n	o, exp	olain in Re	marks.)		
Are Vegetation Soil	or Hy	/drology	/ 🗆	signifi	cantl	y disturbed?	☑ No		Are "Norm	al" Cir	rcumstand	es pre	sent?	 ✓ Yes	No
Are Vegetation Soil	or Hy	ydrology	/ 	natura	ally p	roblematic?	✓ No								
SUMMARY OF FINDIN	GS - At	tach	site n	nap s	how	ving samp	ling poi	nt lo	ocations	s, tra	nsects	, imp	ortan	t features	s, etc.
Hydrophytic Vegetation Preser	nt?		Yes	$\overline{\checkmark}$	No										
Hydric Soil Present?			Yes	$\overline{\checkmark}$	No			Is W	s the Sar vithin a V	mpled Netla	d Area nd?	□ Y	′es 🔽	∑ No	
Wetland Hydrology Present?			Yes	$\overline{\checkmark}$	No										
Field Wetland Classification:	UPL	AND PL	.OT												
Remarks:															
HYDROLOGY															
Wetland Hydrology Indicator	rs:										Secondar	y Indic	ators (2	or more req	uired)
Primary Indicators (minimum c	of one req	uired; c	heck a	ll that a	pply)	<u>.</u>					☐ Surfa	ace Soi	Cracks	s (B6)	
☐ Surface Water (A1)] Wa	ter-S	Stained Leaves	s (B9)				☐ Drair	nage Pa	atterns ((B10)	
☐ High Water Table (A2)				☐ Aqı	uatic	Fauna (B13)					☐ Moss	s Trim L	ines (B	16)	
☐ Saturation (A3)				☐ Ma	rl De	posits (B15)					☐ Dry-	Season	Water	Table (C2)	
] Hyd	droge	en Sulfide Odd	or (C1)				_		rrows (0	-	
☐ Sediment Deposits (B2)				Oxi	idized	d Rhizosphere	es along Liv	ving f	Roots (C3))	☐ Satu	ration \	isible o	n Aerial ima	gery (C9)
☐ Drift Deposits (B3)				Pre	esenc	e of Reduced	I Iron (C4)							d Plants (D1))
☐ Algal Mat or Crust (B4)				Red	cent	Iron Reduction	n in Tilled S	Soils	(C6)		_	•	Position	, ,	
☐ Iron Deposits (B5)				Thi	n Mu	ick Surface (C	(7)						uitard (E	· ·	
☐ Inundation Visible on Aer	rial Imager	y (B7)		Oth	ner (E	Explain in Rem	narks)				_		•	telief (D4)	
Sparsely Vegetated Cond	cave Surfa	ace (B8))								☐ FAC	-Neutra	l Test (I	D5)	
Field Observations:															
	☐ Yes	☑ 1	l ov	Depth (i	inche	es):									
	Yes	_		Depth (i		•			Wetlar	nd Hy	drology I	Presen		Yes ✓	No
Saturation Present? (includes capillary fringe)	☐ Yes		No [Depth (i	inche	es):								165	140
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring v	well,	aerial photos,	previous i	nspe	ctions), if a	availab	ole):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% C	over		Domin	ant	Indicat	or Status
Acer saccharum Quercus rubra Acer rubrum									4: 1: 2:	0		YES NO YES		F	ACU ACU FAC
							Total Cov	er:	1	5	ı			1	



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rhamnus cathartica Frangula alnus		30 20	YES YES	FAC FAC
Trangala amas	Total Cover:	50	120	1710
Herb Stratum				
Plot Size: 5	1			1
Scientific Name		% Cover	Dominant	Indicator Status
Maianthemum canadense Dendrolycopodium obscurum		25 15	YES YES	FACU FACU
Quercus rubra	T 0	10	YES	FACU
	Total Cover:	50		
Woody Vine Stratum				
Plot Size: 30	1		l	1
Scientific Name		% Cover	Dominant	Indicator Status
	T 0			
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind			
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of	of:	Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species:		x 2 = <u>0</u>	
	FAC Species:	<u>70</u>	x 3 = <u>210</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 43 (A/B)	FACU Species:		x 4 = <u>420</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>175 (A)</u>	<u>630 (B)</u>	
	F	Prevalence Index =	= B/A = <u>3.60</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	t? 🗌 Yes 🖟	☑ No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



	(1 0200+											
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to o	ocum	ent the in	dicator o	r confirm t	he abser	nce of indicators.)			
Depth	Matrix		Red	lox Fe	atures							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Text	ure		Rei	marks
0-2	5YR 3/3	100						ORGA	ANIC			
2-10	10YR 3/1	100						SILT L	OAM			
10-18	7.5YR 4/6	100						SILT L	OAM			
10-10	7.51K 4/6	100						SILIL	.OAIVI			
							_					
		<u> </u>	n, RM=Reduced I				or Coated	Grains.	² Location: PL=	Pore Linin	g, M=M	latrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ss otl	nerwise n	oted.)			Indicators for P	roblematio	Hydric	Soils ³ :
☐ Histosol (A	A1)					Surface (S	8) (LRR R		2 cm Muck (A10) (LRR	K, L, M	LRA 149B)
☐ Histic Epip	oedon (A2)		IV	LRA 1	(49B)				☐ Coast Prairie	e Redox (A	16) (LRI	R K, L, R)
■ Black Hist	ic (A3)		□ ⊤	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)	5 cm Mucky	Peat or Pe	at (S3)	(LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRF	R K, L, M	1)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surfac	ce (S8) ((LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1		eplete	d Matrix (I	F3)			☐ Thin Dark Su	urface (S9)	(LRR K	, L)
☐ Thick Darl	k Surface (A12)		_ □ R	edox I	Dark Surfa	ce (F6)			☐ Iron-Mangar	ese Masse	es (F12)	(LRR K, L, R)
_	ıcky Mineral (S1)		_			ırface (F7)			=) (MLRA 149B)
_	eyed Matrix (S4)		_	•	Depressio	. ,				•		
			L '\	GUUX	Бергеззіо	113 (1 0)			_			4A, 145, 149B)
									Red Parent		•	
	Matrix (S6)								□ Very Shallov	v Dark Surf	ace (TF	12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	149B)						Other (Expla	in in Rema	ırks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	logy n	nust be pr	esent, unle	ess disturb	ed or prob	olematic.			
Restrictive Lay	er Present?		res ☑ No	JU	Inknown							
									Hydric Soil Prese	ent?	Yes	☑ No
									•	_		<u></u>
Remarks:												
Remarks.												
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: High		Moderate	_ow			Isolated	Wetland?	Yes 🗆	No 🗀	Unkn	iown
Canaral Camm	anta											
General Comm	ienis.											





SW



WETLAND DETERMINATION FORM - No	thcentral and Northeast Re	gion
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other	
Project/Site: NED Milepost: 48852.2	unty: Essex	Date: 08/10/2015
Applicant/Owner: Kinder Morgan	te: MA Sampling Point: A	N-K-W011-PEM
Investigators: CG JW Quad Name: Wilmington 1	vnship: Andover	
Logbook No.: 2015-1 Logbook Pg.: 123 Tract: 4143		
Landform (hillslope, terrace, etc.): Depression Local Reli	☑ Concave ☐ Convex ☐	None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.598726	Long: -71.165715	Datum: NAD83
Soil Map Unit Name: Sudbury fine sandy loam, 0 to 3 percent slopes	NWI Classific	cation: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	es	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? 🔽	No Are "Normal" Circumstances pres	sent? ☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No	
SUMMARY OF FINDINGS - Attach site map showing sampling	oint locations, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No		
Hydric Soil Present?	Is the Sampled Area	es □ No
Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetland?	
Field Wetland Classification: PEM		
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indica	ators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil	Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9	☐ Drainage Pa	tterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim L	ines (B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season	Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C	☐ Crayfish Bur	rows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres ald	Living Roots (C3)	isible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	(4) Stunted or S	tressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in T	ed Soils (C6) Geomorphic	Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aqu	itard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks	✓ Microtopogra	aphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutra	Test (D5)
Field Observations:		
Surface Water Present?		
Water Table Present? ☑ Yes ☐ No Depth (inches): 0	Wetland Hydrology Present	
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)		☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, prev	us inspections), if available):	
VEGETATION		
Tree Stratum		
Plot Size: 30		
Scientific Name	% Cover Domina	ant Indicator Status
	15 YES	FAC
Tot	Cover: 15	I



Trovidence, IXI 02504				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Alnus incana		10	YES	FACW
	Total Cover:	10		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Persicaria sagittata		20	YES	OBL
Impatiens capensis Glyceria striata		30 10	YES NO	FACW OBL
Symplocarpus foetidus		15	NO	OBL
Typha latifolia	Total Cover:	25 100	YES	OBL
	Total Cover:	100		
Woody Vine Stratum				
Plot Size: 30	ı	0/ 0	l pomi i	lasticate or c
Scientific Name		% Cover	Dominant	Indicator Status
Vitis sp	Total Cavar	5	NA NA	NA
	Total Cover:	5		
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)	Total % Cover		Multiply by:	
	OBL Species:	<u>70</u>	x 1 = <u>70</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species		x 2 = <u>80</u>	
Porcent of Dominant Species	FAC Species:	<u>15</u>	x 3 = <u>45</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = <u>0</u>	
	UPL Species:	<u>0</u>	x 5 = 0	
	Column Totals:	<u>125 (A)</u>	<u>195 (B)</u>	
	<u> </u>	Prevalence Index =	= B/A = <u>1.56</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☑ Yes 🗆] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



OIL																			
ofile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the in	ndicator o	r confirm th	ne absen	ce of	indica	tors.)						
Depth	Matrix			Re	dox Fe	atures													
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc2		Text	ıre						Re	mark	S	
0-24+	7.5YR 2.5/1	100							ORGA	NIC						М	UCK		
pe: C=Cond	centration, D=De	L epletion	l n, RM=Reo	duced	Matrix,	CS=Cov	ered Sand	l or Coated (Grains.	2L	cation	ı: PL	=Pore	Lining	g, I	M=M	atrix		
dric Soil Inc	licators: (Appli	cable t	o all LRR'	s, unle	ess oth	nerwise n	oted.)			Indi	ators	for F	roble	matic	Нγ	dric	Soil	s³:	
Histosol (/	\1)			_ F	Polvvalu	ue Below :	Surface (S	88) (LRR R,		П	2 cm N	/luck	(A10)	(LRR I	Κ. I	L. MI	_RA	149E	3)
	pedon (A2)				/ILŔA 1		(-	-/(/		_				` lox (A1					
Black Hist				П	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)	_				or Pea	•	•			
	Sulfide (A4)			_				(LRR K, L)	- ,					(LRR				,	, ,
	_ayers (A5)				-	Gleyed Ma		, ,						Surfac				K. L)
•'	Below Dark Surfa	ace (A1	11)		-	d Matrix (I					•			(S9)	•	,		,	,
Thick Dar	Surface (A12)			_	-	` Dark Surfa	·			_				Masse:				R K, I	L, R)
-] Sandy Μι	cky Mineral (S1)						urface (F7)			_		_		ain So					-
	eyed Matrix (S4)				•	Depressio	` '			_			-	6) (ML					
Sandy Re	dox (S5)			-								-		ial (F2			, .	, .	,
Stripped N	Matrix (S6)													k Surfa		(TF	12)		
Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)								Other	(Expl	ain in	Remai	rks)			
- ndicators of h	ydrophytic vege	tation a	and wetlan	d hvdr	oloav m	nust be pr	esent. unle	ess disturbe	d or prob	 lemat	c.								
strictive Lav	er Present?		Yes ☑	No	Пυ	nknown													
emarks:																			
	Habitat Characte	ristics,	Aquatic D	iversity	or Ge	neral Com	nments:												
escription of			·	_		neral Com	nments:	Isolated	Netland?		I Va		1 No			Inkn	own		
			Aquatic Di	_	or Ge	neral Com	nments:	Isolated V	Vetland?		Ye	s [] No	\square	· (Jnkn	own		
escription of	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye	s [] No	V	. (Jnkn	own		
escription of	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye	s C] No	Ø	. (Jnkn	own		
escription of	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye	S .] No	V	. (Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye:	s [] No	Ø	. (Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye	3 [] No	☑	. (Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?	С	Ye:	5 [] No	Ø	. (Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Yes	· ·] No	☑		Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?	С	Yes	5 [] No			Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?	С	Ye	33] No	Ø	. (Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?	С	Ye:	S [] Na	☑		Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye:	s [] No	Ø	· (Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Yes] No	☑		Jnkn	own		
escription of	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye:	3 🗆] No	☑		Jnkn	own		
escription of	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye:	5 🗖] No	☑	. (Jnkn	own		
escription of	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye:	55] No	☑		Jnkn	own		
escription of	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Yes	s [] No	☑		Jnkn	own		
escription of	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye:	\$ C] Na			Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye:	6] No		. (Jnkn	own		
escription of etland Qualit	y:		·	_		neral Com	nments:	Isolated V	Vetland?		Ye:	3 -] No	☑		Jnkn	own		





SE



WE	TLAN	ID DE	ΓERN	/INAT	ION	FORM ·	- Northc	en	tral an	d No	ortheas	t Regior	1	
☑ Centerline ☐ Re-R	oute	☐ Acce	ess Roa	ad [] Anci	illary Facilit	у 🗖	Tra	nsmission	Line	☐ Oth	her		
Project/Site: NED				Milepos	: 488	391.5	County:		Middle	esex		Date	: 08/10/201	15
Applicant/Owner: Kinder Mo	rgan						State:	MA	4	Sam	pling Poin	t: AN-K-W	/011-PFO	
Investigators: CG JW		Quad N	lame:	Wilming	ton		Townsh	ip:	Tewks	sbury				
Logbook No.: 2015-1	Lo	gbook Po	g.: 124		Tra	act: 28573	3							_
Landform (hillslope, terrace,	etc.):	Depre	ession			Local	Relief:	7	Concave		Convex	☐ None	Slope%.:	1
Subregion (LRR): Middl	e Atlantic			L	at: 42.	.598525			Long:	-71.16	55706		Datum: NA	D83
Soil Map Unit Name:											NWI CI	assification:	PFO1	
Are climatic / hydrologic cond	litions on	the site t	ypical f	or this ti	me of y	ear?:	✓ Yes	П	No (If n	o, exp	lain in Rem	narks.)		
Are Vegetation Soil	□ or	Hydrolog	νП	sianific	antly d	isturbed?	_ No	_	Are "Norm	al" Cir	cumstance	s present?	√ Yes	☐ No
Are Vegetation Soil	_	Hydrolog	_	•	•	lematic?	☑ No						_	_
	_	.,	, _		.,									
SUMMARY OF FINDI	NGS -	Attach	site r	nap sl	nowin	g samp	ling poin	t lo	cations	s, tra	nsects,	importan	t features	, etc.
Hydrophytic Vegetation Prese	ent?	$\overline{\checkmark}$	Yes		No				the Com					
Hydric Soil Present?		\checkmark	Yes		No			IS W	the Sar ithin a V	npiec Vetlai	nd?	☑ Yes I	□ No	
Wetland Hydrology Present?		V	Yes		No									
Field Wetland Classification:	PF	O												
Remarks:														
HYDROLOGY														
Wetland Hydrology Indicate	rs:									3	Secondary	Indicators (2	2 or more req	uired)
Primary Indicators (minimum	of one r	equired; o	check a	ıll that a	ply)					[Surfac	e Soil Crack	s (B6)	
☐ Surface Water (A1)			ı	☐ Wa	er-Staiı	ned Leaves	s (B9)			[☐ Draina	ge Patterns	(B10)	
✓ High Water Table (A2)				☐ Aqu	atic Fa	una (B13)				[Moss	Trim Lines (E	316)	
✓ Saturation (A3)				☐ Mai	l Depos	sits (B15)				[☐ Dry-Se	eason Water	Table (C2)	
■ Water Marks (B1)			ı	√ Hyc	rogen S	Sulfide Odd	or (C1)			[Crayfis	sh Burrows ((C8)	
☐ Sediment Deposits (B2)			I	Oxi	dized R	hizosphere	s along Livi	ng R	Roots (C3)) [☐ Satura	tion Visible	on Aerial imag	gery (C9)
☐ Drift Deposits (B3)			ı	Pre	sence c	of Reduced	Iron (C4)			[Stunte	d or Stresse	ed Plants (D1)	
☐ Algal Mat or Crust (B4)			ı	Red	ent Iror	n Reduction	n in Tilled So	oils ((C6)	[Geom	orphic Positi	on (D2)	
☐ Iron Deposits (B5)			ı	☐ Thir	Muck	Surface (C	7)			[Shallo	w Aquitard (D3)	
☐ Inundation Visible on A	erial Imaç	gery (B7)	ı	☐ Oth	er (Exp	lain in Rem	narks)			[✓ Microto	opographic f	Relief (D4)	
☐ Sparsely Vegetated Con	ncave Su	ırface (B8	5)							[☐ FAC-N	leutral Test	(D5)	
Field Observations:														
Surface Water Present?	☐ Ye	es 🗹	No	Depth (i	nches):									
Water Table Present?	✓ Ye	es 🔲	No	Depth (i	nches):	4			Wetlar	nd Hyd	drology Pr		7 V □	Na
Saturation Present? (includes capillary fringe)	✓ Ye	es 🔲	No	Depth (i	nches):	0						<u>\</u>	I Yes □	NO
Remarks (Describe Recorded	Data (st	tream gag	ge, mor	nitoring v	vell, aer	rial photos,	previous ins	spec	ctions), if a	availab	ole):			
VEGETATION														
Tree Stratum														
Plot Size: 30														
Scientific Name									% C	over	р	ominant	Indicat	or Status
Pinus strobus									10			NO		ACU
Acer rubrum							Total Cove	r:	70 8		1	YES	F	AC



Providence, RI 02904				7-50///
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Vaccinium corymbosum		15	YES	FACW
Lindera benzoin Frangula alnus		10 15	YES YES	FACW FAC
	Total Cover:	40	'	
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Symplocarpus foetidus		25	YES	OBL
Carex Iurida Impatiens capensis		15 25	NO YES	OBL FACW
Viburnum dentatum		10	NO	FAC FAC
Solidago rugosa	 Total Cover:	30 105	YES	FAC
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	25/1111/011	a.cator otatao
	 Total Cover:		T	I
Dominance Test Worksheet:		dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 7 (A)	OBL Species:	<u>40</u>	x 1 = 40	
Total Number of Dominant	FACW Species		x 2 = 100	
Species Across All Strata: 7 (B)	FAC Species:	<u>125</u>	x 3 = <u>375</u>	
Percent of Dominant Species	FACU Species		x 4 = 40	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	225 (A)	<u>555 (B)</u>	
		Prevalence Index	x = B/A = 2.47	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Prese	ent? ☑ Yes	□ No
data in Remarks or on a separate sheet)	nyaropnyar (ogotation i root	E 163	NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



1 TOVIGETICE, IV	02004																	
SOIL																		
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the in	ndicator o	r confirm	he abser	nce o	f indica	tors.)						
Depth	Matrix			Re	dox Fe	atures			_							_		
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc2		Text	ure					F	(em	arks	
0-24	7.5YR 2.5/1	100							ORGA	ANIC						MU	CK	
¹Type: C=Cond	centration, D=De	pletion	ı. RM=Re	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2	_ocatior	n: PL=	Pore	 Lining	. M=	-Ma	trix	
Hydric Soil Ind	licators: (Appli	cable 1	o all LRR'	s. unle	ess oth	nerwise n	oted.)			Ind	icators	for P	oblen	natic l	Hvdr	ic S	oils	3•
✓ Histosol (A				_			•	8) (LRR R		П	2 cm N				•			
_ `	pedon (A2)				ILRA 1		oundoo (C	o) (Ertit it			Coast							•
☐ Black Hist	, ,			ПТ	hin Da	rk Surface	- (S0) (I P	R R, MLRA	1/0R)									(, L, R)
	Sulfide (A4)			_				(LRR K, L)	1400)		Dark S	-			-			ν, Ε, Ιν)
	_ayers (A5)				-	Gleyed Ma		(LIXIX IX, L)			Polyva			-				(1)
_	Below Dark Surfa	ace (A	11)		-	d Matrix (I					Thin D				-			ζ, Δ)
	Surface (A12)	, , , , , , , , , , , , , , , , , , ,	,	_			•			_					-		-	KID)
_	cky Mineral (S1)					Dark Surfa d Dark Su	ırface (F7)					-			-			K, L, R) RA 149B)
	eyed Matrix (S4)			_	•	o Dark So Depressio	` '						-					•
☐ Sandy Re				_ '	COUA L	zepiessi0	113 (1 0)				Red P	-	•			44A	., 14	5, 149B)
	Matrix (S6)										Very S					LE1.	2)	
	ace (S7) (LRR R	MID	140R\								Other				-	11 12	-/	
_	, , ,		*							_		(LXPI	uii iii r	Cilian	NO)			
	ydrophytic vege					•	esent, uni	ess disturb	ea or prob	nema	tic.							
Restrictive Lay	er Present?		Yes √	No	□ U	nknown												
										Hydr	ic Soil	Prese	nt?	\checkmark	Yes] د		No
Remarks:																		
Description of I	Habitat Characte	ristics,	Aquatic Di	iversity	or Ge	neral Com	nments:											
·			·	•														
Wetland Qualit	y: High	N I	Moderate	П	Low			Isolated	Wetland?	. г	ן Yes	₃П	No	$\overline{\mathbf{v}}$	Un	knov	wn	
	, _									•								
General Comm	ents:																	





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WETLAND DETERMINATION FORM - N	orthcentral and Northeast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other	
Project/Site: NED Milepost: 48852.0	County: Essex Date: 08/10/201	.5
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: AN-K-W011-UPL	
Investigators: CG JW Quad Name: Wilmington	Township: Andover	
Logbook No.: 2015-1 Logbook Pg.: 125 Tract: 4143		
Landform (hillslope, terrace, etc.): Hilltop Local Re	ief: Concave C Convex None Slope%.:	2
Subregion (LRR): Middle Atlantic Lat: 42.598969	Long: -71.165524 Datum: NA	D83
Soil Map Unit Name: Sudbury fine sandy loam, 0 to 3 percent slopes	NWI Classification: Not ma	apped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? [No Are "Normal" Circumstances present?	☐ No
CLIMMADY OF FINIDINGS. Attach site man showing complin	waint leastions transacts important factures	
SUMMARY OF FINDINGS - Attach site map showing samplin	g point locations, transects, important leatures	, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	Is the Sampled Area	
Hydric Soil Present? ☐ Yes ☑ No	within a Wetland? Yes 🗹 No	
Wetland Hydrology Present? ☐ Yes ☑ No		
Field Wetland Classification: UPLAND PLOT		
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indicators (2 or more requ	<u>uired)</u>
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B	Drainage Patterns (B10)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (6	1) Crayfish Burrows (C8)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	ong Living Roots (C3) Saturation Visible on Aerial imag	gery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	(C4) Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	Microtopographic Relief (D4)	
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)	
Field Observations:		
Surface Water Present? ☐ Yes ☑ No Depth (inches):		
Water Table Present? ☐ Yes 🗸 No Depth (inches):	Wetland Hydrology Present?	
Saturation Present?	☐ Yes ☑	No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pre	vious inspections), if available):	
Transante (2000) 200 Transante Para (0.100), pro-		
VEGETATION		
Tree Stratum		
Plot Size: 30		
Scientific Name	% Cover Dominant Indicate	or Status
Juglans nigra		ACU
Acer rubrum		AC
To	tal Cover: 70	



1 Tovidence, IXI 02504				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Malus sylvestris Frangula alnus Comus amomum		20 15 60	YES NO YES	UPL FAC FACW
Contac anomain	Total Cover:	95	120	17.611
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Maianthemum canadense Cornus amomum Alliaria petiolata Geum canadense Lonicera morrowii	Total Cover:	15 25 10 40 45	NO NO NO YES YES	FACU FACW FACU FAC FACU
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Vitis sp		50	NA	NA
	Total Cover:	50	'	1
Dominance Test Worksheet:	Prevalence Inde	ex Worksheet:		
Number of Dominant Species	Total % Cover o	f:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species:	<u>85</u>	x 2 = <u>170</u>	
Species Across All Strata: <u>5 (B)</u>	FAC Species:	<u>65</u>	x 3 = <u>195</u>	
Percent of Dominant Species That Are OBL_FACW_or FAC: 40 (A/B)	FACU Species:	<u>130</u>	x 4 = <u>520</u>	
That Are OBL, FACW, or FAC: 40 (A/B)	UPL Species:	<u>20</u>	x 5 = <u>100</u>	
	Column Totals:	300 (A)	985 (B)	
	Р	revalence Index =	= B/A = <u>3.28</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting 	Hydrophytic V	agatation Brasan	u42 □ Vaa □	7 No
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	nyaropnytic ve	egetation Presen	nt? ☐ Yes ⊡	∆ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Profile Description: (Describe the depth needed to document the indicator or confirm the abser Depth Matrix Redox Features Text	
Depth (inches)	
Color (moist) % Color (moist) % Type¹ Loc² Text 0-10	nce of indicators.)
O-10	
10-18	kture Remarks
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. *Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	LOAM
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. *Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. *Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	IDY LOAM
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problem of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland?	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Stratified Layers (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problem of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Surface (Diversity or General Comments:	²Location: PL=Pore Lining, M=Matrix
Histosol (A1)	Indicators for Problematic Hydric Soils ³ :
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or probable strictive Layer Present? MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Redox Depleted Matrix (F2) Depleted Matrix (F3) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or probable strictive Layer Present? Pescription of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland?	_
□ Black Histic (A3) □ Thin Dark Surface (S9) (LRR R, MLRA 149B) □ Hydrogen Sulfide (A4) □ Loamy Mucky Mineral (F1) (LRR K, L) □ Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Sandy Redox (S5) □ Redox Depressions (F8) □ Dark Surface (S7) (LRR R, MLRA 149B) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or prob Restrictive Layer Present? □ Yes ☑ No □ Unknown Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: □ High □ Moderate □ Low Isolated Wetland?	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (LRR K, L) ☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Dark Surface (S7) (LRR R, MLRA 149B) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or prob Restrictive Layer Present? ☐ Yes ☑ No ☐ Unknown Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland?	Coast Prairie Redox (A16) (LRR K, L, R)
□ Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Sandy Redox (S5) □ Stripped Matrix (S6) □ Dark Surface (S7) (LRR R, MLRA 149B) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or prob Restrictive Layer Present? □ Yes ☑ No □ Unknown Remarks: Wetland Quality: □ High □ Moderate □ Low Isolated Wetland?	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Sandy Redox (S5) □ Stripped Matrix (S6) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or probremstrictive Layer Present? □ Yes ☑ No □ Unknown Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: □ High □ Moderate □ Low Isolated Wetland?	Dark Surface (S7) (LRR K, L, M)
□ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Sandy Redox (S5) □ Stripped Matrix (S6) □ Dark Surface (S7) (LRR R, MLRA 149B) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or prob Restrictive Layer Present? □ Yes ☑ No □ Unknown Remarks: Wetland Quality: □ High □ Moderate □ Low Isolated Wetland?	Polyvalue Below Surface (S8) (LRR K, L)
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Sandy Redox (S5) □ Stripped Matrix (S6) □ Dark Surface (S7) (LRR R, MLRA 149B) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or prob Restrictive Layer Present? □ Yes ☑ No □ Unknown Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: □ High □ Moderate □ Low Isolated Wetland?	Thin Dark Surface (S9) (LRR K, L)
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Sandy Redox (S5) □ Stripped Matrix (S6) □ Dark Surface (S7) (LRR R, MLRA 149B) ③Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or prob Restrictive Layer Present? □ Yes ☑ No □ Unknown Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: □ High □ Moderate □ Low Isolated Wetland?	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problem. Restrictive Layer Present? Yes Mo Unknown Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland?	Piedmont Floodplain Soils (F19) (MLRA 1498
Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problem. Restrictive Layer Present? Yes No Unknown Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland?	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
□ Dark Surface (S7) (LRR R, MLRA 149B) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problemstrictive Layer Present? □ Yes ☑ No □ Unknown Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: □ High □ Moderate □ Low Isolated Wetland?	Red Parent Material (F21)
Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or probestrictive Layer Present? ☐ Yes ☑ No ☐ Unknown Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland?	☐ Very Shallow Dark Surface (TF12)
Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality:	Other (Explain in Remarks)
Vetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland?	
General Comments:	?





WEST



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 49794.8	County: Middlesex Date: 04/23/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: AN-G-W002-PSS
Investigators: NF CM Quad Name: Wilmington	Township: Wilmington
Logbook No.: 2015-1 Logbook Pg.: 123 Tract: 28570	
Landform (hillslope, terrace, etc.): Depression Local F	elief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.597242	Long: -71.162959 Datum: NAD83
Soil Map Unit Name: Urban land	NWI Classification: PEM1E
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	
Hydric Soil Present?	Is the Sampled Area
Wetland Hydrology Present?	
Field Wetland Classification: PSS	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
✓ Surface Water (A1) ☐ Water-Stained Leaves	B9)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced I	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	n Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	rks) Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present?	Wetland Hydrology Present? ☑ Yes ☐ No
Saturation Present?	₩ TeS □ NO
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
	Total Cover:



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Frangula alnus Cornus alba Alnus incana		15 15 25	YES YES YES	FAC FACW FACW
	Total Cover:	55		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Juncus effusus		5	YES	OBL
Typha latifolia	T-t-1 0	20	YES	OBL
W 1 N 2:	Total Cover:	25		
Woody Vine Stratum				
Plot Size: 30	1	0/ 0	1 5	1 1 1 2 1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 5 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>25</u>	x 1 = <u>25</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	40	x 2 = <u>80</u>	
oposios / to osc / to ottobal	FAC Species:	<u>15</u>	x 3 = <u>45</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>	
111at746 GSE, 171GW, 61171G.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	80 (A)	<u>150 (B)</u>	
	F	Prevalence Index	= B/A = <u>1.88</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	I			



SOIL										
J U										
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)		
Depth	Matrix		Redox Features							
(inches)	Color (moist)	Color (moist) %		%	Type ¹	Loc²	Text	ture	Remarks	
0-2	7.5YR 2/1	100					ORG	ANIC		
2-18	GL7/10Y	90	10YR 6/8	10	D	М	SILTY CL	AY LOAM		
Type: C=Cond	L centration, D=De	epletion	l	l Matrix,	CS=Cov	ered Sand	I or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix	
**	· · · · · · · · · · · · · · · · · · ·		o all LRR's, unle						oblematic Hydric Soils³:	
☐ Histosol (A			•			•	:8) (I RR R		A10) (LRR K, L, MLRA 149B)	
_	Histosol (A1) Polyvalue Below Surface (S8) Histic Epipedon (A2)					(2) (2) (1)	_	Redox (A16) (LRR K, L, R)		
_ ::			∀ T	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)	
	<u> </u>						•	e (S7) (LRR K, L, M)		
	Layers (A5)			-	Gleyed Ma		(LIXIVIX, L)		elow Surface (S8) (LRR K, L)	
_	Below Dark Surfa	ace (A1	_	-	d Matrix (f				rface (S9) (LRR K, L)	
= '	k Surface (A12)	(***	· —	•	Dark Surfa				ese Masses (F12) (LRR K, L, R)	
_	ıcky Mineral (S1)		_		d Dark Su				oodplain Soils (F19) (MLRA 149B)	
_	eyed Matrix (S4)		_	-	Depressio				c (TA6) (MLRA 144A, 145, 149B)	
☐ Sandy Re	, ,				200.000.0	(. 0)			Material (F21)	
	Matrix (S6)								Dark Surface (TF12)	
	ace (S7) (LRR R	MIRA	\ 149R)					_ ′	in in Remarks)	
_			•				ess disturbed or prob		iii iii rtomano)	
		_	Yes [v] No	□ [∪]	nknown			Hydric Soil Prese	nt? ☑ Yes ☐ No	
Remarks:								Hydric Soil Prese	nt? ☑ Yes 🗆 No	
	Habitat Characte	ristics,	Aquatic Diversity			nments:		Hydric Soil Prese	nt? ☑ Yes ☐ No	
Description of I		ristics,	_			nments:			nt? ☑ Yes □ No	
Description of I		_	Aquatic Diversity			nments:	Isolated Wetland?		nt? ☑ Yes ☐ No No ☐ Unknown	
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		ments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland's			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Description of H	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland?			
Remarks: Description of I Wetland Qualit General Comm	y: High		Aquatic Diversity	or Ge		nments:	Isolated Wetland's			





EAST



WETLAND DETERMINATION FORM - No	thcentral and Northeast Region				
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other				
Project/Site: NED Milepost: 50031.8 Co	unty: Middlesex Date: 04/23/2015				
Applicant/Owner: Kinder Morgan Sta	tte: MA Sampling Point: AN-G-W002-UPL				
Investigators: NF CM Quad Name: Wilmington To	wnship: Wilmington				
Logbook No.: 2015-1 Logbook Pg.: 125 Tract: 28631					
Landform (hillslope, terrace, etc.): Side slope Local Relief.	☐ Concave ☑ Convex ☐ None Slope%.: 3				
Subregion (LRR): Middle Atlantic Lat: 42.596773	Long: -71.162350 Datum: NAD83				
Soil Map Unit Name: Urban land	NWI Classification: Not mapped				
Are climatic / hydrologic conditions on the site typical for this time of year?:	res No (If no, explain in Remarks.)				
Are Vegetation ✓ Soil or Hydrology significantly disturbed?	No Are "Normal" Circumstances present? ☑ Yes ☐ No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No				
SUMMARY OF FINDINGS - Attach site map showing sampling p	point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? ☐ Yes ☑ No					
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No within a Wetland?				
Wetland Hydrology Present? ☐ Yes ☑ No	Willia Willia				
Field Wetland Classification: UPLAND PLOT					
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)				
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)				
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)				
□ Saturation (A3) □ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)				
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospheres along	along Living Roots (C3)				
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	n (C4) Stunted or Stressed Plants (D1)				
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Till	Tilled Soils (C6) Geomorphic Position (D2)				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)				
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)				
☐ Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present?					
Water Table Present? Yes V No Depth (inches):	Wetland Hydrology Present?				
Saturation Present?	☐ Yes ☑ No				
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previo	us inspections), if available):				
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name	% Cover Dominant Indicator Status				
Total	Cover:				



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Lland Charakters				
Herb Stratum				
Plot Size: 5	ı	24.0	l 5	l
Scientific Name		% Cover	Dominant	Indicator Status
TURF GRASS SPECIES		95	YES	FACU
	Total Cover:	95		
Woody Vine Stratum				
Plot Size: 30				ı
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL_FACW_or FAC: 0 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 1 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 1 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL_FACW_or FAC: 0 (A/B)	FACU Species:	<u>95</u>	x 4 = <u>380</u>	
That Are OBL, FACW, or FAC: 0 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	95 (A)	380 (B)	
	F	Prevalence Index :	= B/A = <u>4.00</u>	
Hydrophytic Vegetation Indicators:			<u> </u>	
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	1 No
,				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks: Altered vegetation - mowed grass area (lawn)				
3 (,				



1 02304																		
otion: (Describe	the d	epth need	led to	docum	ent the ir	ndicator o	r confirm	the abse	nce o	indica	ators	s.)						
Matrix			Re	dox Fe	atures			Та:	turc						D.	mer	·	
Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		ı ex	ıure						ĸe	mark	.5	
10YR 4/3	100							SILT L	OAM									
centration, D=De	epletion	n, RM=Re	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2[ocatio	n: P	L=Por	e Linir	ng,	M=N	latrix		
licators: (Appli	cable t	to all LRR	's, unle	ess oth	nerwise n	oted.)			Ind	cators	for	Probl	ematio	εН	ydric	Soi	ls³:	
pedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surfack Surface (A12) icky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6)				MLRA 1 Thin Da Loamy I Loamy I Deplete Redox I Deplete	id 49B) Irk Surface Mucky Mir Gleyed Matrix (I) Dark Surface d Dark Surface	e (S9) (LR) neral (F1) atrix (F2) F3) ace (F6) urface (F7)	R R, MLRA (LRR K, L)	A 149B)		Coast 5 cm I Dark \$ Polyva Thin E Iron-M Piedm Mesic Red F Very \$	Prai Muck Surfa alue Dark Manga Ma Manga Manga Manga Manga Manga Manga Manga Manga Manga Manga Ma Manga Manga Manga Manga Manga Manga Ma Ma Manga Ma Ma Ma Ma Manga Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma	rie Re ky Pea ace (S Below Surfac anese Floodp dic (T at Mate ow Da	dox (A t or Pe 7) (LRI Surfa e (S9) Masse blain S A6) (M erial (F rk Sur	A16 eat R k ce) (L es fac	(S3) (, L, M (S8) (RR K (F12) (F19) (A 144)	R K, (LRF (LRF (LRF (LR) (LR) (M)	L, F R K, R K, LRA	L, R) L, R) L, R)
		•	d bydr	ology n	ouet ho pr	ocont unl	see dieturb	od or prob	_		(=,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			٠,			
ver Present?		Yes 🔽	No	<u> </u>	Inknown				Hydr	ic Soil	Pres	sent?			Yes	V	N	0
y: High					neral Con	nments:	Isolated	Wetland?	? [] Ye	·s [□ N	∘ □]	Unkr	nown		
	Matrix Color (moist) 10YR 4/3 centration, D=Deficators: (Appliant) centration, D=De	Matrix Color (moist) % 10YR 4/3 100 Centration, D=Depletion dicators: (Applicable of A1) Dedon (A2) Circ (A3) Sulfide (A4) Layers (A5) Below Dark Surface (A12) Layers (A12) Layers (A12) Layers (A13) Below Dark Surface (A13) Layers (A14) Layers (A5) Below Dark Surface (A14) Layers (A5) Below Dark Surface (A15) Layers (A16) Layers (A17) Layers (A18) Layers (A19) Layers (A2) Layers (A3) Layers (A3) Layers (A2) Layers (A3) Layers (A3) Layers (A3) Layers (A3) Layers (A3) Layers (A3) Layer	Matrix Color (moist) % Color (noist) % Color (noist)	Matrix Re Color (moist) % Color (moist) 10YR 4/3 100 Centration, D=Depletion, RM=Reduced dicators: (Applicable to all LRR's, unlead) A1)	Matrix Redox Fe Color (moist) % Color (moist) % 10YR 4/3 100 Centration, D=Depletion, RM=Reduced Matrix, Alicators: (Applicable to all LRR's, unless off MLRA 1 Dedon (A2) Sidic (A3) Thin Da Sulfide (A4) Loamy Layers (A5) Deplete K Surface (A12) Redox I Deplete K Surface (A12) Deplete Matrix (S4) Redox I Deplete Polyvaling MLRA 1 Deplete Redox I Redox I	Matrix Redox Features Color (moist) % Color (moist) % Type¹ 10YR 4/3 100 Centration, D=Depletion, RM=Reduced Matrix, CS=Covers (Applicable to all LRR's, unless otherwise in the product of the produc	Atrix Redox Features Color (moist) % Color (moist) % Type¹ Loc² 10YR 4/3 100	Matrix Redox Features Color (moist) % Color (moist) % Type¹ Loc²	Attrix Redox Features Tex	Ation: (Describe the depth needed to document the indicator or confirm the absence of Matrix Redox Features Color (moist)	Ation: (Describe the depth needed to document the indicator or confirm the absence of indicators. Matrix	At Redox Features Texture	Ation: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Matrix	Allorin: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Matrix	Attivition: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Matrix	Atlon: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Matrix	Atlon: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Matrix	Attrix Redox Features Texture Remarks Color (moist)





WEST



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 51132.4	County: Middlesex Date: 08/10/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: WL-K-W002-PEM
Investigators: CG JW Quad Name: Wilmington	Township: Wilmington
Logbook No.: 2015-1 Logbook Pg.: 130 Tract: 8654	
Landform (hillslope, terrace, etc.): Depression Local F	telief: ☑ Concave ☐ Convex ☐ None Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.595177	Long: -71.159146 Datum: NAD83
Soil Map Unit Name: Udorthents, wet substratum	NWI Classification: PEM1Ex
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☑ or Hydrology ☐ significantly disturbed?	□ No Are "Normal" Circumstances present? ☑ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area
Wetland Hydrology Present?	
Field Wetland Classification: PEM	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves	(B9) Drainage Patterns (B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced I	ron (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	rks)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present?	Wetland Hydrology Present? ☑ Yes □ No
Saturation Present?	₩ TeS □ NO
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
	Total Cover:



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Impatiens capensis		5	NO	FACW
Phragmites australis	Total Cavari	100	YES	FACW
M 1 1 7 0 1	Total Cover:	105		
Noody Vine Stratum				
Plot Size: 30	1		1 5	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind		Multiple ber	
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)	Total % Cover of OBL Species:		Multiply by:	
Total Number of Dominant	FACW Species:	<u>0</u> : <u>105</u>	$x 1 = \underline{0}$ $x 2 = \underline{210}$	
Species Across All Strata: 1 (B)	FAC Species:	. <u>103</u> <u>0</u>	$x 3 = \frac{210}{}$	
Percent of Dominant Species	FACU Species:		x 4 = 0	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>o</u>	x 5 = 0	
	Column Totals:	<u>105 (A)</u>	210 (B)	
		Prevalence Index		
H. Lee J. C. Marriedo do Partero		revalence index	= B/A = <u>2.00</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				-
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Prese	nt? ☑ Yes [□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
Remarks.				



Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.) Depth	Providence, R	1 02904															200	
Depth (inches)	SOIL																	
Texture Remarks Color (moist) % Color (moist) % Type! Loc* ORGANIC	Profile Descrip	tion: (Describe	the de	epth need	ed to	docum	ent the in	ndicator o	r confirm tl	ne absen	ce of indica	ators.))					
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Third Surface (S8) (LRR R, MLRA 149B) Histosol (A1)		Matrix			Re	dox Fe	atures											
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. **Location: PL=Pore Lining, M=Matrix **Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Text	ure					Remark	(S	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	0-12	7.5YR 3/4	100							ORGA	NIC							
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	¹Type: C=Cond	entration. D=De	epletion.	. RM=Re	duced	Matrix.	CS=Cov	ered Sand	or Coated	Grains.	²Locatio	n: PL:	 =Pore	Lining	a. M	=Matrix		
Histosol (A1)			-															
Remarks: SOIL IS ORGANIC MATTER CONSISTING OF DECOMPOSING COMMON REED, BELOW THAT SOIL DISTURBED DUE TO MAN MADE STORM WATER DRAINAGE AREA Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown Unknown General Comments:	Histosol (A Histic Epip Black Histi Hydrogen Stratified L Depleted B Thick Dark Sandy Mu Sandy Gle Sandy Re Stripped N Dark Surfa	bedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surfac Surface (A12) cky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	ace (A1	1)		Polyvalt //LRA 1 Thin Da .oamy (Deplete Redox I Deplete Redox I	ue Below (49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	Surface (See (S9) (LRI) neral (F1) (atrix (F2) F3) ace (F6) urface (F7) ns (F8)	R R, MLRA (LRR K, L)		2 cm l Coast 5 cm l Dark \$ Polyva Inno-M Piedm Mesic Red F Very \$ Other	Muck (Prairie Mucky Surface alue B Dark Se langar sont Fle Spodi Parent Shallov	(A10) e Red Peat e (S7) elow S urface nese M oodpla ic (TAI Mater w Dark	(LRR ox (Ar or Per ox (LRR ox (LRR ox (S9))) Masse ain So ox (ML ox (LRR ox (K, L, 116) (I at (S K, L ce (Si (LRF es (F1) LRA 21) ace (MLRA LRR K, 3) (LRF ., M) B) (LRF R K, L) 2) (LR 144A, 1	149B) L, R) R K, L, R) R K, L, R) R K, L, R) LRA 149B)	
Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown General Comments:	Remarks: SOIL IS ORGA	NIC MATTER C						IMON REE	ED, BELOW									
General Comments:			ristics,	Aquatic D	iversity	or Gei	neral Com	nments:										
	Wetland Quality	y: High	□ M	Moderate		Low			Isolated \	Wetland?	☐ Ye	s 🗹	No		Ur	nknown		
MAN MADE STORM WATER RETENTION AREA	General Comm	ents:																
	MAN MADE ST	ORM WATER F	RETENT	TION ARE	Α													





SE



WETLAND DETERMINATION FORM - Nor	thcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 51178.1 Cou	unty: Middlesex Date: 08/10/2015
Applicant/Owner: Kinder Morgan Sta	te: MA Sampling Point: WL-K-W002-UPL
Investigators: CG JW Quad Name: Wilmington Tow	vnship: Wilmington
Logbook No.: 2015-1 Logbook Pg.: 131 Tract: 8654	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.595202	Long: -71.158979 Datum: NAD83
Soil Map Unit Name: Udorthents, wet substratum	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	es No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☑ or Hydrology ☐ significantly disturbed? ☐	No Are "Normal" Circumstances present? ☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No
SUMMARY OF FINDINGS - Attach site map showing sampling p	point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area ☐ Yes ☑ No within a Wetland?
Wetland Hydrology Present? ☐ Yes ☑ No	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	(4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	ed Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	us inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Total	Cover:



1 Tovidence, IXI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rosa multiflora Frangula alnus Sambucus nigra		15 20 10	YES YES YES	FACU FAC FACW
Sambucus nigra	Total Cover:	45	120	TAOW
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Celastrus orbiculatus Toxicodendron radicans Solidago canadensis		50 15 40	YES NO YES	UPL FAC FACU
	Total Cover:	105		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		l	
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:	-	
Number of Dominant Species That Are OBL. FACW. or FAC: 2 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>10</u>	x 2 = <u>20</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>35</u>	x 3 = <u>105</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)	FACU Species:	<u>55</u>	x 4 = <u>220</u>	
	UPL Species:	<u>50</u>	x 5 = <u>250</u>	
	Column Totals:	<u>150 (A)</u>	<u>595 (B)</u>	
		Prevalence Index :	= B/A = 3.97	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	∐ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	1			



1 TOVIGCTICE, I	1 02304																		
SOIL																			
Profile Descrip	otion: (Describe	the de	epth need	ed to c	docum	ent the in	ndicator o	r confirm	he abser	nce of	indica	ators	.)						
Depth	Matrix			Red	dox Fe	atures			_							_			
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Text	ure						Kem	arks		
0-12	7.5YR 3/2	100							SILT L	.OAM			R	OCK F	REFU	JSA	L AT	12 INCH	HES
¹Type: C=Cond	centration, D=De	epletion	ı, RM=Re	duced I	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2	ocatio	n: PL	.=Pore	Lining	g, M	=Ма	trix		
Hydric Soil Inc	licators: (Appli	cable t	o all LRR'	s, unle	ess oth	nerwise n	oted.)			Indi	cators	for F	Proble	matic	Hyd	ric S	Soils	:	
Black Hist Hydrogen Stratified Depleted Thick Dar Sandy Mt Sandy Gle Sandy Re Stripped I Dark Surf	bedon (A2) iic (A3) Sulfide (A4) Layers (A5) Below Dark Surfack Surface (A12) iicky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	, MLRA	\ 149B) and wetland	M L L L L L L L L L L L L L L L L L L L	TLRA 1 Thin Da oamy I oamy (peplete dedox E peplete Redox [49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	e (S9) (LR neral (F1) atrix (F2) F3) ace (F6) urface (F7) nrs (F8)		. 149B)		Coast 5 cm I Dark \$ Polyva Thin E Iron-M Piedm Mesic Red F Very \$ Other	Prair Muck Surfact alue E Dark S langa nont F Spoot Parent Shallo	ce (S7) Below S Burface Inese M	ox (A1 or Pea (LRR Surface (S9) Masses ain So 6) (ML ial (F2 x Surfa	16) (I at (S K, L e (S (LRF (LRF RA 21)	LRR 3) (L -, M) 8) (L R K, 12) (l 1144	K, L, .RR F .RR K L) LRR (MLF A, 145	R) (, L, R)	.
Remarks:	BED DUE TO MA						AREA			Hydri	c Soil	Pres	ent?		Ye	s	<u> </u>	No	
Description of	Habitat Characte	ristics,	Aquatic D	iversity	or Ge	neral Com	nments:												
Wetland Qualit	y: High		Moderate		Low			Isolated	Wetland?	, Г] Ye	s [] No		Ur	nkno	wn		
General Comm	ents:																		
MAN MADE S'	TORM WATER F	RETEN	TION ARE	Ē.Ā															





NW



WE	TLAN	D DE	ΓERN	IINATI	ON F	ORM -	Northc	ent	ral an	d No	ortheas	t Regior	า	
☑ Centerline ☐ Re-R	oute [Acce	ss Roa	ad 🔲	Ancilla	ary Facility		Tran	smission	Line	☐ Ot	her		
Project/Site: NED				Milepost:	78978	8.4	County:		Middle	esex		Date	: 08/13/201	15
Applicant/Owner: Kinder Mo	rgan						State:	MA		Samp	oling Poir	t: RD-K-W	/001-PFO	
Investigators: CG JW		Quad N	lame:	Reading			Townshi	p:	Readir	ng				
Logbook No.: 2015-1	Log	book Po	g.: 140	1	Trac	t: 2820								
Landform (hillslope, terrace, e	etc.):	Depre	ssion	'		Local R	elief:	7 (Concave		Convex	☐ None	Slope%.:	0
Subregion (LRR): Middl	e Atlantic			Lat	42.55	55698		L	ong:	-71.07	5953		Datum: NA	D83
Soil Map Unit Name: Fre	etown mu	ick, 0 to	1 perce	ent slopes							NWI C	lassification:	PFO1E	
Are climatic / hydrologic cond	litions on	he site t	ypical f	or this tim	e of yea	ar?:	7 Yes		No (If no	o, expl	lain in Ren	narks.)		
Are Vegetation	☐ or H	Hydrolog	у 🗖	significa	ntly dist	urbed?	☑ No	Aı	re "Norma	al" Circ	cumstance	s present?	✓ Yes	☐ No
Are Vegetation Soil	☐ or H	lydrolog	у 🗖	naturally	probler	matic?	☑ No							
SUMMARY OF FINDIN	NGS - A	ttach	site r	nap sho	wing	samplii	ng point	l lo	cations	s, tra	nsects,	importar	nt features	, etc.
Hydrophytic Vegetation Prese	ent?	$\overline{\checkmark}$	Yes	☐ No)									
Hydric Soil Present?		$\overline{\checkmark}$	Yes	☐ No)				the San thin a V			☑ Yes	□ No	
Wetland Hydrology Present?		$\overline{\checkmark}$	Yes	□ No)									
Field Wetland Classification:	PF)												
Remarks:														
HYDROLOGY														
Wetland Hydrology Indicato	rs:									5	Secondary	Indicators (2	2 or more requ	uired)
Primary Indicators (minimum	of one re	quired; o	heck a	ıll that app	ly)						Surfac	e Soil Crack	(s (B6)	
☐ Surface Water (A1)			[√ Wate	r-Staine	d Leaves (B9)				☐ Draina	ige Patterns	(B10)	
✓ High Water Table (A2)			I	☐ Aqua	tic Faun	ıa (B13)					Moss	Trim Lines (I	B16)	
✓ Saturation (A3)			[☐ Marl I	Deposits	s (B15)					Dry-Se	eason Water	Table (C2)	
□ Water Marks (B1)			[√ Hydro	gen Su	lfide Odor	(C1)				Crayfis	sh Burrows ((C8)	
☐ Sediment Deposits (B2)			I	Oxidi:	zed Rhiz	zospheres	along Livir	ng Ro	oots (C3)	. [☐ Satura	tion Visible	on Aerial imaç	gery (C9)
☐ Drift Deposits (B3)			I	Prese	nce of I	Reduced Ir	on (C4)				Stunte	d or Stresse	ed Plants (D1)	
☐ Algal Mat or Crust (B4)			I	Rece	nt Iron F	Reduction i	n Tilled So	ils (C	C6)		Geom	orphic Positi	ion (D2)	
☐ Iron Deposits (B5)			I	☐ Thin I	Muck Su	urface (C7)	1				☐ Shallo	w Aquitard (D3)	
☐ Inundation Visible on A	erial Image	ery (B7)	I	Other	(Explai	in in Rema	rks)			5	✓ Microt	opographic I	Relief (D4)	
☐ Sparsely Vegetated Cor	ncave Sur	face (B8)								☐ FAC-N	leutral Test	(D5)	
Field Observations:														
Surface Water Present?	☐ Yes	· 🗹	No	Depth (inc	hes):									
Water Table Present?	✓ Yes	_		Depth (inc	,	0			Wetlan	nd Hyd	drology Pr		∐ Yes □	No
Saturation Present? (includes capillary fringe)	✓ Ye:	· 🗆	No	Depth (inc	hes):	0						<u>LY</u>	les 🗀	NO
Remarks (Describe Recorded	Data (str	eam gaç	je, mor	nitoring we	II, aeria	l photos, p	revious ins	pect	ions), if a	availab	le):			
VEGETATION														
Tree Stratum														
Plot Size: 30														
Scientific Name									% Co	over		Oominant	Indicate	or Status
Pinus strobus Acer rubrum									10 80	0		NO YES		ACU AC
						T	Total Cove	r:	90	0				



	% Cover	Dominant	Indicator Status
	60 10 5	YES NO NO	FAC FACW FACW
Total Cover:	75	1	1
	% Cover	Dominant	Indicator Status
	15	NO	OBL
	10 10	NO NO	FACW FACW
	25 20	YES	FAC OBL
Total Cover:		ILS	OBL
1000 00001.			
	% Cover	Dominant	Indicator Status
Total Cover:		1	
Prevalence Ind	lex Worksheet:		
Total % Cover of	of:	Multiply by:	
OBL Species:	<u>35</u>	x 1 = <u>35</u>	
FACW Species	: <u>35</u>	x 2 = <u>70</u>	
FAC Species:	<u>165</u>	x 3 = <u>495</u>	
FACU Species:	<u>10</u>	x 4 = <u>40</u>	
UPL Species:	<u>0</u>	x 5 = <u>0</u>	
Column Totals:	245 (A)	<u>640 (B)</u>	
F	Prevalence Index	= B/A = <u>2.61</u>	
Hydrophytic V	egetation Prese	nt? ☑ Yes [□ No
	Total Cover: Total Cover: Prevalence Inc Total % Cover of OBL Species: FACW Species: FACU Species: UPL Species: Column Totals:	60 10 5 5 Total Cover: 75 % Cover 15 10 10 25 20 20 Total Cover: 80 % Cover Total Cover: 80 % Cover Total Cover: Prevalence Index Worksheet: Total % Cover of: OBL Species: 35 FACW Species: 35 FACW Species: 165 FACU Species: 10 UPL Species: 0 Column Totals: 245 (A) Prevalence Index	60



SOIL																	
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the in	ndicator o	r confirm	he absen	ce of	indicator	s.)					
Depth (inches)	Matrix			Re	dox Fe	atures			т	ırc				_	00	nelse.	
(inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc ²		Textu	ure 					Rema	11KS	
0-24+	5YR 2.5/2	100							ORGA	NIC					MUC	CK	
¹Type: C=Cond	centration, D=De	l epletion	l n, RM=Red	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2	ocation: F	L=Pore	e Lining	g, M=	-Mat	rix	
Hydric Soil Ind	licators: (Appli	cable t	o all LRR'	s, unle	ess oth	nerwise n	oted.)			Indi	cators for	Proble	matic	Hydr	ic S	oils³	:
Histosol (A	A1)			_	,		Surface (S	8) (LRR R			2 cm Muc	k (A10)	(LRR	K, L,	MLR	A 14	9B)
☐ Histic Epip	pedon (A2)			N	ILRA 1	49B)					Coast Pra	irie Re	dox (A1	16) (L	RR I	K, L,	R)
■ Black Hist	ic (A3)			□ т	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)		5 cm Muc	ky Pea	t or Pe	at (S3	3) (LF	RR K	, L, R)
☐ Hydrogen	Sulfide (A4)				oamy I	Mucky Mir	neral (F1)	(LRR K, L)			Dark Surfa	ace (S7) (LRR	K, L	, M)		
☐ Stratified I	_ayers (A5)				oamy (Gleyed Ma	atrix (F2)				Polyvalue	Below	Surfac	e (S8) (LF	₹R K	, L)
☐ Depleted I	Below Dark Surfa	ace (A1	l1)		eplete	d Matrix (I	F3)				Thin Dark	Surfac	e (S9)	(LRR	K, L	.)	
☐ Thick Darl	k Surface (A12)				Redox [Dark Surfa	ace (F6)				Iron-Mang	anese	Masse	s (F1	2) (L	RR Ł	(, L, R)
☐ Sandy Mu	icky Mineral (S1)				eplete	d Dark Su	ırface (F7)				Piedmont	Floodp	lain So	ils (F	19) (MLR	A 149B)
☐ Sandy Gle	eyed Matrix (S4)			□ F	Redox [Depressio	ns (F8)				Mesic Spo	odic (TA	A6) (ML	RA 1	44A	, 145	, 149B)
☐ Sandy Re	dox (S5)										Red Parei	nt Mate	rial (F2	21)			
☐ Stripped N	Matrix (S6)										Very Shal	low Da	rk Surfa	ace (ΓF12	?)	
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	4 149B)								Other (Ex	plain in	Rema	rks)			
3Indicators of h	nydrophytic vege	tation a	and wetland	d hydro	ology n	nust be pr	esent, unle	ess disturb	ed or probl	lemat	ic.						
Restrictive Lay	er Present?	□ `	Yes ☑	No	□ ∪	nknown			ı	Hydri	c Soil Pre	sent?	V	Yes	s [_ r	No
Remarks: Description of I	Habitat Characte	ristics,	Aquatic Di	versity	or Ge	neral Com	nments:										
Wetland Qualit	y: High	☑ 1	Moderate		Low			Isolated	Wetland?] Yes	√ No	· 🗆	Un	knov	vn	
General Comm	ents:																





NORTH



WET	AND	DET	ERN	IINATI	ON F	FORM -	Northc	entral a	nd N	ortheas	t Regio	n	
☑ Centerline ☐ Re-Rout	• 🗆	Acce	ss Roa	ad 🔲	Ancill	lary Facility		Transmissi	on Line	☐ Ot	her		
Project/Site: NED	-		1	Milepost:	791	54.2	County:	Midd	dlesex		Date	e: 08/13/201	15
Applicant/Owner: Kinder Morga	n						State:	MA	Sam	pling Poin	t: RD-K-V	V001-PSS	
Investigators: CG JW	C	Quad N	ame:	Reading			Townshi	p: Rea	ding				
Logbook No.: 2015-1	Logb	ook Pg	.: 139		Tra	ict: 2820	•						
Landform (hillslope, terrace, etc.	:	Depre	ssion	'		Local R	Relief:	☑ Concav	е 🔲	Convex	☐ None	Slope%.:	0
Subregion (LRR): Middle A	lantic			Lat	: 42.5	555649		Long:	-71.0	75236		Datum: NA	D83
Soil Map Unit Name: Freeto	wn mucl	k, 0 to	1 perce	ent slopes	3					NWI C	lassification	: PEM1I	 E
Are climatic / hydrologic conditio	ns on the	e site ty	pical f	or this tim	ne of ye	ear?:	✓ Yes	☐ No (If	no, exp	olain in Rem	narks.)		_
Are Vegetation	or Hy	drology	/ 🗆	significa	intly dis	sturbed?	☑ No	Are "Nor	mal" Ci	rcumstance	s present?	✓ Yes	☐ No
Are Vegetation ☐ Soil ☐	or Hy	drology	/ 🗆	naturally	y proble	ematic?	— ☑ No						
		_	_		_		_						
SUMMARY OF FINDING	S - Att	tach	site n	nap sh	owing	g sampli	ng point	location	ns, tra	insects,	importai	nt features	, etc.
Hydrophytic Vegetation Present		$\overline{\checkmark}$	Yes	□ N	0			Is the Sa	amnla	d Area			
Hydric Soil Present?		\checkmark	Yes	☐ N	0			within a	Wetla	nd?	☑ Yes	□ No	
Wetland Hydrology Present?		$\overline{\mathbf{A}}$	Yes	□ N	0								
Field Wetland Classification:	PSS												
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicators										Secondary	Indicators (2 or more requ	uired)
Primary Indicators (minimum of	one requ	uired; c	heck a	ll that app	oly)					☐ Surfac	e Soil Cracl	ks (B6)	
☐ Surface Water (A1)			6	√ Wate	r-Stain	ed Leaves ((B9)			□ Draina	ige Patterns	(B10)	
✓ High Water Table (A2)			[☐ Aqua	tic Fau	ına (B13)				☐ Moss	Trim Lines (B16)	
✓ Saturation (A3)			[☐ Marl	Deposi	its (B15)				☐ Dry-Se	eason Wate	r Table (C2)	
☐ Water Marks (B1)			6	√ Hydro	ogen S	ulfide Odor	(C1)			☐ Crayfis	sh Burrows	(C8)	
☐ Sediment Deposits (B2)			[Oxidi	zed Rh	nizospheres	along Livir	ng Roots (C	3)	☐ Satura	ition Visible	on Aerial imaç	gery (C9)
☐ Drift Deposits (B3)			[Prese	ence of	f Reduced I	ron (C4)			☐ Stunte	d or Stresse	ed Plants (D1)	
☐ Algal Mat or Crust (B4)			[Rece	nt Iron	Reduction i	in Tilled So	ils (C6)		☐ Geom	orphic Posit	ion (D2)	
☐ Iron Deposits (B5)			[Thin	Muck S	Surface (C7))			☐ Shallo	w Aquitard	(D3)	
☐ Inundation Visible on Aeria	Imagery	y (B7)		Othe	r (Expla	ain in Rema	ırks)			✓ Microt	opographic	Relief (D4)	
☐ Sparsely Vegetated Conca	e Surfa	ce (B8))							☐ FAC-N	leutral Test	(D5)	
Field Observations:													
Surface Water Present?	Yes	7 1	No I	Depth (inc	ches):								
Water Table Present? ✓	Yes		No I	Depth (inc	ches):	2		Wetl	and Hy	drology Pr	esent?		
Saturation Present? (includes capillary fringe)	Yes	<u> </u>	No I	Depth (ind	ches):	0					5	☑ Yes 🛚	No
Remarks (Describe Recorded Da	ta (strea	am gag	e, mon	itoring we	ell, aeri	al photos, p	revious ins	pections), i	f availat	ole):			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name								%	Cover		ominant	Indicate	or Status
Acer rubrum									5		YES	F	AC
						-	Total Cove	r:	5	'		•	



Trovidence, IXI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Vaccinium corymbosum Clethra alnifolia Frangula alnus		15 5 75	NO NO YES	FACW FAC FAC
	Total Cover:	95	I	I
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Symplocarpus foetidus Osmunda regalis Onoclea sensibilis Leersia oryzoides Phragmites australis	Total Cover:	25 15 10 15 40 105	YES NO NO NO VES	OBL OBL FACW OBL FACW
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	1
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>55</u>	x 1 = <u>55</u>	
Total Number of Dominant	FACW Species:		x 2 = <u>130</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>85</u>	x 3 = <u>255</u>	
Percent of Dominant Species	FACU Species:	<u>0</u>	x 4 = <u>0</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	205 (A)	440 (B)	
	F	Prevalence Index :	= B/A = <u>2.15</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting 	Hudrophytic V	agatatian Brasar		7 No
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	нуагорпунс v	egetation Preser	nt? ☑ Yes [」 NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	<u> </u>			



SOIL																	
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the in	ndicator o	r confirm	he absen	ce of	indicator	s.)					
Depth (inches)	Matrix			Re	dox Fe	atures			т	ırc				_	00	nelse.	
(inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc ²		Textu	ure 					Rema	11KS	
0-24+	5YR 2.5/2	100							ORGA	NIC					MUC	CK	
¹Type: C=Cond	centration, D=De	l epletion	l n, RM=Red	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2	ocation: F	L=Pore	e Lining	g, M=	-Mat	rix	
Hydric Soil Ind	licators: (Appli	cable t	o all LRR'	s, unle	ess oth	nerwise n	oted.)			Indi	cators for	Proble	matic	Hydr	ic S	oils³	:
Histosol (A	A1)			_	,		Surface (S	8) (LRR R			2 cm Muc	k (A10)	(LRR	K, L,	MLR	A 14	9B)
☐ Histic Epip	pedon (A2)			N	ILRA 1	49B)					Coast Pra	irie Re	dox (A1	16) (L	RR I	K, L,	R)
☐ Black Hist	ic (A3)			□ т	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)		5 cm Muc	ky Pea	t or Pe	at (S3	3) (LF	RR K	, L, R)
☐ Hydrogen	Sulfide (A4)				oamy I	Mucky Mir	neral (F1)	(LRR K, L)			Dark Surfa	ace (S7) (LRR	K, L	, M)		
☐ Stratified I	_ayers (A5)				oamy (Gleyed Ma	atrix (F2)				Polyvalue	Below	Surfac	e (S8) (LF	₹R K	, L)
☐ Depleted I	Below Dark Surfa	ace (A1	l1)		eplete	d Matrix (I	F3)				Thin Dark	Surfac	e (S9)	(LRR	K, L	.)	
☐ Thick Darl	k Surface (A12)				Redox [Dark Surfa	ace (F6)				Iron-Mang	anese	Masse	s (F1	2) (L	RR Ł	(, L, R)
☐ Sandy Mu	icky Mineral (S1)				eplete	d Dark Su	ırface (F7)				Piedmont	Floodp	lain So	ils (F	19) (MLR	A 149B)
☐ Sandy Gle	eyed Matrix (S4)			□ F	Redox [Depressio	ns (F8)				Mesic Spo	odic (TA	A6) (ML	RA 1	44A	, 145	, 149B)
☐ Sandy Re	dox (S5)										Red Parei	nt Mate	rial (F2	21)			
☐ Stripped N	Matrix (S6)										Very Shal	low Da	rk Surfa	ace (ΓF12	?)	
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	4 149B)								Other (Ex	plain in	Rema	rks)			
3Indicators of h	nydrophytic vege	tation a	and wetland	d hydro	ology n	nust be pr	esent, unle	ess disturb	ed or probl	lemat	ic.						
Restrictive Lay	er Present?	□ `	Yes ☑	No	□ ∪	nknown			ı	Hydri	c Soil Pre	sent?	V	Yes	s [_ r	No
Remarks: Description of I	Habitat Characte	ristics,	Aquatic Di	versity	or Ge	neral Com	nments:										
Wetland Qualit	y: High	☑ 1	Moderate		Low			Isolated	Wetland?] Yes	√ No	· 🗆	Un	knov	vn	
General Comm	ents:																





EAST



WETLAND DETERMINATION FORM - N	Northcentral and Northeast Region
Centerline	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 371.7	County: Essex Date: 08/12/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: LY-D-W001-PEM
Investigators: PB Quad Name: Reading	Township: Lynnfield
Logbook No.: 6 Logbook Pg.: 38 Tract: 2544	
Landform (hillslope, terrace, etc.): Depression Local Re	elief: 🗹 Concave 🗌 Convex 🗎 None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.552757	Long: -71.065390 Datum: NAD83
Soil Map Unit Name: Deerfield loamy fine sand, 0 to 3 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No
	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area
Wetland Hydrology Present? ☑ Yes ☐ No	Willia Wolland.
Field Wetland Classification: PEM	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
□ Surface Water (A1) □ Water-Stained Leaves (B	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
✓ Saturation (A3)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	Control Visible on Assisting (CO)
□ Drift Deposits (B3) □ Presence of Reduced Inc	Chunted or Chronod Dlanta (D4)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remar	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☑ Yes ☐ No
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)	E 165 E 16
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	evious inspections), if available):
VEGETATION	
Tree Stratum Plot Size: 00	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
т	otal Cover:



T Tovidence, Tri 02304				1 1 1 1 1 1 1 1 1 1
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:	ı		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Solidago gigantea		5	NO	FACW
Microstegium vimineum Euthamia carliniana		15 30	YES YES	FAC FAC
Onoclea sensibilis		10	NO	FACW
Lythrum salicaria	Total Cover:	5 65	NO	OBL
	Total Cover.			
Woody Vine Stratum				
Plot Size: 30				ı
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>5</u>	x 1 = <u>5</u>	
Total Number of Dominant	FACW Species		x = 30	
Species Across All Strata: 2 (B)	•			
Percent of Dominant Species	FAC Species:	<u>45</u>	x 3 = <u>135</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = <u>0</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>65 (A)</u>	<u>170 (B)</u>	
	I	Prevalence Index =	$= B/A = \underline{2.62}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0	11. 1 1 2		=	.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Presen	t? ☑ Yes [」 No
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
present, unless disturbed of problematic.				
Remarks:				



Providence, F	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abs	ence of indicators.)	
Depth	Matrix		-	dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	exture	Remarks
0.42	` ′		` ′					NI T	
0-13	10YR 3/1	90	5YR 4/6	10	С	M	٤	SILT	
13-18	10YR 5/1	85	5YR 4/6	15	С	М	S	AND	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains	. ² Location: PL:	=Pore Lining, M=Matrix
Hvdric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils ³ :
Histosol (A			•			•	8) (LRR R,		(A10) (LRR K, L, MLRA 149B)
<u> </u>	•			/ILRA 1		ounace (c	o) (ERRER,		
_	pedon (A2)			ilia Da		- (CO) (LD)	D D MI DA 440D)	=	e Redox (A16) (LRR K, L, R)
☐ Black Hist							R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			.oamy	Mucky Mii	neral (F1)	(LRR K, L)	☐ Dark Surfac	e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			.oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	l1) 🔲 🛭	Peplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		√ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			Peplete	d Dark Su	ırface (F7)		☐ Piedmont FI	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
☐ Stripped I	Matrix (S6)								w Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	\ 149R)						ain in Remarks)
			•				ess disturbed or pr		an in Remarks)
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: High		Moderate	Low			Isolated Wetland	d? ☑ Yes 🗖	No 🔲 Unknown
General Comm	ente:								





W



WE	TLAND	DET	ERM	INATI	ON FORM -	Northce	entral an	d No	ortheast	Region		
☑ Centerline ☐ Re-R	oute 🔲	Acces	s Road		Ancillary Facility		Transmission	Line	☐ Othe	er		
Project/Site: NED			M	lilepost:	310.2	County:	Essex	(Date:	08/12/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	oling Point:	LY-D-W0	01-UPL	
Investigators: PB		Quad Na	me: R	eading		Township	p: Lynnfi	eld				
Logbook No.: 6	Logb	ook Pg.	: 32		Tract: 2544	•						
Landform (hillslope, terrace, e	etc.):	Flat			Local R	elief:	Concave	$\overline{\checkmark}$	Convex	None	Slope%.:	1
Subregion (LRR): Middl	e Atlantic			Lat	: 42.552787		Long:	-71.06	5161		Datum: NA	D83
Soil Map Unit Name: De	erfield loam	ny fine sa	and, 0 t	o 3 perc	ent slopes				NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	r this tim	e of year?:	7 Yes	☐ No (If n	o, expl	lain in Rema	rks.)		
Are Vegetation	or Hy	/drology		significa	ntly disturbed?	√ No	Are "Norm	al" Circ	cumstances	present?	✓ Yes	☐ No
Are Vegetation Soil	or Hy	/drology		naturally	problematic?	— ✓ No						
SUMMARY OF FINDIN	NGS - At	tach s	ite m	ap sho	owing samplir	ng point	locations	s, tra	nsects, ii	nportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☐ No)							
Hydric Soil Present?			Yes	✓ No)		Is the Sar within a V	npled Notlar	l Area □	Yes ⊻	∐ No	
Wetland Hydrology Present?			Yes	☑ No)		withina	veliai	iu:			
Field Wetland Classification:	UPLA	AND PL	ОТ									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	ors:							5	Secondary In	dicators (2	or more requ	uired)
Primary Indicators (minimum	of one requ	uired; ch	neck all	that app	<u>ly)</u>				Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)				Wate	r-Stained Leaves (B9)			☐ Drainag	e Patterns (B10)	
☐ High Water Table (A2)] Aqua	tic Fauna (B13)				☐ Moss Tr	im Lines (B	16)	
☐ Saturation (A3)				Marl I	Deposits (B15)				☐ Dry-Sea	son Water	Table (C2)	
□ Water Marks (B1)] Hydro	ogen Sulfide Odor	(C1)			Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2)				Oxidi	zed Rhizospheres	along Livin	ng Roots (C3)) [Saturation	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				Prese	ence of Reduced In	on (C4)			Stunted	or Stressed	l Plants (D1)	
☐ Algal Mat or Crust (B4)				Rece	nt Iron Reduction in	n Tilled So	ils (C6)		Geomor	phic Positio	n (D2)	
☐ Iron Deposits (B5)] Thin I	Muck Surface (C7)				Shallow	Aquitard (D	03)	
☐ Inundation Visible on A	rial Imager	y (B7)		O ther	(Explain in Remai	rks)				ographic R		
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)							FAC-Ne	utral Test ([O5)	
Field Observations:	<u> </u>											
Surface Water Present?	☐ Yes	√ N	lo D	epth (inc	:hes):							
Water Table Present?	☐ Yes	√ N	lo D	epth (inc	:hes):		Wetlar	nd Hyd	drology Pre		· =	
Saturation Present? (includes capillary fringe)	Yes	☑ N	lo D	epth (inc	thes):					Ц	Yes ⊻	No
Remarks (Describe Recorded	Data (strea	am gage	e, monit	oring we	ell, aerial photos, pi	revious ins	pections), if a	availabl	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Do	minant	Indicate	or Status
Fraxinus pennsylvanica Acer rubrum Quercus rubra							5 5	5		NO NO 'ES	F.	AC ACU
					Т	otal Cover	1	0	Ι	-	1	



Providence, Ri 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Lindera benzoin		15	YES	FACW
	Total Cover:	15	'	
Herb Stratum				
Plot Size: 5				
	1	0/ Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	
Parathelypteris noveboracensis Taraxacum officinale		40 3	YES NO	FAC FACU
Parthenocissus quinquefolia		5	NO	FACU
	Total Cover:	48		
Woody Vine Stratum				
Plot Size: 30				ı
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inde	ex Worksheet:		
Number of Dominant Species	Total % Cover o	f:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species:	<u>20</u>	x 2 = <u>40</u>	
Species Across All Strata: 3 (B)	FAC Species:	<u>45</u>	x 3 = <u>135</u>	
Percent of Dominant Species	FACU Species:	<u>58</u>	x 4 = <u>232</u>	
That Are OBL, FACW, or FAC: 67 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	123 (A)	407 (B)	
		revalence Index :		
Hadron kartin Vanatatian Indiantara		TOVAICHOC HIGGX -	<u> </u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Ve	egetation Preser	nt? ☑ Yes 🏻] No
data in Nomano di di a separate sheeti				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
present, unless disturbed or problematic.				
Remarks:				



Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Depth (inches)	TOVIGOTICO, I	11 02304								
Depth	SOIL									
Color (moist)	Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	confirm the abser	nce of indicators.))
10-8		Matrix		Re	dox Fe	atures				
8-18	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, cS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, unless otherwise noted.) Histosol (A1)	0-8	7.5YR 3/3	100					SIL	LT	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, unless otherwise noted.) Histosol (A1)										
Aydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	8-18	7.5YR 4/4	100					SAI	ND	
Aydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)										
Histosol (A1)	¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	²Location: PL:	L =Pore Lining, M=Matrix
Histic Epipedon (A2) Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Som Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Allow Depleted Dark Surface (F7) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Allow Dark Surface (TF12) Other (Explain in Remarks) Allow Dark Surface (TF12) Other (Explain in Remarks) Player Present? Yes No Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown	Hydric Soil Inc	dicators: (Appli	cable t	to all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils ³ :
Histic Epipedon (A2) Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Andicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? Yes No No Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown	Histosol (A	A1)		П ғ	Polyval	ue Below	Surface (S	8) (LRR R,	☐ 2 cm Muck ((A10) (LRR K, L, MLRA 149B)
Black Histic (A3)	_	·					•		_	
Stratified Layers (A5)	=			י ם	Γhin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)		
Stratified Layers (A5)	☐ Hydrogen	Sulfide (A4)		l	oamy	Mucky Mir	neral (F1) (LRR K, L)	☐ Dark Surfac	e (S7) (LRR K, L, M)
Thick Dark Surface (A12)		Layers (A5)		_	-	-		, ,	☐ Polyvalue B	elow Surface (S8) (LRR K, L)
Thick Dark Surface (A12)			ace (A1	_	-	-				
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes ☑ No □ Unknown □ Hydric Soil Present? □ Yes ☑ No □ No □ Unknown □ Present? □ Yes ☑ No □ Unknown □ No		k Surface (A12)		F	Redox I	Dark Surfa	ace (F6)			
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. **Restrictive Layer Present? □ Yes ☑ No ■ Hydric Soil Present? □ Yes ☑ No **Remarks: **Description of Habitat Characteristics, Aquatic Diversity or General Comments: **Wetland Quality: □ High □ Moderate □ Low Isolated Wetland? □ Yes □ No □ Unknown		ucky Mineral (S1))	_						
Stripped Matrix (S6)	☐ Sandy Gl	eyed Matrix (S4)		F	Redox	Depressio	ns (F8)			
Dark Surface (S7) (LRR R, MLRA 149B)	☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?	☐ Stripped I	Matrix (S6)							☐ Very Shallov	w Dark Surface (TF12)
Restrictive Layer Present? Yes	□ Dark Surf	ace (S7) (LRR R	, MLR/	A 149B)					Other (Expla	ain in Remarks)
Restrictive Layer Present? Yes No Unknown Hydric Soil Present? Yes No No No No No No No N	3Indicators of I	nydrophytic vege	tation a	and wetland hydr	ology n	nust be pr	esent, unle	ess disturbed or prob	blematic.	
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland? ☐ Yes ☐ No ☐ Unknown	Remarks:									
	Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Com	nments:			
General Comments:	Wetland Qualit	ty: High	□ ¹	Moderate	Low			Isolated Wetland?	?	No Unknown
General Comments:	0 10									
	General Comm	ients:								





SE



WE	TLAN	ND DE	TERI	MINAT	ION I	FORM - I	Northc	entral ar	nd No	ortheast	Region		
☑ Centerline ☐ Re-R	oute	☐ Acc	ess Ro	ad [] Ancil	lary Facility		Transmissio	n Line	☐ Oth	ner		
Project/Site: NED				Milepost	650	.3	County:	Essex	x		Date:	12/13/201	4
Applicant/Owner: Kinder Mo	rgan						State:	MA	Sam	oling Point	t: LY-P-W	01-PFO	
Investigators: AF CV		Quad	Name:	Reading			Township	p: Lynnf	ield				
Logbook No.: 2014P3	L	ogbook F	g.: 98		Tra	ict: 8457	•						
Landform (hillslope, terrace, e	etc.):	DEP	RESSIG	ON		Local R	elief:	☑ Concave		Convex	☐ None	Slope%.:	10
Subregion (LRR): Middl	e Atlanti	ic		La	at: 42.	552791		Long:	-71.06	6968		Datum: NAI	D83
Soil Map Unit Name: Sci	tuate fin	ne sandy	loam, 3	to 8 perc	ent slop	oes, extreme	ly stony			NWI Cla	assification:	PFO1E	
Are climatic / hydrologic cond	litions or	n the site	typical	for this tir	ne of ye	ear?: ✓	7 Yes	☐ No (If r	по, ехр	lain in Rem	arks.)		
Are Vegetation	□ 01	r Hydrolo	ду 🗖	signific	antly dis	sturbed?	☑ No	Are "Norm	nal" Cir	cumstances	s present?	✓ Yes	☐ No
Are Vegetation Soil	□ 01	r Hydrolo	gy 🗖	natural	ly probl	ematic?	☑ No						
SUMMARY OF FINDIN	NGS -	Attach	site	map sh	owing	g samplir	ng point	location	s, tra	nsects, i	importan	t features	, etc.
Hydrophytic Vegetation Prese	ent?	V	Yes	□ N	lo								
Hydric Soil Present?		✓] Yes	1	Ю			Is the Sa within a	mpled Wetlai	l Area nd?	☑ Yes [□ No	
Wetland Hydrology Present?		✓	[Yes	□ 1	10								
Field Wetland Classification:	Р	FO											
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicato	rs:								5	Secondary I	Indicators (2	or more requ	uired)
Primary Indicators (minimum	of one	required;	check a	all that ap	ply)				[Surface	e Soil Cracks	s (B6)	
☑ Surface Water (A1)				√ Wat	er-Stain	ed Leaves (I	B9)		[☐ Draina	ge Patterns ((B10)	
✓ High Water Table (A2)				☐ Aqu	atic Fau	ına (B13)			[Moss T	rim Lines (B	16)	
☑ Saturation (A3)				☐ Mar	Depos	its (B15)			[☐ Dry-Se	ason Water	Table (C2)	
□ Water Marks (B1)				☐ Hyd	rogen S	ulfide Odor ((C1)		[Crayfis	h Burrows (0	C8)	
☐ Sediment Deposits (B2)				☐ Oxio	lized Rh	nizospheres	along Livin	ng Roots (C3	₎ [☐ Saturat	tion Visible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)				☐ Pres	sence of	f Reduced Ire	on (C4)		[Stunted	d or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)				☐ Rec	ent Iron	Reduction in	n Tilled So	ils (C6)	[Geomo	orphic Position	on (D2)	
☐ Iron Deposits (B5)				☐ Thin	Muck S	Surface (C7)			[Shallov	v Aquitard (D	03)	
☐ Inundation Visible on A	erial Ima	gery (B7)	☐ Othe	er (Expl	ain in Remar	ks)		[Microto	pographic R	telief (D4)	
☐ Sparsely Vegetated Cor	ncave S	urface (B	8)						[☐ FAC-N	eutral Test (D5)	
Field Observations:													
Surface Water Present?	√ Y	es 🔲	No	Depth (in	iches):	1-8							
Water Table Present?	√ Y	es 🔲	No	Depth (in	iches):	0		Wetla	nd Hyd	drology Pre		Voc 🗆	No
Saturation Present? (includes capillary fringe)	⊘ Y	es 🔲	No	Depth (ir	iches):	0					<u>[V]</u>	Yes □	NO
Remarks (Describe Recorded	Data (s	stream ga	ge, mo	nitoring w	ell, aeri	al photos, pr	revious ins	pections), if	availab	le):			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name								% C	over	Do	ominant	Indicate	or Status
Pinus strobus Acer rubrum Chamaecyparis thyoides								2	20 20 25		YES YES YES	F	ACU AC BL
						Т	otal Cover	r: 6	65				



Sapling/Shrub Stratum Plot Size: 15 Scientific Name Ilex verticillata Quercus ilicifolia				
Scientific Name Ilex verticillata				
llex verticillata				
		% Cover	Dominant	Indicator Status
Berberis thunbergii Frangula alnus		20 20 10 20	YES YES NO YES	FACW UPL FACU FAC
	Total Cover:	70		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Scirpus cyperinus		10	NO	OBL
Spaghnum sp		20	NA	NONE
	Total Cover:	30		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>35</u>	x 1 = <u>35</u>	
Total Number of Dominant	FACW Species:	: <u>20</u>	x 2 = <u>40</u>	
Species Across All Strata: 6 (B)	FAC Species:	<u>40</u>	x 3 = <u>120</u>	
Percent of Dominant Species That Are OBL_FACW_or_FAC: 67 (A/B)	FACU Species:	<u>30</u>	x 4 = <u>120</u>	
That Are OBL, FACW, or FAC: 67 (A/B)	UPL Species:	<u>20</u>	x 5 = <u>100</u>	
	Column Totals:	145 (A)	415 (B)	
	F	Prevalence Index	= B/A = <u>2.86</u>	
Hydrophytic Vegetation Indicators:				
□ 1 - Rapid Test for Hydrophytic Vegetation☑ 2 - Dominance Test is > 50%				
_				
3 - Prevalence Index is ≤ 3.0	Hadranbadia V	/tti B		7 No.
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Prese	nt? ☑ Yes [☐ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
· 				
Remarks:				



2011									
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
0-14	10YR 2/1	100					ORG	ANIC	ORGANIC LOAM
14-24	10YR 3/1	100					SANDY	LOAM	
Type: C=Cond	centration, D=De	pletion	, RM=Reduced	Matrix,	CS=Cov	ered Sand	I or Coated Grains.	²Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	icators: (Appli	cable t	o all LRR's, unio	ess oth	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils³:
☐ Histosol (A	A1)		ПБ	Polyvalı	ue Below :	Surface (S	88) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<u> </u>	pedon (A2)		^	/ILRA 1	149B)	•		☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		_ T	hin Da	ırk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			.oamy	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	ayers (A5)		ا 🗖	.oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
■ Depleted I	Below Dark Surfa	ace (A1	1) 🗹 [eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Darl	Surface (A12)		□ F	Redox I	Dark Surfa	ce (F6)		☐ Iron-Mangar	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	cky Mineral (S1)			Peplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		☐ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped M	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of h	ydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	er Present?		∕es ☑ No	<u> </u>	Inknown			Hydric Soil Prese	ent? ☑ Yes ☐ No
Restrictive Lay	er Present?		∕es ☑ No		Inknown			Hydric Soil Prese	ent? ☑ Yes ☐ No
Remarks:			res ☑ No Aquatic Diversity					Hydric Soil Prese	ent? ☑ Yes ☐ No
Remarks:			_					Hydric Soil Prese	ent? ☑ Yes ☐ No
Remarks: Description of l	Habitat Characte	ristics,	Aquatic Diversity				Isolated Wetland?		
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks:	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					
Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge					





W



WETLAND DETERMIN	ATION FORM - N	lorthcentra	al and Nor	theast Region	
✓ Centerline ☐ Re-Route ☐ Access Road	☐ Ancillary Facility	☐ Transn	mission Line	Other	
Project/Site: NED Mile	post: 706.9	County:	Essex	Date:	12/13/2014
Applicant/Owner: Kinder Morgan		State: MA	Sampli	ing Point: LY-P-W0	01-PSS
Investigators: AF CV Quad Name: Read	ding	Township:	Lynnfield		
Logbook No.: 2014P3 Logbook Pg.: 97	Tract: 8457				
Landform (hillslope, terrace, etc.): DEPRESSION	Local Re	lief: 🗹 Cor	ncave C	Convex None	Slope%.: 0
Subregion (LRR): Middle Atlantic	Lat: 42.552876	Lor	ng: -71.067	165	Datum: NAD83
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8	percent slopes, extremely	/ stony		NWI Classification:	PEM1E
Are climatic / hydrologic conditions on the site typical for the	nis time of year?:	Yes N	No (If no, explai	in in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ sig	nificantly disturbed?	☑ No Are	"Normal" Circu	ımstances present?	☑ Yes 🔲 No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ nat	turally problematic?	☑ No			
SUMMARY OF FINDINGS - Attach site map	showing sampling	g point loca	ations, trans	sects, important	t features, etc.
Hydrophytic Vegetation Present? ✓ Yes □] No			_	
Hydric Soil Present? ✓ Yes □] No	Is th with	ne Sampled <i>A</i> nin a Wetland	Area d? ☑ Yes □] No
Wetland Hydrology Present?] No				
Field Wetland Classification: PSS					
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:			<u>Se</u>	econdary Indicators (2	or more required)
Primary Indicators (minimum of one required; check all that	at apply)			Surface Soil Cracks	s (B6)
✓ Surface Water (A1)	Water-Stained Leaves (B	9)		Drainage Patterns (B10)
✓ High Water Table (A2)	Aquatic Fauna (B13)			Moss Trim Lines (B	16)
✓ Saturation (A3)	Marl Deposits (B15)			Dry-Season Water	Table (C2)
☐ Water Marks (B1)	Hydrogen Sulfide Odor (C	21)		Crayfish Burrows (C	28)
☐ Sediment Deposits (B2)	Oxidized Rhizospheres a	long Living Roo	ots (C3)	Saturation Visible o	n Aerial imagery (C9)
☐ Drift Deposits (B3)	Presence of Reduced Iro	n (C4)		Stunted or Stressed	l Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in	Tilled Soils (C6)	s) 🗆	Geomorphic Position	n (D2)
☐ Iron Deposits (B5)	Thin Muck Surface (C7)			Shallow Aquitard (D	93)
☐ Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remark	s)		Microtopographic R	elief (D4)
☐ Sparsely Vegetated Concave Surface (B8)				FAC-Neutral Test (I	D5)
Field Observations:					
Surface Water Present? ✓ Yes No Dept	th (inches): 1-8				
Water Table Present? ✓ Yes No Dept	th (inches): 0	'	Wetland Hydro	ology Present?	Vaa 🗖 Na
Saturation Present? ☑ Yes ☐ No Dept (includes capillary fringe)	th (inches): 0			™	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring	ng well, aerial photos, pre	vious inspection	ns), if available):	
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name			% Cover	Dominant	Indicator Status
Quercus rubra Chamaecyparis thyoides Quercus palustris	_	4-1-0-	10 15 10	YES YES YES	FACU OBL FACW
	To	tal Cover:	35		



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Quercus ilicifolia		20	YES	UPL
Frangula alnus	T 0	20	YES	FAC
	Total Cover:	40		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Spaghnum sp		20	NA	NONE
Scirpus cyperinus Symplocarpus foetidus		25 20	YES YES	OBL OBL
Typha angustifolia		25	YES	OBL
Carex comosa Phragmites australis		10 20	NO YES	OBL FACW
3	Total Cover:	120		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
Colonial Paris		70 00101	Bonnian	maioator Gtatao
	 Total Cover:			
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)	Total % Cover of		Multiply by:	
	OBL Species:	<u>95</u>	x 1 = <u>95</u>	
Total Number of Dominant Species Across All Strata: 9 (B)	FACW Species:	: <u>30</u>	x 2 = <u>60</u>	
	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 78 (A/B)	FACU Species:	<u>10</u>	x 4 = <u>40</u>	
	UPL Species:	<u>20</u>	x 5 = <u>100</u>	
	Column Totals:	<u>175 (A)</u>	355 (B)	
	F	Prevalence Index =	= B/A = <u>2.03</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
	Uvdranhytia V	ogototion Proces	142	7 No.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	nyaropnytic v	egetation Presen	it? ☑ Yes [] ио
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, T	(1 0200+								A CONTRACTOR OF THE PARTY OF TH	
SOIL										
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	dicator o	confirm the abs	ence of indicators.)	
Depth	Matrix		Redox Features				_	_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Te	exture	Remarks	
0-18	10YR 2/1	100					OR	GANIC	ORGANIC LOAM	
18-24	10YR 2/2	100					CLA	Y LOAM		
-										
¹Type: C=Cond	entration D-De	nletion	RM-Reduced	Matrix	CS-Cov	ered Sand	or Coated Grains	2l ocation: Pl	 =Pore Lining, M=Matrix	
		·					Or Coaled Grains			
•		cable t	o all LRR's, unle			•			roblematic Hydric Soils ³ :	
Histosol (A	•			'olyval /ILRA 1		Surface (S	8) (LRR R,	_	(A10) (LRR K, L, MLRA 149B)	
☐ Histic Epip	pedon (A2)				,				e Redox (A16) (LRR K, L, R)	
■ Black Hist	ic (A3)		ד 🗆	hin Da	ark Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)	
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)	
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)	
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔽 🖸	eplete	ed Matrix (I	F3)		☐ Thin Dark S	urface (S9) (LRR K, L)	
☐ Thick Darl	k Surface (A12)		□ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangai	nese Masses (F12) (LRR K, L, R)	
☐ Sandy Mu	ıcky Mineral (S1)			eplete	ed Dark Su	ırface (F7)		☐ Piedmont FI	loodplain Soils (F19) (MLRA 149B)	
☐ Sandy Gle	eyed Matrix (S4)		☐ F	Redox	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)	
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)	
☐ Stripped N	Matrix (S6)							☐ Very Shallo	w Dark Surface (TF12)	
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)	
_			•	ology r	nust he nr	esent unle	ess disturbed or pr		,	
Remarks:								Hydric Soil Prese	ent? ☑ Yes 🗆 No	
T to manter										
Description of I	Habitat Characto	rictics	Aquatic Diversity	or Go	noral Com	monte:				
Description of t	i iabitat Cilaracte	iiislics,	Aqualic Diversity	oi Ge	illerai Coli	iiieiiis.				
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetlan	d? ☐ Yes 🗹	No □ Unknown	
General Comm	ents:									





W



WETLAND DETERMINATION FORM - Northcentral and Northeast Region											
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other										
Project/Site: NED Milepost: 699.0	County: Essex Date: 12/13/2014										
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: LY-P-W001-UPL										
Investigators: AF CV Quad Name: Reading	Township: Lynnfield										
Logbook No.: 2014P3 Logbook Pg.: 99 Tract: 8457											
Landform (hillslope, terrace, etc.): HILLSIDE Local Re	elief: Concave 🗹 Convex 🔲 None Slope%.: 20										
Subregion (LRR): Middle Atlantic Lat: 42.552973	Long: -71.066941 Datum: NAD83										
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8 percent slopes, extremely	y stony NWI Classification: Not mapped										
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.)											
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No Are "Normal" Circumstances present? ☑ Yes ☐ No											
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No											
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.											
Hydrophytic Vegetation Present? ☐ Yes ☑ No											
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No within a Wetland?										
Wetland Hydrology Present? ☐ Yes ☑ No	Titling a Frontiera										
Field Wetland Classification: UPLAND PLOT											
Remarks:											
HYDROLOGY											
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)										
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)										
☐ Surface Water (A1) ☐ Water-Stained Leaves (B	Drainage Patterns (B10)										
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)										
☐ Saturation (A3) ☐ Marl Deposits (B15)	□ Dry-Season Water Table (C2)										
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (0	C1) Crayfish Burrows (C8)										
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)										
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)										
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)										
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)										
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	(s) Microtopographic Relief (D4)										
☐ Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutral Test (D5)										
Field Observations:											
Surface Water Present? Yes No Depth (inches):											
	Wetland Hydrology Present?										
Water Table Present? ☐ Yes ☑ No Depth (inches): Saturation Present? ☐ Yes ☑ No Depth (inches):	Wettalid Hydrology Fresent? ☐ Yes ☑ No										
(includes capillary fringe)											
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pre	evious inspections), if available):										



VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
Carpinus caroliniana Quercus alba Chamaecyparis thyoides Pinus strobus Quercus rubra		20 10 20 20 15	YES NO YES YES NO	FAC FACU OBL FACU FACU			
	Total Cover:	85					
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:		•				
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Dominance Test Worksheet:	Prevalence Index Worksheet:						
Number of Dominant Species	Total % Cover of	of:	Multiply by:				
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>20</u>	x 1 = <u>20</u>				
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>				
openie neces in chaia.	FAC Species:	<u>20</u>	x 3 = <u>60</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)	FACU Species:	<u>45</u>	x 4 = <u>180</u>				
	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	<u>85 (A)</u>	<u>260 (B)</u>				
	· ·	Prevalence Index	= B/A = 3.06				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
☑ 2 - Dominance Test is > 50%							
3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Vegetation Present? ☐ Yes ☑ No						
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
- Posioniale Hydrophylie Vogetation (Explain)							
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							



	(1 0200+												
SOIL													
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the ir	ndicator o	r confirm th	ne absen	ce of indicators.)				
Depth (inches)	Matrix		Red	dox Fe	atures			Text	ıro		Por	marks	
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		1680	uie		IXEI	liaiks	
0-2	10YR 3/3	100						ORGA	NIC		ORGAN	IIC LOAM	
2-16	10YR 4/4	100						SANDY	LOAM				
16-20	10YR 5/2	100						SANDY	LOAM				
10 20	10111 0/2	100						0, 1110 1	207 (14)				
1T 0.0		1						0 :	31 DI	<u> </u>			
		<u> </u>	n, RM=Reduced				or Coated	Grains.	² Location: PL=				
Hydric Soil Inc	licators: (Appli	cable t	to all LRR's, unle	ess otl	nerwise n	oted.)			Indicators for Pr	oblematic	Hydric	Soils ³ :	
Histosol (A	A1)			olyval 1LRA 1		Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR	K, L, ML	.RA 149B)	
☐ Histic Epip	oedon (A2)		IV	ILINA	1490)				☐ Coast Prairie	e Redox (A	16) (LRF	₹ K, L, R)	
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L											LRR K, L, R)		
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)		☐ Dark Surface	e (S7) (LRF	≀ K, L, M)	
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surfac	e (S8) (LRR K, L)	
☐ Depleted	Below Dark Surfa	ace (A1	11) 🔲 🗅	eplete	d Matrix (F3)			☐ Thin Dark Su	urface (S9)	(LRR K,	L)	
	k Surface (A12)		_	•	` Dark Surfa	•			_		•	(LRR K, L, R)	
_	ıcky Mineral (S1)		_			ırface (F7)			_			(, _, .,) (MLRA 149B)	
_	eyed Matrix (S4)		_	•		` ,			_	•	, ,		
			□ F	euox	Depressio	115 (F0)			_			A, 145, 149B)	
☐ Sandy Re									Red Parent I		•		
☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12)													
□ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks)													
3Indicators of h	³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.												
Restrictive Lay	er Present?		Yes √ No		Inknown								
_			_						Hydric Soil Prese	nt?	Yes	☑ No	
									,		103	<u> </u>	
Domorko													
Remarks:													
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:							
Wetland Qualit	y: 🔲 High		Moderate	Low			Isolated \	Wetland?	☐ Yes ☐	No 🔲	Unkn	own	
General Comm	ents:												





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WE	TLAND	DET	ERM	INATIO	ON FORM - I	Northce	entral an	d No	ortheast	Region		
☑ Centerline ☐ Re-R	oute	Acces	s Road		Ancillary Facility	□ ⊺	ransmission	Line	☐ Oth	er		
Project/Site: NED			М	ilepost:	1416.0	County:	Essex	:		Date:	08/12/201	5
Applicant/Owner: Kinder Mo	rgan		•			State:	MA	Samp	oling Point	LY-D-W0	02-PFO	
Investigators: PB		Quad Na	me: R	eading		Township	: Lynnfi	eld				
Logbook No.: 6	Logb	ook Pg.	: 35		Tract: 8457							
Landform (hillslope, terrace,	etc.):	Depres	sion		Local R	elief: 🔽	Concave		Convex	☐ None	Slope%.:	2
Subregion (LRR): Middl	e Atlantic			Lat:	42.555132		Long:	-71.06	6939		Datum: NA	D83
Soil Map Unit Name: Sci	tuate fine s	andy loa	am, 3 to	8 percer	nt slopes, extreme	ly stony			NWI Cla	assification:	Not ma	apped
Are climatic / hydrologic cond	itions on th	e site ty	pical fo	r this time	e of year?:	Yes	☐ No (If n	o, expl	ain in Rema	arks.)		
Are Vegetation Soil	or Hy	/drology		significar	ntly disturbed?	☑ No	Are "Norma	al" Circ	cumstances	present?	✓ Yes	☐ No
Are Vegetation Soil	or Hy	/drology		naturally	problematic?	☑ No						
SUMMARY OF FINDI	NGS - At	tach s	ite m	ap sho	wing samplir	ng point	locations	s, tra	nsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☐ No								
Hydric Soil Present?		$\overline{\checkmark}$	Yes	☐ No			Is the San within a V			ĭ Yes □] No	
Wetland Hydrology Present?		$\overline{\checkmark}$	Yes	☐ No								
Field Wetland Classification:	PFO											
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicate	ors:							5	Secondary I	ndicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one requ	uired; ch	neck all	that appl	<u>y)</u>				Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)			√	Water	-Stained Leaves (I	B9)			☐ Drainag	je Patterns ((B10)	
☐ High Water Table (A2)				Aquati	ic Fauna (B13)				Moss T	rim Lines (B	16)	
✓ Saturation (A3)				Marl D	Deposits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
☐ Water Marks (B1)				Hydro	gen Sulfide Odor ((C1)			Crayfish	n Burrows (C	C8)	
☐ Sediment Deposits (B2)			\checkmark	Oxidiz	ed Rhizospheres	along Living	g Roots (C3)	, [Saturat	ion Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of Reduced Ire	on (C4)			Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recen	nt Iron Reduction in	n Tilled Soil	ls (C6)		Geomo	rphic Positio	on (D2)	
☐ Iron Deposits (B5)				Thin M	Muck Surface (C7)				Shallow	Aquitard (D	03)	
☐ Inundation Visible on A	rial Imager	y (B7)		Other	(Explain in Remar	ks)		5	✓ Microto	pographic R	elief (D4)	
☐ Sparsely Vegetated Con	ıcave Surfa	ace (B8)							☐ FAC-Ne	eutral Test (I	D5)	
Field Observations:												
Surface Water Present?	☐ Yes	☑ N	lo D	epth (incl	nes):							
Water Table Present?	☐ Yes	✓ N	lo D	epth (incl	nes):		Wetlan	nd Hyd	Irology Pre		Voc 🏻	No
Saturation Present? (includes capillary fringe)	✓ Yes		lo D	epth (incl	hes): 0					V	Yes □	NO
Remarks (Describe Recorded	Data (strea	am gage	e, monit	oring wel	ll, aerial photos, pr	revious insp	pections), if a	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% Co	over	Do	ominant	Indicate	or Status
Acer rubrum Ulmus americana Betula alleghaniensis							25 5 40	5		YES NO YES	FA	AC CW AC
- 					Т	otal Cover:	: 70	0	1		ı	



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus Lindera benzoin Acer rubrum		2 30 5	NO YES NO	FACU FACW FAC
	Total Cover:	37		· ·
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Parthenocissus quinquefolia Arisaema triphyllum Symplocarpus foetidus Parathelypteris noveboracensis Onoclea sensibilis		3 10 8 10 5	NO NO NO YES NO	FACU FAC OBL FAC FACW
	Total Cover:	36		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inde	ex Worksheet:		
Number of Dominant Species	Total % Cover o	f:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>8</u>	x 1 = <u>8</u>	
Total Number of Dominant	FACW Species:	<u>40</u>	x 2 = <u>80</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>90</u>	x 3 = <u>270</u>	
Percent of Dominant Species That Are OBL FACW or FAC: 100 (A/B)	FACU Species:	<u>5</u>	x 4 = <u>20</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	143 (A)	378 (B)	
	P	revalence Index	= B/A = <u>2.64</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				-
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Ve	egetation Prese	nt? ☑ Yes [」 No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.)	Providence, R	1 02904											
Depth	SOIL												
Depth	Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the a	absenc	e of indicators.)	1		
13-18		Matrix		Re	dox Fe	atures							
13-18	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Textu	re		Rem	arks
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.)	0-13	10YR 3/1	90	5YR 4/6	10	С	M,PL		SILT				
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	13-18	10YR 5/1	85	5YR 4/6	15	С	М		SANE)			
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	¹Type: C=Cond	centration, D=De	l epletion	l n, RM=Reduced	Matrix,	CS=Cov	ered Sand	l I or Coated Gra	ins.	² Location: PL=	 =Pore Linin	g, M=Ma	trix
Histosol (A1)		· · · · · · · · · · · · · · · · · · ·	·	·									
Histic Epipedon (A2)			ouble t				-	9) /I DD D				-	
Black Histic (A3)	= :	,					ounace (o	o) (LIXIX IX,					•
Hydrogen Sulfide (A4)	_				hin Do	rk Curfoo	- (SO) (LB)	D D MI DA 140					
□ Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Polyvalue Below Surface (S8) (LRR K, L) □ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Present? □ Yes □ No □ Unknown □ Unknown □ Wetland Quality: □ High □ Moderate □ Low □ Isolated Wetland? □ Yes □ No □ Unknown □ Unknown										_			•
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Present? □ Yes ☑ No □ Unknown □ Hydric Soil Present? ☑ Yes □ No □ No □ Remarks: □ Wetland Quality: □ High ☑ Moderate □ Low Isolated Wetland? ☑ Yes □ No □ Unknown				_	-	=		(LRR K, L)				•	
Thick Dark Surface (A12)			(A1	_	-	-						. , .	
Sandy Mucky Mineral (S1)			ace (A		-		-					-	•
Sandy Gleyed Matrix (S4)				_			. ,			_			
Sandy Redox (S5))	_	•		` ,				•		
Stripped Matrix (S6)	: _			□ F	Redox I	Depressio	ns (F8)						i, 145, 149B)
Dark Surface (S7) (LRR R, MLRA 149B) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? Yes No Unknown Hydric Soil Present? Ves No No Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown		, ,										•	
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?	☐ Stripped N	Matrix (S6)								_ ·		,	2)
Restrictive Layer Present?	☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	ain in Rema	rks)	
Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality:	3Indicators of h	ydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or	r proble	ematic.			
Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown									Н	lydric Soil Prese	ent? 🗹	Yes [□ No
Wetland Quality: ☐ High ☑ Moderate ☐ Low Isolated Wetland? ☑ Yes ☐ No ☐ Unknown	Remarks:												
, - ·	Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
General Comments:	Wetland Qualit	y: High	☑ 1	Moderate	Low			Isolated Wetl	land?	✓ Yes 🗆	No 🗖	Unkno	wn
	General Comm	ents:											





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WETLAND DETERMINATION FORM - N	lorthcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 1464.7	County: Essex Date: 08/12/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: LY-D-W002-PEM
Investigators: PB Quad Name: Reading	Township: Lynnfield
Logbook No.: 6 Logbook Pg.: 37 Tract: 8457	
Landform (hillslope, terrace, etc.): Depression Local Re	lief: ☑ Concave ☐ Convex ☐ None Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.555273	Long: -71.066796 Datum: NAD83
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8 percent slopes, extremel	y stony NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ✓ Soil ✓ or Hydrology ✓ significantly disturbed?	☐ No Are "Normal" Circumstances present? ☐ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	
Hydric Soil Present? ✓ Yes ☐ No	ls the Sampled Area
Wetland Hydrology Present?	
Field Wetland Classification: PEM	
Remarks: Soil, vegetation and hydrology disturbed by gas line	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (E	Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
✓ Saturation (A3)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	long Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	n (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	✓ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pro	evious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Т	otal Cover:



1 TOVIGOTION, INTOZOOT					
Sapling/Shrub Stratum					
Plot Size: 15					
Scientific Name			% Cover	Dominant	Indicator Status
Morella pennsylvanica			25	YES	FAC
		Total Cover:	25		
Herb Stratum					
Plot Size: 5					
Scientific Name			% Cover	Dominant	Indicator Status
Solidago gigantea Equisetum arvense Impatiens capensis Euthamia caroliniana Carex vulpinoidea Juncus effusus Persicaria sagittata Fragaria virginiana Osmundastrum cinnamomeum Oncolea sensibilis		Total Cover:	5 10 3 30 5 5 5 3 5 3	NO YES NO YES NO NO NO NO	FACW FAC FACW FAC OBL OBL FACU FACW FACW
Woody Vine Stratum					
Plot Size: 30					
Scientific Name			% Cover	Dominant	Indicator Status
		Total Cover:			
Dominance Test Worksheet:		Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3.0	(Δ)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC:	<u>~</u>	OBL Species:	<u>15</u>	x 1 = <u>15</u>	
Total Number of Dominant Species Across All Strata: 3	(<u>B)</u>	FACW Species	: <u>16</u>	x 2 = <u>32</u>	
- Francis III - Francis II		FAC Species:	<u>65</u>	x 3 = <u>195</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 10	0 (A/B)	FACU Species:	: <u>3</u>	x 4 = <u>12</u>	
, ,		UPL Species:	<u>0</u>	x 5 = <u>0</u>	
		Column Totals:	<u>99 (A)</u>	<u>254 (B)</u>	
		I	Prevalence Index =	= B/A = <u>2.57</u>	
Hydrophytic Vegetation Indicators:					
☐ 1 - Rapid Test for Hydrophytic Vegetat	tion				
✓ 2 - Dominance Test is > 50%					
3 - Prevalence Index is ≤ 3.0					
4 - Morphological Adaptations¹ (Provid data in Remarks or on a separate she		Hydrophytic \	egetation Presen	t? ☑ Yes □] No
Problematic Hydrophytic Vegetation¹ (I	Explain)				
¹ Indicators of hydric soil and wetland hydrol present, unless disturbed or problematic.	ogy must be				
Remarks:					



Providence, F	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the a	bsence of indicators.)	
Depth	Matrix		-		atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Texture	Remarks
0.4	, ,		Color (molety	,,,	.,,,,			CILT	
0-4	10YR 3/1	100						SILT	
4-18	7.5YR 5/1	90	5YR 4/6	10	С	М		SAND	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Gra	ins. ² Location: PL=	Pore Lining, M=Matrix
Hvdric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils³:
Histosol (/	Δ1)		_ F	Polyvali	ue Below	Surface (S	88) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<u> </u>	,			/ILRA 1		Odridoc (C	o) (Litter,		
_	pedon (A2)			This Da	l. Of	- (CO) (LD	D D MI DA 440	_	Redox (A16) (LRR K, L, R)
☐ Black Hist							R R, MLRA 149		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			.oamy	Mucky Mir	neral (F1)	(LRR K, L)	_	e (S7) (LRR K, L, M)
_	Layers (A5)		_	-	Gleyed Ma			☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
✓ Depleted	Below Dark Surfa	ace (A1	11) 🔲 🗆	Peplete	ed Matrix (F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		☐ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1)			Peplete	d Dark Su	urface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallov	v Dark Surface (TF12)
	ace (S7) (LRR R	. MLR/	A 149B)						in in Remarks)
_			and wetland hydro	مامصري			ana diaturbada		,
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: High		Moderate	Low			Isolated Wet	land? ☑ Yes 🗖	No Unknown
General Comm	nente:								





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WETLAND DETERMINATION FORM - Northce	ntral and Northeast Region									
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ T	ransmission Line									
Project/Site: NED Milepost: 81982.9 County:	Essex Date: 08/12/2015									
Applicant/Owner: Kinder Morgan State: N	MA Sampling Point: LY-D-W002-UPL									
Investigators: PB Quad Name: Reading Township:	Lynnfield									
Logbook No.: 6 Logbook Pg.: 36 Tract: 8457										
Landform (hillslope, terrace, etc.): Flat Local Relief:	Concave ☑ Convex ☐ None Slope%.: 2									
Subregion (LRR): Middle Atlantic Lat: 42.555084	Long: -71.067088 Datum: NAD83									
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8 percent slopes, extremely stony	NWI Classification: Not mapped									
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)									
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	— Are "Normal" Circumstances present?									
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	·									
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.										
Hydrophytic Vegetation Present? ✓ Yes ☐ No	· · · · · · · · · · · · · · · · · · ·									
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area									
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland? ☐ Yes ☑ No									
Field Wetland Classification: UPLAND PLOT										
Remarks:										
Tomano.										
HYDROLOGY										
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)									
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)									
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	Drainage Patterns (B10)									
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)									
☐ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)									
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)									
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	· · · · · · · · · · · · · · · · · · ·									
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)									
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils	_									
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)									
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)									
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)									
Field Observations:										
Surface Water Present?										
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?									
Saturation Present?	☐ Yes ☑ No									
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	ections), if available):									
VEGETATION										
Tree Stratum										
Plot Size: 30										
Scientific Name	% Cover Dominant Indicator Status									
Acer rubrum	15 YES FAC									
Ulmus americana Acer pensylvanicum	15 YES FACW 5 NO FACU									
Pinus strobus	40 YES FACU									
Total Cover:	75									



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Prunus serotina		5 5	YES YES	FACU
Quercus rubra	Total Cover:	5 10	TES	FACU
	Total Cover.			
Herb Stratum				
Plot Size: 5	ı	ı		I
Scientific Name		% Cover	Dominant	Indicator Status
Maianthemum canadense Osmundastrum cinnamomeum		3 5	NO YES	FACU FACW
Trientalis borealis		5	YES	FAC
Parthenocissus quinquefolia	Total Cover:	3 16	NO	FACU
Woody Vine Stratum	Total Cover.	10		
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	mulcator Status
	Total Cover:	l		
Dominance Test Worksheet:		dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover		Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species		x 2 = <u>40</u>	
Percent of Dominant Species	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
That Are OBL, FACW, or FAC: 57 (A/B)	FACU Species:		x 4 = <u>244</u>	
	UPL Species:	<u>3</u>	x 5 = <u>15</u>	
	Column Totals:		<u>359 (B)</u>	
		Prevalence Index =	= B/A = <u>3.45</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	egetation Presen	t? ☑ Yes 🏻] No
data in Keniarks of on a separate sneet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



T TOVIGETICE, IN																		
SOIL																		
Profile Descrip	tion: (Describe	the d	epth need	ed to d	docum	ent the ir	ndicator o	r confirm	he abser	nce o	findica	ators.)					
Depth	Matrix			Red	dox Fe	atures							_					
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc2		Text	ture						Kem	narks	
0-12	7.5YR 4/3	100							SAN	ND				-				
¹Type: C=Cond	centration, D=De	epletion	∟ า, RM=Re≀	duced	Matrix,	CS=Cov	ered Sand	l or Coated	Grains.	2	ocation	n: PL	.=Pore	Lining	, М	l=Ma	atrix	
Hydric Soil Ind	licators: (Appli	cable t	o all LRR'	s, unle	ess oth	nerwise n	oted.)			Ind	icators	for F	roblei	matic	Hyd	Iric S	Soils	3:
☐ Histosol (A	A1)			_ P	olvvalu	ue Below	Surface (S	8) (LRR R		П	2 cm l	Muck	(A10)	(LRR ł	K. L	. ML	RA 1	49B)
_ `	pedon (A2)				ILRA 1			-, (=						ox (A1				•
☐ Black Hist				Пт	hin Da	rk Surface	- (S9) (I R	R R, MLRA	149R)					•	, ,			κ, L, R)
	Sulfide (A4)			_				(LRR K, L)	02)			-) (LRR				1, =, 11,
	_ayers (A5)			_	-	Gleyed Ma		(2.11.11, 2)						-				(1)
☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2) ☐ Polyvalue Below Surface (S8) (LRR K, L) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thin Dark Surface (S9) (LRR K, L)																		
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R)																		
_	icky Mineral (S1)						ırface (F7)					_						RA 149B)
	eyed Matrix (S4)			_		o Daik Sc Depressio	` '			_			-					•
☐ Sandy Re				_ `	LOUUX I	-chi e9910	(1 0)					-	•	ial (F2		144/	٦, ۱4	5, 149B)
	Matrix (S6)									_				k Surfa		/TE1	2)	
	, ,	MID	\ 140B\								-					(11.1	۷)	
_	ace (S7) (LRR R		•									(Exbi	alli III I	Remar	KS)			
	nydrophytic vege						esent, uni	ess disturb	ea or proc	olema	tic.							
Restrictive Lay	er Present?	☑ '	Yes	No	□ ∪	nknown												
ROCK										Hydr	ic Soil	Pres	ent?		Ye	S	\checkmark	No
12																		
Remarks:																		
Description of I	Habitat Characte	ristics,	Aquatic D	iversity	or Ge	neral Com	nments:											
Wetland Qualit	y: High		Moderate		Low			Isolated	Wetland?	? [☐ Ye	s [] No		U	nkno	own	
											_		_					
General Comm	ents:																	





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WE	TLAND	DET	ERN	IINATI	ON FORM -	Northce	entral an	d No	rtheast	Region		
☑ Centerline ☐ Re-R	oute	Acces	ss Roa	d 🗖	Ancillary Facility	□ ™	ransmission	Line	☐ Othe	er		
Project/Site: NED			ı	Milepost:	2492.5	County:	Essex			Date:	08/13/201	5
Applicant/Owner: Kinder Mo	rgan					State: I	MA	Samp	ling Point:	LY-D-W0	03-PFO	
Investigators: PB	(Quad Na	ame: I	Reading		Township	: Lynnfi	eld				
Logbook No.: 6	Logb	ook Pg	.: 43		Tract: 8457	•						
Landform (hillslope, terrace,	etc.):	Depres	ssion		Local R	Relief: 🗹	Concave		Convex	None	Slope%.:	2
Subregion (LRR): Middl	e Atlantic			Lat:	42.557990		Long:	-71.066	6571		Datum: NAI	D83
Soil Map Unit Name: Sci	tuate fine s	andy lo	am, 3 t	o 8 perce	nt slopes, extreme	ely stony			NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	or this time	e of year?:	☑ Yes [☐ No (If no	o, expl	ain in Rema	ırks.)		
Are Vegetation Soil	or Hy	drology	,	significa	ntly disturbed?	☑ No	Are "Norma	al" Circ	cumstances	present?	✓ Yes	■ No
Are Vegetation Soil	or Hy	drology	[']	naturally	problematic?	☑ No						
SUMMARY OF FINDI	NGS - At	tach s	site n	nap sho	owing sampli	ng point	locations	s, trar	nsects, iı	mportant	features	, etc.
Hydrophytic Vegetation Prese	ent?	$\overline{\checkmark}$	Yes	☐ No)				_			
Hydric Soil Present?		$\overline{\checkmark}$	Yes	☐ No)		Is the San within a V			∫ Yes □] No	
Wetland Hydrology Present?		$\overline{\mathbf{A}}$	Yes	☐ No)							
Field Wetland Classification:	PFO											
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicate	ors:							<u>s</u>	Secondary Ir	ndicators (2	or more requ	uired)
Primary Indicators (minimum	of one req	uired; cl	heck al	ll that app	<u>ly)</u>				Surface	Soil Cracks	(B6)	
☐ Surface Water (A1)			5	✓ Water	r-Stained Leaves ((B9)			☐ Drainag	e Patterns (B10)	
☐ High Water Table (A2)				☐ Aquat	tic Fauna (B13)				Moss Tr	im Lines (B	16)	
✓ Saturation (A3)				Marl [Deposits (B15)				☐ Dry-Sea	son Water	Table (C2)	
☐ Water Marks (B1)				☐ Hydro	gen Sulfide Odor	(C1)			Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizospheres	along Living	g Roots (C3)		Saturati	on Visible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Prese	ence of Reduced In	ron (C4)			Stunted	or Stressed	l Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction i	in Tilled Soil	s (C6)		Geomor	phic Positio	n (D2)	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7))			Shallow	Aquitard (D	93)	
☐ Inundation Visible on A	erial Imager	y (B7)		Other	(Explain in Rema	ırks)			Microtop	oographic R	elief (D4)	
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)							☐ FAC-Ne	utral Test ([D5)	
Field Observations:												
Surface Water Present?	☐ Yes	☑ N	No [Depth (inc	hes):							
Water Table Present?	Yes	_		Depth (inc	•		Wetlan	nd Hyd	Irology Pre	_	Yes □	No
Saturation Present? (includes capillary fringe)	✓ Yes	□ N	No [Depth (inc	hes): 0						165	140
Remarks (Describe Recorded	Data (stre	am gage	e, mon	itoring we	ll, aerial photos, p	revious insp	ections), if a	vailabl	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% Co	over	Do	minant	Indicate	or Status
Fraxinus pennsylvanica Acer rubrum							5	0		NO ⁄ES		.CW AC
					٦	Total Cover:	65	5				



1 Tovidence, IXI 02004				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Lindera benzoin		5 40	NO YES	FAC FACW
Lindera berizoiri	Total Cover:	40 45	123	FACW
Herb Stratum				
Plot Size: 5	ı		I	I
Scientific Name		% Cover	Dominant	Indicator Status
Symplocarpus foetidus Osmunda spectabilis		3 3	NO NO	OBL OBL
Microstegium vimineum Parthenocissus quinquefolia		40 5	YES NO	FAC FACU
Arisaema triphyllum		2	NO	FAC
Osmundastrum cinnamomeum Osmunda claytoniana		10 5	NO NO	FACW FAC
Impatiens capensis		2	NO	FACW
	Total Cover:	70		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 3 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>6</u>	x 1 = <u>6</u>	
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	: <u>57</u>	x 2 = <u>114</u>	
Opecies Acioss Ali Strata.	FAC Species:	<u>112</u>	x 3 = <u>336</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>5</u>	x 4 = <u>20</u>	
11.00.000	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>180 (A)</u>	<u>476 (B)</u>	
	1	Prevalence Index =	= B/A = 2.64	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	/egetation Preser	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	ndicator o	r confirm the abse	nce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		.	turo	Damarka
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Tex	luie	Remarks
0-12	10YR 3/1	92	5YR 4/6	8	С	М	SII	LT	
12-18	7.5YR 4/1	75	5YR 4/6	25	С	M	SAI	ND	
¹Type: C=Cond	entration, D=De	epletion	n, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	icators: (Applic	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)			olyvalu ILRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	edon (A2)		IV	ILIXA I	490)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ⊤	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
✓ Depleted I	Below Dark Surfa	ace (A1	(1) 🔲 D	eplete	d Matrix (I	F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dark	Surface (A12)		 R	edox [Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	cky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Fl	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)			edox [Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							□ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of h	ydrophytic veget	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prol	blematic.	
Remarks:								Hydric Soil Prese	ent? ☑ Yes ☐ No
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
·									
Wetland Qualit	y: 🗹 High	<u></u> п	Moderate	Low			Isolated Wetland?	? ☐ Yes ☑	No Unknown
General Comm	ents:								





NE



WE	TLAND	DET	ERMIN	IATIO	ON FORM - I	Northce	entral an	nd No	ortheast	Region		
☑ Centerline ☐ Re-Ro	oute 🔲	Acces	s Road		Ancillary Facility		Transmission	n Line	☐ Oth	er		
Project/Site: NED			Mile	post:	2454.8	County:	Essex	(Date:	08/13/201	5
Applicant/Owner: Kinder Mo	rgan		·			State:	MA	Sam	pling Point	LY-D-W0	03-UPL	
Investigators: PB		Quad Na	me: Rea	ading		Township	p: Lynnfi	ield				
Logbook No.: 6	Logb	ook Pg.	: 44		Tract: 8457							
Landform (hillslope, terrace, e	etc.):	Slope -	mid		Local Re	elief:	Concave	$\overline{\checkmark}$	Convex	☐ None	Slope%.:	3
Subregion (LRR): Middle	e Atlantic			Lat:	42.557772		Long:	-71.06	66477		Datum: NA	D83
Soil Map Unit Name: Wir	ndsor loamy	y sand, 3	3 to 8 per	cent slo	opes				NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	itions on th	e site ty	pical for t	his time	e of year?:	1 Yes	☐ No (If n	ю, ехр	lain in Rema	arks.)		
Are Vegetation	or Hy	drology	☐ sig	gnificar	ntly disturbed?	√ No	Are "Norm	nal" Cir	cumstances	present?	✓ Yes	☐ No
Are Vegetation Soil	or Hy	/drology	☐ na	aturally	problematic?	☑ No						
SUMMARY OF FINDIN	IGS - At	tach s	ite ma	o sho	wing samplin	ng point	locations	s, tra	nsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☑ No			1- 41 0					
Hydric Soil Present?			Yes	☑ No			Is the Sar within a V	mpied Netlai	nd?] Yes ⊡	∑ No	
Wetland Hydrology Present?			Yes [₫ No								
Field Wetland Classification:	UPLA	AND PLO	TC									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	rs:							5	Secondary I	ndicators (2	or more requ	uired)
Primary Indicators (minimum	of one requ	uired; ch	eck all th	at appl	<u>y)</u>			[Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)				Water	-Stained Leaves (F	B9)		[☐ Drainag	je Patterns ((B10)	
☐ High Water Table (A2)				Aquati	ic Fauna (B13)			[☐ Moss T	rim Lines (B	16)	
☐ Saturation (A3)				Marl D	Deposits (B15)			[☐ Dry-Sea	ason Water	Table (C2)	
☐ Water Marks (B1)				Hydro	gen Sulfide Odor ((C1)		[_	n Burrows (C	•	
☐ Sediment Deposits (B2)				Oxidiz	ed Rhizospheres	along Livin	ng Roots (C3)) [-			n Aerial imag	
☐ Drift Deposits (B3)				Prese	nce of Reduced Iro	<u> </u>						
☐ Algal Mat or Crust (B4)				Recen	t Iron Reduction in	<u> </u>						
☐ Iron Deposits (B5)				Thin M	fluck Surface (C7)		Shallow Aquitard (D3)					
☐ Inundation Visible on Ae	rial Imager	y (B7)		Other	(Explain in Remar	ks)	_					
Sparsely Vegetated Con	cave Surfa	ice (B8)						Ĺ	FAC-Ne	eutral Test (I	D5)	
Field Observations:		-										
Surface Water Present?	Yes	☑ N		th (incl	,							
Water Table Present?	☐ Yes	✓ N		oth (incl	•		wetiai	na Hyd	drology Pre	_	Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	⊘ N	о рер	th (incl	nes):					_		
Remarks (Describe Recorded	Data (strea	am gage	, monitor	ing wel	ll, aerial photos, pr	evious ins	pections), if a	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Do	minant	Indicat	or Status
Pinus strobus Quercus rubra Acer rubrum							4 1 3			YES NO YES	F/	ACU ACU AC
					Т	otal Cover	1	80	ı		1	



Trovidence, IXI 02304							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Acer rubrum Quercus alba Pinus strobus		10 2 30	YES NO YES	FAC FACU FACU			
Amelanchier arborea		5	NO	FACU			
	Total Cover:	47					
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
Trientalis borealis		10	YES	FAC			
Maianthemum canadense	Total Cover:	15 25	YES	FACU			
Washi Vina Ctratum	Total Cover.	25					
Woody Vine Stratum Plot Size: 30							
Scientific Name	ı	% Cover	Dominant	Indicator Status			
Scientific Name		% Cover	Dominant	indicator Status			
	Total Cover:						
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:					
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover	of:	Multiply by:				
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>				
	FAC Species:	<u>50</u>	x 3 = <u>150</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species:		x 4 = <u>408</u>				
	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	<u>152 (A)</u>	<u>558 (B)</u>				
		Prevalence Index =	= B/A = <u>3.67</u>				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
2 - Dominance Test is > 50%							
3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	Hydrophytic Vegetation Present?					
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
Remarks:							



T TOVIGETICE, I	(1 0200+												
SOIL													
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the in	ndicator o	confirm the abse	nce o	f indicators.)			
Depth	Matrix		Re	dox Fe	atures		_						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	kture			Ren	narks	
0-8	7.5YR 4/4	100					SILT						
8-18	7.5YR 5/6	100					Δ2	ND					
0-10	7.5113/0	100					3A	IIVD					
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced	Matrix,	, CS=Cov	ered Sand	or Coated Grains.	2	Location: PL	=Pore Linin	კ, M=Ma 	atrix	
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess otl	herwise n	oted.)		Ind	icators for P	roblematic	Hydric	Soils³:	
☐ Histosol (A	A1)					Surface (S	8) (LRR R,		2 cm Muck	(A10) (LRR	K, L, ML	.RA 149B)	
☐ Histic Epip	oedon (A2)		N.	ILRA 1	149B)				Coast Prairi	e Redox (A	16) (LRR	k K, L, R)	
■ Black Hist	ic (A3)		ПΤ	hin Da	ark Surface	e (S9) (LRI	R R, MLRA 149B)		5 cm Mucky	Peat or Pe	at (S3) (I	LRR K, L, R)	
☐ Hydrogen	Sulfide (A4)		ПЬ	oamy	Mucky Mir	neral (F1) (LRR K, L)		Dark Surfac	e (S7) (LRF	≀ K, L, M)	
☐ Stratified I	Layers (A5)		_	-	Gleyed Ma		. ,		Polyvalue B	elow Surfac	e (S8) (I	RR K. L)	
	Below Dark Surfa	ace (A1		-	ed Matrix (I				Thin Dark S			· ·	
	k Surface (A12)		_		Dark Surfa	•					•	(LRR K, L, R)	
_	ıcky Mineral (S1)		_			rface (F7)			_			(LRR R, L, R)) (MLRA 149B	1)
	eyed Matrix (S4)		_							•	` '	•	•
_ '			☐ F	CUUX	Depressio	115 (F0)			•			A, 145, 149B)	
☐ Sandy Re									Red Parent		•		
☐ Stripped N	Matrix (S6)								Very Shallo	w Dark Surf	ace (TF1	12)	
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)						Other (Explanation	ain in Rema	rks)		
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ss disturbed or pro	blema	tic.				
Remarks:									ric Soil Preso		Yes	☑ No	
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:							
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland	? [☐ Yes ☐	No 🗆	Unkno	own	
General Comm	ents:												





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WETLAND DETERMINATION FORM - North	central an	d Northeast I	Region		
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission	Line			
Project/Site: NED Milepost: 8967.3 County	: Essex		Date: 08/14/2015		
Applicant/Owner: Kinder Morgan State:	MA	Sampling Point:	LY-M-W002-PFO		
Investigators: CG JW Quad Name: Reading Towns	hip: Lynnfi	eld			
Logbook No.: 2015-1 Logbook Pg.: 143 Tract: 26253					
Landform (hillslope, terrace, etc.): Floodplain terrace Local Relief:	✓ Concave	☐ Convex ☐	None Slope%.: 2		
Subregion (LRR): Middle Atlantic Lat: 42.566122	Long:	-71.049918	Datum: NAD83		
Soil Map Unit Name: Poquonock loamy sand, 8 to 15 percent slopes, very stony		NWI Clas	sification: Not mapped		
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no	o, explain in Remar	ks.)		
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? 🗹 No	Are "Norma	al" Circumstances p	present? ☑ Yes □	No	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No					
CUMMARY OF FINDINGS. Attack site was about a second and a					
SUMMARY OF FINDINGS - Attach site map showing sampling poi	nt locations	s, transects, in	iportant features, etc.	•	
Hydrophytic Vegetation Present? ✓ Yes ☐ No	Is the San	npled Area			
Hydric Soil Present?	within a V	Vetland? ✓	Yes □ No		
Wetland Hydrology Present? ✓ Yes ☐ No					
Field Wetland Classification: PFO					
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Inc	dicators (2 or more required)		
Primary Indicators (minimum of one required; check all that apply)		☐ Surface S	Soil Cracks (B6)		
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)		□ Drainage	Patterns (B10)		
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			m Lines (B16)		
☐ Saturation (A3) ☐ Marl Deposits (B15)		☐ Dry-Seas	son Water Table (C2)		
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish I	Burrows (C8)		
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Liv	ing Roots (C3)	☐ Saturation	n Visible on Aerial imagery (C	29)	
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		☐ Stunted of	or Stressed Plants (D1)		
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	Soils (C6)	_			
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		☐ Shallow A	Aquitard (D3)		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		✓ Microtopo	ographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)		▼ FAC-Neu	itral Test (D5)		
Field Observations:					
Surface Water Present?					
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetlan	d Hydrology Pres			
Saturation Present?			☑ Yes □ No		
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	nspections), if a	vailable):			
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name	% Cd	over Dom	ninant Indicator State	tus	
Acer rubrum	45		ES FAC		
Quercus alba Quercus bicolor	5 10) N	O FACU FACW		
Pinus strobus	20	1	ES FACU		
Total Cov	er: 80	J			



Providence, RI 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus		10	YES	FACU
Frangula alnus Vaccinium corymbosum		30 10	YES YES	FAC FACW
•	Total Cover:	50	ı	1
Herb Stratum				
Plot Size: 5				
		0/ 0	Damin and	la dianta Otatua
Scientific Name		% Cover	Dominant	Indicator Status
Osmunda spectabilis Maianthemum canadense		20 10	YES NO	OBL FACU
Osmundastrum cinnamomeum		65	YES	FACW
	Total Cover:	95		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>20</u>	x 1 = <u>20</u>	
Total Number of Dominant	FACW Species	s: <u>85</u>	x 2 = <u>170</u>	
Species Across All Strata: 7 (B)	FAC Species:	<u>75</u>	x 3 = <u>225</u>	
Percent of Dominant Species That Are OBL_FACW_or_FAC: 71 (A/B)	FACU Species	: <u>45</u>	x 4 = <u>180</u>	
That Are OBL, FACW, or FAC: 71 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals	225 (A)	<u>595 (B)</u>	
		Prevalence Index	= B/A = <u>2.64</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				_
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	egetation Prese	nt? ☑ Yes [□ No
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, R	RI 02904									- 1	
SOIL											
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	r confirm th	e absen	ce of indicators.)		
Depth	Matrix		•	dox Fe							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure	Re	emarks
0-3	5YR 3/2	100						ORGA	ANIC		
3-9	10YR 2/1	100					SILT LOAM				
0.45	40VD 0/4	400					FIN	IE CANE	27.1.0.4.4		
9-15	10YR 6/1	100					FII	NE SAINL	DY LOAM		
15-18	10YR 6/1	90	7.5YR 4/6	10	С	М	FIN	NE SAND	DY LOAM		
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated (Grains.	² Location: PL=	Pore Lining, M=N	//atrix
	licators: (Appli	•	-							oblematic Hydric	
	`	ouble t	<u> </u>			,	8) (LRR R,			A10) (LRR K, L, M	
	pedon (A2)			MLRA 1		ounace (o	o) (LIXIX IX,		_	e Redox (A16) (LR	•
	` ,			Thin Do	rk Curfood	- (SO) (LDI	DD MIDA	1.40D)		Peat or Peat (S3)	
☐ Black Hist			_				R R, MLRA	1490)	_ ′	e (S7) (LRR K, L, I	
	Sulfide (A4) _ayers (A5)			-	-		(LRR K, L)			. ,	<i>,</i>
_	-ayers (A3) Below Dark Surfa	aaa (A1		-	Gleyed Ma d Matrix (I					elow Surface (S8)	` ,
	k Surface (A12)	ace (A i	_	•	o Mairix (i Dark Surfa	,			_	urface (S9) (LRR k	
_	icky Mineral (S1)		_			` '			_ `	iese Masses (F12)	
_	eyed Matrix (S4)		_	-		ırface (F7)				oodplain Soils (F19	
: _				Redox i	Depressio	ris (Fo)				c (TA6) (MLRA 14	4A, 145, 149B)
☐ Sandy Re										Material (F21)	
	Matrix (S6)									v Dark Surface (TF	⁻ 12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	(149B)						Other (Expla	in in Remarks)	
3Indicators of h	nydrophytic veget	tation a	ind wetland hydr	ology n	nust be pr	esent, unle	ess disturbed	d or prob	lematic.		
Restrictive Lay	er Present?	□ \	∕es ☑ No	□ ∪	nknown				Hydric Soil Prese	nt? ☑ Yes	□ No
Remarks:							'				
Description of I	Habitat Characte	ristics,	Aquatic Diversity	y or Ge	neral Com	nments:					
Wetland Qualit	y: High	V N	Moderate	Low			Isolated V	Vetland?	☐ Yes 🗹	No 🔲 Unki	nown
General Comm	ents:										





WEST



WETLAND DETERMINATION FORM - Northo	entral and Northeast Region			
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line			
Project/Site: NED Milepost: 9050.0 County:	Essex Date: 08/14/2015			
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: LY-M-W002-UPL			
Investigators: CG JW Quad Name: Reading Townsh	ip: Lynnfield			
Logbook No.: 2015-1 Logbook Pg.: 145 Tract: 26253				
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 2			
Subregion (LRR): Middle Atlantic Lat: 42.566144	Long: -71.049611 Datum: NAD83			
Soil Map Unit Name: Poquonock loamy sand, 8 to 15 percent slopes, very stony	NWI Classification: Not mapped			
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No				
SUMMARY OF FINDINGS - Attach site map showing sampling poin	it locations, transects, important features, etc.			
Hydrophytic Vegetation Present? ☐ Yes ☑ No				
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area within a Wetland? ☐ Yes ☑ No			
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland?			
Field Wetland Classification: UPLAND PLOT				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)			
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)			
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)				
☐ Saturation (A3) ☐ Marl Deposits (B15)	□ Dry-Season Water Table (C2)			
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)			
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livi	ing Roots (C3) Saturation Visible on Aerial imagery (C9)			
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)			
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	G (C6) Geomorphic Position (D2)			
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)			
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)			
Field Observations:				
Surface Water Present?				
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?			
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections), if available):			
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name	% Cover Dominant Indicator Status			
Acer rubrum	10 NO FAC			
Betula papyrifera Pinus strobus	10 NO FACU 60 YES FACU			
Quercus alba	15 NO FACU			
Total Cove	er: 95			



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Frangula alnus		10	NO	FAC
Quercus alba Pinus strobus		15 40	YES YES	FACU FACU
	Total Cover:	65	ı	
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Maianthemum canadense		% Cover 20	Dominant NO	Indicator Status FACU
Osmundastrum cinnamomeum		40	YES	FACW
Gaultheria procumbens Vaccinium angustifolium		10 40	NO YES	FACU FACU
J	Total Cover:	110		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
	Total Cover:		I	I
Dominance Test Worksheet:	Provalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	0. <u>0</u>	x 1 = 0	
Total Number of Dominant	FACW Species		x 2 = 80	
Species Across All Strata: 5 (B)	FAC Species:	. <u>40</u> <u>20</u>	x 3 = 60	
Percent of Dominant Species	FACU Species		x 4 = 840	
That Are OBL, FACW, or FAC: 20 (A/B)	UPL Species:	. <u>210</u> <u>0</u>	x 5 = 0	
	Column Totals:		980 (B)	
		Prevalence Index	= B/A = <u>3.63</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	egetation Prese	nt? 🗌 Yes [☑ No
add in Homano of on a coparate choosy				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



	(1 0200+											6120 1200
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to o	locum	ent the in	dicator o	r confirm t	he abser	nce of indicators.)			
Depth	Matrix		Red	dox Fe	atures							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure		Re	marks
0-3	5YR 3/3	100						ORGA	ANIC			
3-14	10YR 2/2	100						SILT L	OAM			
• • • • • • • • • • • • • • • • • • • •	.52,2							0.2. 2				
	40VD 4/0	400						OII T.I	0444			
14-18	10YR 4/2	100						SILT L	.OAM			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	g, M=N	1atrix
Hydric Soil Inc	licators: (Appli	cable t	to all LRR's, unle	ss otl	nerwise n	oted.)			Indicators for Pr	oblematio	Hydric	Soils³:
☐ Histosol (/	A1)		□ P	olyvalı	ue Below :	Surface (S	8) (LRR R		2 cm Muck (A10) (LRR	K, L, M	LRA 149B)
☐ Histic Epip	pedon (A2)		N	ILRA 1	149B)				☐ Coast Prairie	e Redox (A	.16) (LR	R K, L, R)
☐ Black Hist	ic (A3)		Пт	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)	5 cm Mucky	Peat or Pe	eat (S3)	(LRR K, L, R)
	Sulfide (A4)						(LRR K, L)	,	☐ Dark Surface		. ,	
	Layers (A5)			-	Gleyed Ma		, -/		☐ Polyvalue Be	. , .		,
_	Below Dark Surfa	ace (A1	_	-	d Matrix (I				☐ Thin Dark St		. ,	
_	k Surface (A12)	(, (,	_	•	Dark Surfa	•			_		•	(LRR K, L, R)
_	icky Mineral (S1)		_			ice (i o) irface (F7)			=			
_			_			` ′				•		9) (MLRA 149B)
	eyed Matrix (S4)		□ R	.euox i	Depressio	ns (Fo)			_			4A, 145, 149B)
☐ Sandy Re									Red Parent		•	
	Matrix (S6)								□ Very Shallov	v Dark Surf	ace (TF	12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	149B)						Other (Expla	in in Rema	ırks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	ed or prob	olematic.			
Restrictive Lay	er Present?		Yes ☑ No ∣	□ U	Inknown							
									Hydric Soil Prese	nt?	Yes	☑ No
										_		_
Remarks:												
T to manto												
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: High		Moderate	Low			Isolated	Wetland?	Yes 🗆	No _	Unkr	iown
General Comm	ents:											





EAST



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 16787.3	County: Essex Date: 07/07/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: ME-P-W004-PEM
Investigators: PF JW Quad Name: Lawrence	Township: Methuen
Logbook No.: 2015-1 Logbook Pg.: 48 Tract: 6864	
Landform (hillslope, terrace, etc.): Depression Local R	elief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.718710	Long: -71.229681 Datum: NAD83
Soil Map Unit Name: Canton fine sandy loam, 3 to 8 percent slopes, very stor	y NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	☑ No Are "Normal" Circumstances present? ☑ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area
Wetland Hydrology Present?	
Field Wetland Classification: PEM	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9) Drainage Patterns (B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction i	n Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	ks) Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ✓ Yes No Depth (inches): 1	
Water Table Present? ✓ Yes No Depth (inches): 4	Wetland Hydrology Present?
Saturation Present?	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	evious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
1	otal Cover:

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Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Agrostis gigantea		30	YES	FACW
Onoclea sensibilis Lysimachia terrestris		40 15	YES NO	FACW OBL
Ġlyceria striata		20	NO	OBL
	Total Cover:	105		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>35</u>	x 1 = <u>35</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	: <u>70</u>	x 2 = <u>140</u>	
Species Across All Strata: 2 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	105 (A)	175 (B)	
	ı	Prevalence Index =	= B/A = 1.67	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
	Uvdranhvija \	logotation Broson	42 🗹 Van E	7 No.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic v	egetation Preser	it? ✓ Yes 🗆] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
Tomano.				



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SOIL											
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the in	ndicator o	r confirm the abse	ence of indicators.)			
Depth	Matrix		Red	dox Fe	atures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	kture	Remarks		
0-8	10YR 2/2	100					ORG	SANIC			
8-14	10YR 2/2	90	5Y 5/2	10	D	M	SAND	Y LOAM	ROCK REFUSAL AT 14 INCHES		
0-14	1011 2/2	30	31 3/2	10		IVI	SAND	I LOAW	ROCK REI USAL AT 14 INCHES		
1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. 2Location: PL=Pore Lining, M=Matrix											
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :											
☐ Histosol (A1) ☐ Polyvalue Below Surface (S8) (LRR R, ☐ 2 cm Muck (A10) (LRR K, L, MLF							A10) (LRR K, L, MLRA 149B)				
Histic Epipedon (A2)				1LRA 1	1496)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)		
■ Black Hist	Black Histic (A3) ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) ☐ 5 cm Mucky Peat or Peat (S3) (LRR K,						Peat or Peat (S3) (LRR K, L, R)				
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)		
☐ Stratified L	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)		
☐ Depleted I	Below Dark Surfa	ace (A1		eplete	d Matrix (I	F3)		☐ Thin Dark S	urface (S9) (LRR K, L)		
	k Surface (A12)		_		` Dark Surfa	-			nese Masses (F12) (LRR K, L, R)		
	icky Mineral (S1)		_			ırface (F7)			podplain Soils (F19) (MLRA 149B)		
_	eyed Matrix (S4)		_		Depressio			_	. , , , , , , , ,		
			L .	redox i	Бергеззіо	113 (1 0)			c (TA6) (MLRA 144A, 145, 149B)		
☐ Sandy Redox (S5) ☐ Red Parent Material (F											
	Matrix (S6)		= .					= '	v Dark Surface (TF12)		
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)		
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.			
Restrictive Lay	er Present?		Yes ☑ No	□ U	Inknown						
								Hydric Soil Prese	ent? ☑ Yes ☐ No		
Remarks:											
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:					
Wetland Qualit	y: High		Moderate 🗹	Low			Isolated Wetland	l? ☐ Yes 🗹	No Unknown		
General Comm	ents:										
Conoral Comm	onto.										





SW



WETLAND DETERMINATION FORM - Northcentral and Northeast Region									
			or moder region	•					
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Tra	ansmission Line	☐ Other						
Project/Site: NED Milepost: 16776.6 Cou	ınty:	Essex	Date	07/07/2015					
Applicant/Owner: Kinder Morgan State	te: MA	A Sam	pling Point: ME-P-W	004-PFO					
Investigators: PF JW Quad Name: Lawrence Tow	vnship:	Methuen							
Logbook No.: 2015-1 Logbook Pg.: 49 Tract: 6864									
Landform (hillslope, terrace, etc.): Depression Local Relief:		Concave	Convex None	Slope%.: 5					
Subregion (LRR): Middle Atlantic Lat: 42.718844 Long: -71.229796 Datum: NAD83									
Soil Map Unit Name: Rock outcrop-Charlton-Hollis complex, 3 to 15 percent slopes NWI Classification: Not mapped									
Are climatic / hydrologic conditions on the site typical for this time of year?:	es 🔲	No (If no, exp	olain in Remarks.)						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No A	Are "Normal" Cir	rcumstances present?	✓ Yes ☐ No					
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No								
SUMMARY OF FINDINGS - Attach site map showing sampling p	oint Ic	ocations, tra	insects, importan	t features, etc.					
Hydrophytic Vegetation Present?	Is	s the Sample	d Area						
Hydric Soil Present? ✓ Yes No		vithin a Wetla		□ No					
Wetland Hydrology Present?									
Field Wetland Classification: PFO									
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:			Secondary Indicators (2	or more required)					
Primary Indicators (minimum of one required; check all that apply)			☐ Surface Soil Crack	s (B6)					
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)	B9) Drainage Patterns (B10)								
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)								
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)								
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	(C1) Crayfish Burrows (C8)								
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)								
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	on (C4) Stunted or Stressed Plants (D1)								
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	Filled Soils (C6) Geomorphic Position (D2)								
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)								
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		Microtopographic Relief (D4)							
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D5)					
Field Observations:									
Surface Water Present? ☐ Yes ☑ No Depth (inches):									
Water Table Present? ☑ Yes ☐ No Depth (inches): 6		Wetland Hy	drology Present?						
Saturation Present?			☑	∫ Yes □ No					
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previou	ıs insped	ctions), if availab	ole):						
		,,)-						
VEGETATION									
Tree Stratum									
Plot Size: 30									
Scientific Name		% Cover	Dominant	Indicator Status					
Quercus rubra		60	YES	FACU					
Fraxinus pennsylvanica	``au.e	40	YES	FACW					
Total Cover: 100									



Providence, Ri 02904						
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Fraxinus pennsylvanica Rhamnus alnifolia		30 70	YES YES	FACW OBL		
Mannus annona	Total Cover:	100	11.5	OBL		
Herb Stratum						
Plot Size: 5	1		ı	1		
Scientific Name		% Cover	Dominant	Indicator Status		
Onoclea sensibilis Symplocarpus foetidus		10 80	NO YES	FACW OBL		
Toxicodendron radicans		10	NO	FAC		
	Total Cover:	100				
Woody Vine Stratum						
Plot Size: 30	1		ı	1		
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:				
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover of	of:	Multiply by:			
1.	OBL Species:	<u>150</u>	x 1 = <u>150</u>			
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	: <u>80</u>	x 2 = <u>160</u>			
	FAC Species:	<u>10</u>	x 3 = <u>30</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)	FACU Species:	<u>60</u>	x 4 = <u>240</u>			
	UPL Species:	<u>0</u>	x 5 = <u>0</u>			
	Column Totals:	<u>300 (A)</u>	<u>580 (B)</u>			
	F	Prevalence Index =	= B/A = <u>1.93</u>			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☑ Yes ☐ No					
data in Remarks or on a separate sheet)						
Problematic Hydrophytic Vegetation¹ (Explain)						
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Remarks:						



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SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures		_		-
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ture	Remarks
0-12	10YR 2/1	100					ORGA	ANIC	
12-16	10YR 3/1	100					FINE SANI	DY LOAM	ROCK REFUSAL AT 16 INCHES
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
Histosol (A	A1)		□ P	Polyvalı	ue Below :	Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		N	/ILRA 1	149B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)		□ L	.oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	I1) 🗹 🖸	Peplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangan	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			Peplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)		☐ Mesic Spodi	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							□ Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
□ Dark Surf	ace (S7) (LRR R	, MLRA	\ 149B)					Other (Expla	in in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ u	Inknown			Hydric Soil Prese	ent? ☑ Yes ☐ No
Remarks:									
Remarks.									
December of		! . 4!	Ati- Diit-	0 -					
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	nerai Con	iments:			
Wetland Qualit	y: High		Moderate 🗹	Low			Isolated Wetland?	? ☐ Yes ☑	No 🔲 Unknown
General Comm	ents:								
Concrai Comm	onio.								





SW



WETLAND DETERMINATION FORM - North	cent	ral and	d Nor	theast R	egion		
∇ Centerline Re-Route Access Road Ancillary Facility] Tran	smission	Line	☐ Other			
Project/Site: NED Milepost: 20965.1 County	v:	Essex		_	Date:	07/08/2015	
Applicant/Owner: Kinder Morgan State:	MA		Sampli	ing Point:	ME-P-W00	05-PEM	
Investigators: PF JW Quad Name: Lawrence Townsl	ship:	Methue					
Logbook No.: 2015-1 Logbook Pg.: 58 Tract: 6440							
Landform (hillslope, terrace, etc.): Flat Local Relief:		Concave	□ c	onvex 🗹	None	Slope%.: 0	
Subregion (LRR): Middle Atlantic Lat: 42.729915	L	.ong: -	-71.2262	248		Datum: NAD83	
Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes				NWI Classi	fication:	PEM1E	
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes		No (If no	o, explai	in in Remarks	s.)		
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	o Ai	re "Norma	al" Circu	ımstances pre	esent?	☑ Yes ☐ No	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No)						
SUMMARY OF FINDINGS - Attach site map showing sampling poin	nt loc	cations	tran	sects imr	ortant	features etc	
Hydrophytic Vegetation Present? ✓ Yes ☐ No	110	Jations	, traii	ocoto, mip	Jortani		
	Is	the San	npled A	Area	Yes □	l No	
Hydric Soil Present?	wi	thin a W	etlanc	1? ┗	Yes □	No	
Field Wetland Classification: PEM							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:			Se	econdary Indic	cators (2 c	or more required)	
Primary Indicators (minimum of one required; check all that apply)				Surface So	il Cracks	(B6)	
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)				Drainage P	atterns (E	310)	
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)				Moss Trim	Lines (B1	6)	
✓ Saturation (A3) ☐ Marl Deposits (B15)				Dry-Season	n Water T	able (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)				Crayfish Bu	urrows (C	8)	
□ Sediment Deposits (B2) □ Oxidized Rhizospheres along Liv	ving Ro	oots (C3)		Saturation	Visible on	Aerial imagery (C9)	
□ Drift Deposits (B3) □ Presence of Reduced Iron (C4)				Stunted or	Stressed	Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	Soils (C	26)		Geomorphi	Geomorphic Position (D2)		
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	•	•		Shallow Ac	uitard (D3	3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)				Microtopog	raphic Re	elief (D4)	
□ Sparsely Vegetated Concave Surface (B8)					5)		
Field Observations:							
Surface Water Present? Yes No Depth (inches):		Watlan	al I la calac	-l B	-40		
Water Table Present?		wetian	a Hyard	ology Preser		Yes □ No	
Saturation Present? ✓ Yes ☐ No Depth (inches): 0 (includes capillary fringe)					_		
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	inspect	ions), if a	vailable):			
VEGETATION							
Tree Stratum							
Plot Size: 30	,			1		ı	
Scientific Name		% Co		Domir		Indicator Status	
Acer rubrum		5		YES	3	FAC	
Total Cov	ver:	5					



egetation Provide supporting		Providence, RI 02904				
S	Indicator Status	Sapling/Shrub Stratum				
S	Total Cover: 15 Tota	Plot Size: 15				
10	Total Cover: 10 YES FACW	Scientific Name		% Cover	Dominant	Indicator Status
Total Cover: 15	Indicator Indi	Populus deltoides				
% Cover	Stratum Pilot Size: 5 Scientific Name % Cover Dominant Indicator Status Prevalence Index Status Prevalence Index = B/A = 1.62	Salix discolor	T		YES	FACW
20			Total Cover:	15		
20	Scientific Name	Herb Stratum				
20	20	Plot Size: 5				
20	20	Scientific Name		% Cover	Dominant	Indicator Status
60	Color Colo	Symplocarpus foetidus				
10	Total Cover: 10	Carex crinita Onoclea sensibilis				
Total Cover: 125	Total Cover: 125	Lythrum salicaria				
% Cover	Plot Size: 30 Scientific Name Cover Dominant Indicator Status	турна напона	 Total Cover:		140	OBL
Total Cover: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 65	Total Cover: Scientific Name % Cover Dominant Indicator Status	Woody Vine Stratum		.20		
Total Cover: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 65	Total Cover: Prevalence Index Worksheet: Total Cover: Dominant Indicator Status					
Total Cover: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 65	Total Cover: Prevalence Index Worksheet: Number of Dominant Species Chat Are OBL, FACW, or FAC: 6_(A)		ı	% Cover	Dominant	Indicator Status
Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 65	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 6_(A) Total % Cover of: OBL Species: 65	Ocientino Indine		/₀ Covei	Dominant	muicator Status
Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 65	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 6_(A) Total % Cover of: OBL Species: 65		Total Cover:		1	
Total % Cover of: Multiply by: OBL Species: 65	Total % Cover of: Multiply by: OBL Species: 65 x 1 = 65 FACW, or FAC: 6 (B) Formulation of Dominant Species Across All Strata: 6 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) Prevalence Index = B/A = 0 UPL Species: 0 x 4 = 0 UPL Species: 0 x 5 = 0 Column Totals: 145 (A) 235 (B) Prevalence Index = B/A = 1.62 Prevalence Index = B/A = 1.62 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes No Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
6 (A) OBL Species: 65	That Are OBL, FACW, or FAC: OBL Species: 65					
6 (B) FACW Species: 70	OBL Species: 55					
FAC Species: 10	Species Across All Strata: 6 (B). Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) Prevalence Index = B/A = 1.62 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Indicators: Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
FACU Species:	Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B) FACU Species: 0	Species Across All Strata: 6 (B)				
UPL Species: 0 x 5 = 0 Column Totals: 145 (A) 235 (B) Prevalence Index = B/A = 1.62 regetation Provide supporting Hydrophytic Vegetation Present? ✓ Yes No	That Are OBL, FACW, or FAC: UPL Species: 0	Percent of Deminant Species				
Column Totals: 145 (A) 235 (B) Prevalence Index = B/A = 1.62 : egetation Provide supporting Hydrophytic Vegetation Present? ✓ Yes 🗆 No	Column Totals: 145 (A) 235 (B) Prevalence Index = B/A = 1.62 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes No Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	That Are OBL, FACW, or FAC: 100 (A/B)				
Prevalence Index = B/A = 1.62 : egetation Provide supporting Hydrophytic Vegetation Present? Yes No	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes ☐ No Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				_	
: degetation Provide supporting	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes □ No Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be bresent, unless disturbed or problematic.		Column Totals:	<u>145 (A)</u>	<u>235 (B)</u>	
egetation Provide supporting	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes ☐ No Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			Prevalence Index	= B/A = <u>1.62</u>	
Provide supporting Hydrophytic Vegetation Present? ☑ Yes ☐ No	2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes □ No Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Hydrophytic Vegetation Indicators:				
	3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes □ No Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	1 - Rapid Test for Hydrophytic Vegetation				
	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes No No Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	✓ 2 - Dominance Test is > 50%				
	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be bresent, unless disturbed or problematic.	3 - Prevalence Index is ≤ 3.0				
ite sheet)	Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be bresent, unless disturbed or problematic.		Hydrophytic \	/egetation Prese	nt? ☑ Yes I	□ No
	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	data in Remarks or on a separate sheet)				
	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
tion¹ (Explain)	present, unless disturbed or problematic.	☐ Problematic Hydrophytic Vegetation¹ (Explain)				
		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
	Remarks:	Remarks:				
hydrology must be	·	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be	Hydrophytic \	/eç	getation Prese	getation Present? 🗹 Yes
	emarks:	emarks:	<u> </u>			



T TOVIGETICE, I	(1 02304											S. P. S. P. S.
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the ir	ndicator o	r confirm tl	he absen	nce of indicators.)			
Depth	Matrix		Red	dox Fe	atures							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure		Rei	marks
0-8	10YR 2/1	100						SANDY	LOAM			
8-12	10YR 2/2	100						SAN	ID.			
0-12	1011(2/2	100						OAI.	ND			
40.00	10)/5 0/4	100							1110			
12-20	10YR 2/1	100						ORGA	ANIC			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	g, M=M	latrix
Hydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ss otl	nerwise n	oted.)			Indicators for Pr	oblematic	Hydric	Soils ³ :
☐ Histosol (/	A1)		□Р	olyvalı	ue Below	Surface (S	88) (LRR R,		2 cm Muck (A10) (LRR	K, L, M	LRA 149B)
_ `	pedon (A2)			ILRA 1		- (-	,, ,,		☐ Coast Prairie			•
☐ Black Hist			Пт	hin Da	ırk Surface	e (S9) (I R	R R, MLRA	149B)	_			(LRR K, L, R)
	Sulfide (A4)		_				(LRR K, L)	. 105)	☐ Dark Surface		. ,	
	Layers (A5)			-	-		(LIXIX IX, L)		_	. , .		•
		(^4		-	Gleyed Ma				Polyvalue Be		. , ,	•
:: :	Below Dark Surfa	ace (A1	_		d Matrix (•			Thin Dark Su		•	
_	k Surface (A12)		_		Dark Surfa							(LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1))		eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain So	ils (F19	9) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)			ledox l	Depressio	ns (F8)				c (TA6) (M	_RA 144	4A, 145, 149B)
☐ Sandy Re	edox (S5)								☐ Red Parent	Material (F	21)	
☐ Stripped I	Matrix (S6)								□ Very Shallov	v Dark Surf	ace (TF	12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	rks)	
3Indicators of h	nvdrophytic veae	tation a	and wetland hydro	oloav n	nust be pr	esent. unle	ess disturbe	d or prob	elematic.			
Restrictive Lay					Inknown	<u> </u>	T	<u> </u>				
Restrictive Lay	er Fresent?	ш	ies 🔽 No	υч	IIKIIOWII					=		
									Hydric Soil Prese	nt? ✓	Yes	□ No
Remarks:												
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	tv: 🗖 High	N N	Moderate	Low			Isolated \	Netland?	☐ Yes 🗹	No □	Unkr	iown
	g								_ ··· <u>_</u>			
General Comm	ents:											





NE



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 20533.6	County: Essex Date: 07/08/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: ME-P-W005-PSS
Investigators: PF JW Quad Name: Lawrence	Township: Methuen
Logbook No.: 2015-1 Logbook Pg.: 64 Tract: 6440	
Landform (hillslope, terrace, etc.): Slope - mid Local R	elief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 5
Subregion (LRR): Middle Atlantic Lat: 42.728751	Long: -71.226539 Datum: NAD83
Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes	NWI Classification: PEM1E
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	─ No
SUMMARY OF FINDINGS - Attach site map showing sampling	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Is the Sampled Area
Hydric Soil Present? ☑ Yes ☐ No	within a Wetland?
Wetland Hydrology Present?	
Field Wetland Classification: PSS	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) Drainage Patterns (B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction i	n Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	ks) Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present?	Wetland Hydrology Present?
Saturation Present?	✓ Yes □ No
(includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	evious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
	otal Cover:



Providence, RI 02904				A_COM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Salix discolor		60	YES	FACW
Rubus allegheniensis	Tatal Carran	20	YES	FACU
	Total Cover:	80		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Impatiens capensis		60	YES	FACW
Onoclea sensibilis Typha latifolia		40 5	YES NO	FACW OBL
Eutrochium maculatum Euthamia graminifolia		20 10	YES NO	OBL FAC
Luliama grammolia	Total Cover:	135	140	IAO
Noody Vine Stratum				
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
Joientino Indille		76 COVEI	Dominant	mulcator Status
	 Total Cover:		1	
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover		Multiply by:	
	OBL Species:	<u>25</u>	x 1 = <u>25</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species		x 2 = <u>320</u>	
	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)	FACU Species:		x 4 = <u>80</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>215 (A)</u>	<u>455 (B)</u>	
		Prevalence Index	= B/A = 2.12	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? ☑ Yes I	□ No
data in Remarks or on a separate sheet)		J		_
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



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SOIL																		
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the ir	ndicator o	r confirm	he abser	nce o	f indica	tors.)						
Depth	Matrix			Re	dox Fe	atures			-							_		
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Text	ure					F	≺em	narks	
0-20	10YR 2/1	100							ORGA	ANIC								
¹Type: C=Cond	centration, D=De	pletion	⊥ n, RM=Re∈	duced	Matrix,	CS=Cov	ered Sanc	or Coated	Grains.	2	_ocation	: PL=	Pore	Lining	. M	 =Мг	atrix	
	licators: (Appli	•	-								icators							3-
✓ Histosol (A				_			•	8) (LRR R		П	2 cm N				-			
_ `	pedon (A2)				/ILRA 1		ourrace (c	O) (LIXIX IX			Coast							-
	` ,				hin Do	rk Curfoo	- (SO) (LB	D D MIDA	140P)	=								•
☐ Black Hist				_				R R, MLRA	1490)			-						K, L, R)
	Sulfide (A4)				-	-		(LRR K, L)			Dark S							Z 1)
_	_ayers (A5)	(A	11)		-	Gleyed Ma					Polyva							∖ , ∟)
:	Below Dark Surfa	ACE (A	11)		-	d Matrix (•				Thin D						-	K I D)
	k Surface (A12)					Dark Surfa						_						K, L, R)
	icky Mineral (S1)			_	•		urface (F7)						-					RA 149B)
_	eyed Matrix (S4)				kedox [Depressio	ns (F8)					•				144/	۹, 14	5, 149B)
☐ Sandy Re											Red Pa						_,	
	Matrix (S6)										Very S					TF1	2)	
☐ Dark Surfa	ace (S7) (LRR R	, MLR	4 149B)								Other (Expla	in in R	≀emar	ks)			
3Indicators of h	nydrophytic vege	tation a	and wetlan	d hydro	ology m	nust be pr	esent, unle	ess disturb	ed or prob	olema	tic.							
Restrictive Lay	er Present?		Yes 🗹	No	□ U	nknown												
										Hydr	ic Soil	Prese	nt?	\checkmark	Ye	s		No
Remarks:														-				
Description of I	Habitat Characte	riotico	Aquatia D	ivoroit	, or Co	noral Cam	amonto:											
Description of t	Habitat Characte	iisiics,	Aquatic Di	iversity	or Ge	nerai Con	intents.											
Wetland Ouglit	🗖 Lliada		Madarata	_	Law			laalatad	\\/atland0		7 Vas	. 🗖	Na	_	11.	ممادم		
Wetland Qualit	y: High	√	Moderate		Low			isolated	Wetland?	L	Yes	. ✓	No		UI	nkno	WH	
General Comm	ents:																	





SOUTH



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 21171.0	County: Essex Date: 07/08/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: ME-P-W005-PFO
Investigators: PF JW Quad Name: Lawrence	Township: Methuen
Logbook No.: 2015-1 Logbook Pg.: 63 Tract: 6440	
Landform (hillslope, terrace, etc.): Flat Local R	relief: ☐ Concave ☐ Convex ☑ None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.730525	Long: -71.226430 Datum: NAD83
Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes	NWI Classification: PEM1E
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
	_
SUMMARY OF FINDINGS - Attach site map showing sampling	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Is the Sampled Area
Hydric Soil Present? ☑ Yes ☐ No	within a Wetland? Yes No
Wetland Hydrology Present?	
Field Wetland Classification: PFO	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3)
☐ Drift Deposits (B3) ☐ Presence of Reduced In	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction i	n Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remains	rks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present?	Wetland Hydrology Present?
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspections), if available):
VECETATION	
VEGETATION	
Tree Stratum	
Plot Size: 30	1 1
Scientific Name	% Cover Dominant Indicator Status
Quercus bicolor Acer rubrum	20 YES FACW 70 YES FAC
Τ	Fotal Cover: 90



Providence, Rt 02904			- 1				
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Rhamnus alnifolia		70 45	YES NO	OBL			
Corylus americana	Total Cover:	15 85	NO	FACU			
	Total Cover.						
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
Osmundastrum cinnamomeum		30	YES	FACW			
Symplocarpus foetidus Toxicodendron radicans		40 10	YES NO	OBL FAC			
Dryopteris marginalis		30	YES	FACU			
	Total Cover:	110					
Woody Vine Stratum							
Plot Size: 30			1	1			
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:					
Number of Dominant Species	Total % Cover of	of:	Multiply by:				
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>110</u>	x 1 = <u>110</u>				
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species:	: <u>50</u>	x 2 = <u>100</u>				
Species Across All Strata: 6 (B)	FAC Species:	<u>80</u>	x 3 = <u>240</u>				
Percent of Dominant Species That Are OBL FACW or FAC: 83 (A/B)	FACU Species:	<u>45</u>	x 4 = <u>180</u>				
That Are OBL, FACW, or FAC: 83 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	285 (A)	630 (B)				
	F	Prevalence Index :	= B/A = <u>2.21</u>				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
✓ 2 - Dominance Test is > 50%							
_	Hydrophytic V	ohytic Vegetation Present? ☑ Yes ☐ No					
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	nyarophytic v	egetation Preser	itr <u>v</u> fes L] NO			
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
Danisalas							
Remarks:							



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SOIL									
rofile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
0-18	10YR 2/1	100					ORGA	ANIC	
18-20	10YR 3/2	90	2.5Y 4/2	10	D	М	FINE S	SAND	
Type: C=Con	L centration, D=De	epletion	l n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
lvdric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
✓ Histosol (•			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
	pedon (A2)			/ILRA 1		(-	-, (=,	_	e Redox (A16) (LRR K, L, R)
✓ Black His			П 1	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)					neral (F1) (·		e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed Ma			_	elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1	_	-	d Matrix (urface (S9) (LRR K, L)
	k Surface (A12)		· —	•	Dark Surfa	•			lese Masses (F12) (LRR K, L, R)
_	ucky Mineral (S1)		_			urface (F7)			podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		_	•	Depressio	, ,			c (TA6) (MLRA 144A, 145, 149B)
 ☐ Sandy Re			_		.,	- (- /			Material (F21)
<u> </u>	Matrix (S6)							_	v Dark Surface (TF12)
	ace (S7) (LRR R	. MLRA	A 149B)					_ ′	in in Remarks)
<u> </u>			•	ology n	ouat ha ar	ocont unic	ess disturbed or prob		
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Vetland Quali	ty:	☑ 1	Moderate	Low			Isolated Wetland?	P ☐ Yes ☑	No 🔲 Unknown
General Comm	ents:								





NE



WETLAND DETERMINATION FORM - No	orthcentra	al and Nor	theast Regio	n		
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transm	nission Line	Other			
Project/Site: NED Milepost: 20969.9 C	County:	Essex	Date	e: 07/08/2015		
Applicant/Owner: Kinder Morgan S	State: MA	Sampli	ng Point: ME-P-V	W005-UPL		
Investigators: PF JW Quad Name: Lawrence T	ownship: I	Methuen				
Logbook No.: 2015-1 Logbook Pg.: 59 Tract: 6440						
Landform (hillslope, terrace, etc.): Flat Local Relie	ef: Con	ncave 🔲 C	onvex 🔽 None	e Slope%.: 2		
Subregion (LRR): Middle Atlantic Lat: 42.729958	Lon	ıg: -71.2264	423	Datum: NAD83		
Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes			NWI Classification	n: Not mapped		
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes N	lo (If no, explai	in in Remarks.)			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ✓	No Are	"Normal" Circu	mstances present?	✓ Yes ☐ No		
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No					
SUMMARY OF FINDINGS - Attach site map showing sampling	point loca	tions, trans	sects, importa	nt features, etc.		
Hydrophytic Vegetation Present?			_			
Hydric Soil Present? ☐ Yes ☑ No	Is the	e Sampled <i>A</i> in a Wetland	Area ⊔? □ Yes	☑ No		
Wetland Hydrology Present? ☐ Yes ☑ No	With	iii a wonano	••			
Field Wetland Classification: UPLAND PLOT						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:		<u>Se</u>	condary Indicators	(2 or more required)		
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Crac	ks (B6)		
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9))		Drainage Patterns	s (B10)		
☐ High Water Table (A2) ☐ Aquatic Fauna (B13) ☐ Moss Trim Lines (B16)						
□ Saturation (A3) □ Marl Deposits (B15) □ Dry-Season Water Table (C2)						
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1	1)		Crayfish Burrows	(C8)		
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres alo	ng Living Root	ts (C3)	Saturation Visible	on Aerial imagery (C9)		
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	(C4)	Stunted or Stressed Plants (D1)				
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in T	illed Soils (C6)		Geomorphic Posi	tion (D2)		
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)			Shallow Aquitard	(D3)		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks))		Microtopographic	Relief (D4)		
☐ Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test	t (D5)		
Field Observations:						
Surface Water Present?						
Water Table Present? ☐ Yes ☑ No Depth (inches):	V	Netland Hydro	ology Present?	J Vac ⊠ Na		
Saturation Present? Yes Mo Depth (inches): (includes capillary fringe)				□ Yes ☑ No		
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, prev	ious inspection	ns), if available)):			
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
Populus tremuloides Acer rubrum Ulmus americana		80 10 20	YES NO NO	FACU FAC FACW		
	al Cover:	110		1		



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Sapling/Shrub Stratum								
Plot Size: 15								
Scientific Name		% Cover	Dominant	Indicator Status				
Pinus strobus Acer rubrum		10 20	NO YES	FACU FAC				
Cornus florida		30	YES	FACU				
Rhamnus alnifolia	T	30	YES	OBL				
	Total Cover:	90						
Herb Stratum								
Plot Size: 5								
Scientific Name		% Cover	Dominant	Indicator Status				
Solidago rugosa Quercus rubra		10 10	YES YES	FAC FACU				
Toxicodendron radicans		20	YES	FAC				
	Total Cover:	40						
Woody Vine Stratum								
Plot Size: 30								
Scientific Name		% Cover	Dominant	Indicator Status				
	Total Cover:							
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:						
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover	of:	Multiply by:					
That Are OBL, FACW, or FAC.	OBL Species:	<u>30</u>	x 1 = <u>30</u>					
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species	: <u>20</u>	x 2 = <u>40</u>					
	FAC Species:	<u>60</u>	x 3 = <u>180</u>					
Percent of Dominant Species That Are OBL, FACW, or FAC: 57 (A/B)	FACU Species:		x 4 = <u>520</u>					
	UPL Species:	<u>0</u>	x 5 = <u>0</u>					
	Column Totals:	<u>240 (A)</u>	<u>770 (B)</u>					
	1	Prevalence Index :	= B/A = <u>3.21</u>					
Hydrophytic Vegetation Indicators:								
1 - Rapid Test for Hydrophytic Vegetation								
☑ 2 - Dominance Test is > 50%								
3 - Prevalence Index is ≤ 3.0								
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Preser	nt? ☑ Yes [□ No				
data in Normania of on a separate sheety								
☐ Problematic Hydrophytic Vegetation¹ (Explain)								
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.								
Describes								
Remarks:								



1 TOVIGETICE, I	02304								A CONTRACTOR OF THE PARTY OF TH
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to d	locum	ent the in	dicator o	r confirm the abse	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	ture	Remarks
0-12	10YR 3/2	100					SANDY	'LOAM	
12-20	10YR 4/4	100					FINE SAN	DY LOAM	
12 20	10110 1// 1	100					1 11 12 07 11 4	D1 207 ((V)	
1Type: C-Con	contration D_D	nlotion	- PM-Paduaad	Motrix	CS-Cov	orod Sand	or Coated Crains	21 continue DL	-Doro Lining M-Motriy
	· · · · · · · · · · · · · · · · · · ·	·					or Coated Grains.		=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess ot	herwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
Histosol (A	A1)			olyval ILRA		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		IV	ILIXA	1430)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		ПΤ	hin Da	ark Surface	e (S9) (LRI	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	1) 🔲 🗅	eplete	ed Matrix (I	F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□ R	edox	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	ed Dark Su	ırface (F7)			oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)			edox	Depressio	ns (F8)		_	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)		_		·	, ,			Material (F21)
_	Matrix (S6)							_	v Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	1/0R)						ain in Remarks)
_			•						an in Kemarks)
andicators of r	iyaropriytic vege	tation a	ind welland hydro		-	esent, unit	ess disturbed or prol	biernatic.	
Restrictive Lay	er Present?		′es 🗹 No	п г	Jnknown				
								Hydric Soil Prese	ent? ☐ Yes ☑ No
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland	?	No 🔲 Unknown
	,. ப	_	_						
General Comm	ents:								





NORTH



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region								
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other								
Project/Site: NED Milepost: 24924.0	County: Essex Date: 12/03/2014								
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: ME-P-W001-PEM								
Investigators: AF CV Quad Name: Lawrence	Township: Methuen								
Logbook No.: 2014P3 Logbook Pg.: 16 Tract: 6841									
Landform (hillslope, terrace, etc.): DEPRESSION Local F	elief: 🔽 Concave 🗌 Convex 🔲 None Slope%.: 0								
Subregion (LRR): Middle Atlantic Lat: 42.740066	Long: -71.222272 Datum: NAD83								
Soil Map Unit Name: Pipestone loamy sand, 0 to 3 percent slopes NWI Classification: Not mapped									
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.)									
Are Vegetation ☐ Soil ☑ or Hydrology ☑ significantly disturbed?	□ No Are "Normal" Circumstances present? ☑ Yes □ No								
Are Vegetation ☐ Soil ☐ or Hydrology ☑ naturally problematic?	Are Vegetation ☐ Soil ☐ or Hydrology ☑ naturally problematic? ☐ No								
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present?									
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area ☑ Yes ☐ No within a Wetland?								
Wetland Hydrology Present?									
Field Wetland Classification: PEM									
Remarks: SOILS WERE DISTURBED DUE TO GAS LINE. DUE TO SNO	W MELT FLOOD LEVELS AND BANK FULL CONDITIONS PRESENT								
HYDROLOGY									
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)								
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)								
✓ Surface Water (A1) ☐ Water-Stained Leaves	B9) Drainage Patterns (B10)								
✓ High Water Table (A2) ☐ Aquatic Fauna (B13) ☐ Moss Trim Lines (B16)									
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)								
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)								
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)								
☐ Drift Deposits (B3) ☐ Presence of Reduced I	on (C4) Stunted or Stressed Plants (D1)								
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	n Tilled Soils (C6) Geomorphic Position (D2)								
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7	☐ Shallow Aquitard (D3)								
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	Microtopographic Relief (D4)								
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)								
Field Observations:									
Surface Water Present? ✓ Yes ☐ No Depth (inches): 1-6									
Water Table Present?	Wetland Hydrology Present?								
Saturation Present?	☑ Yes □ No								
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspections), if available):								
VEGETATION									
Tree Stratum									
Plot Size: 30									
Scientific Name	% Cover Dominant Indicator Status								
	Fotal Cover:								



Providence, Ri 02904			1			
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:			,		
Herb Stratum						
Plot Size: 5						
	1	0/ 0	Dania aut	la dia atau Otatua		
Scientific Name		% Cover	Dominant	Indicator Status		
Lythrum salicaria Juncus effusus		10 20	NO YES	OBL OBL		
Typha angustifolia Onoclea sensibilis		20 30	YES YES	OBL FACW		
Onobica scrisionis	Total Cover:	80	120	17.000		
Woody Vine Stratum						
Plot Size: 30						
Scientific Name	ı	% Cover	Dominant	Indicator Status		
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:				
Number of Dominant Species	Total % Cover	of:	Multiply by:			
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>50</u>	x 1 = <u>50</u>			
Total Number of Dominant	FACW Species	: <u>30</u>	x 2 = <u>60</u>			
Species Across All Strata: 3 (B)	FAC Species:	<u> </u>	x 3 = <u>0</u>			
Percent of Dominant Species	FACU Species:		x 4 = <u>0</u>			
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u> </u>	x = 0			
	Column Totals:		110 (B)			
						
		Prevalence Index :	= B/A = <u>1.38</u>			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
✓ 2 - Dominance Test is > 50%						
☑ 3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☑ Yes ☐ No					
data in Remarks or on a separate sheet)						
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Remarks:						



Trofile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Depth	2011									
Depth (inches)	OIL									
Color (moist) % Color (moist) % Type* Loc² Texture Remarks Color (moist) % Color (moist) % Type* Loc² Color (moist) % Color (moist) % Type* Loc² Color (moist) % Color (moist) % Type* Loc² SILT LOAM	Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)	
O-4										
4-18	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Coated Grains. CS=Covered Sand or Caated Sand or Caa	0-4	10YR 2/1	100					SILT L	OAM	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Coated Grains. CS=Covered Sand or Caated Sand or Caa										
tydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)	4-18	10YR 7/1	80	10YR 2/1	20	D	М	FINE S	SAND	
tydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)										
Indicators: (Applicable to all LRR's, unless otherwise noted.)	Type: C=Cond	centration, D=De	pletion	, RM=Reduced	Matrix,	CS=Cov	ered Sand	I or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Histosol (A1)	**		·							
Histic Epipedon (A2) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (A11) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Stripped Matrix (S6) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Petrictive Layer Present? Yes No Unknown Hydric Soil Present? Yes No Unknown	<u> </u>			•			•	:8) (I RR R		•
Black Histic (A3)	:	·					ouridoo (O	(2) (2) (1)	_	
Hydrogen Sulfide (A4)				Пт	hin Da	ırk Surface	(S9) (LRI	R R MI RA 149B)	_	
Stratified Layers (A5)	_							•		
Depleted Below Dark Surface (A11)				· <u>—</u>	-	-		(LIKICIK, L)	_	
Thick Dark Surface (A12)		•	ace (A1		-	-				
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Other (Explain in Remarks) □ Other (Explain in Remarks) □ No □ Unknown □ Hydric Soil Present? □ Yes □ No □ No □ No □ Remarks: □ Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: □ High □ Moderate □ Low Isolated Wetland? □ Yes □ No □ Unknown	_ _ : :			, <u> </u>	•	•	•			
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Other (Explain in Remarks) □ Other (Explain in Remarks) □ Other (Explain in Remarks) □ No □ Unknown □ Yes □ No □ Unknown □				_						
□ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Identification of Hydric Soil Present? □ Yes ☑ No □ Unknown Hydric Soil Present? ☑ Yes □ No Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: ☑ High □ Moderate □ Low Isolated Wetland? □ Yes ☑ No □ Unknown				_	•					
Stripped Matrix (S6)						200.000.0	(. 0)			
Dark Surface (S7) (LRR R, MLRA 149B)									_	
Andicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Pestrictive Layer Present?			MIRA	149R)					_ ′	,
Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High				•						iii iii rtomano)
Wetland Quality: ☑ High ☐ Moderate ☐ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown	estrictive Lay	er Present?		∕es ☑ No	<u></u> ∪	Inknown	,			nt? ☑ Yes ☐ No
	Remarks:	er Present?		∕es ☑ No		Inknown				nt? ☑ Yes ☐ No
	Remarks:			_						nt? ☑ Yes □ No
General Comments:	Remarks: Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	
	Remarks: Description of I Wetland Qualit	Habitat Characte y: ☑ High	ristics,	Aquatic Diversity	or Ge				Hydric Soil Prese	





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WETLAND DETERMINATION FORM - Northo	WETLAND DETERMINATION FORM - Northcentral and Northeast Region								
Centerline Re-Route Access Road Ancillary Facility	Transmission Line								
Project/Site: NED Milepost: 24981.2 County		/03/2014							
Applicant/Owner: Kinder Morgan State: MA Sampling Point: ME-P-W001-PFO									
Logbook No.: 2014P3 Logbook Pg.: 15 Tract: 6818									
Landform (hillslope, terrace, etc.): DEPRESSION Local Relief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 0									
Subregion (LRR): Middle Atlantic Lat: 42.740214 Long: -71.222117 Datum: NAD83									
Soil Map Unit Name: Deerfield loamy fine sand, 0 to 3 percent slopes NWI Classification: Not mapped									
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, explain in Remarks.)								
Are Vegetation ☐ Soil ☑ or Hydrology ☑ significantly disturbed? ☐ No	Are "Normal" Circumstances present? ✓	Yes No							
Are Vegetation ☐ Soil ☐ or Hydrology ☑ naturally problematic? ☐ No									
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present? ✓ Yes ☐ No									
	Is the Sampled Area	.							
Hydric Soil Present?	within a Wetland? ✓ Yes □ N	10							
Field Wetland Classification: PFO									
Remarks: FLOOD LEVELS AND BANK FULL DUE TO SNOW MELT CONDITION:									
HYDROLOGY									
Wetland Hydrology Indicators:	Secondary Indicators (2 or mo	ore required)							
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)								
☑ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)								
☐ Aquatic Fauna (B13)									
✓ Saturation (A3) ☐ Marl Deposits (B15)	□ Dry-Season Water Table	(C2)							
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)								
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Liv	ng Roots (C3) Saturation Visible on Aeri	ial imagery (C9)							
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plan	nts (D1)							
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	oils (C6) Geomorphic Position (D2	2)							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)								
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		(D4)							
☐ Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutral Test (D5)								
Field Observations:	T								
Surface Water Present? ✓ Yes No Depth (inches): 1-6									
Water Table Present? ✓ Yes No Depth (inches): 0	Wetland Hydrology Present?								
Saturation Present?	_	s 🗆 No							
(includes capillary fringe)									
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections), if available):								
VEGETATION									
Tree Stratum									
Plot Size: 30									
Scientific Name	% Cover Dominant	Indicator Status							
Betula papyrifera	10 NO	FACU							
Quercus palustris Carpinus caroliniana	20 YES NO	FACW FAC							
Acer rubrum	20 YES	FAC							
Total Covi	er: 55								



Providence, Ri 02904							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Alnus incana		30	YES	FACW			
	Total Cover:	30					
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
Onoclea sensibilis		25	YES	FACW			
Lythrum salicaria		10	YES	OBL			
	Total Cover:	35					
Woody Vine Stratum							
Plot Size: 30				1			
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:					
Number of Dominant Species	Total % Cover of		Multiply by:				
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>10</u>	x 1 = 10				
Total Number of Dominant	FACW Species:		x 2 = 150				
Species Across All Strata: 5 (B)	FAC Species:	<u>25</u>	x 3 = 75				
Percent of Dominant Species	FACU Species:		x 4 = <u>40</u>				
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	120 (A)	275 (B)				
	,	Prevalence Index	= B/A = 2.29				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
☑ 2 - Dominance Test is > 50%							
3 - Prevalence Index is ≤ 3.0 4 Many halo size I Adopt time 1 (Provide averagetion)	Hoden both M	Hydrophytic Veretation Present?					
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	Hydrophytic Vegetation Present? ☑ Yes ☐ No					
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
Remarks:	I						



Providence, R	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abs	ence of indicators.)	
Depth	Matrix		-		atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	exture	Remarks
0.16	, ,		` ′				FINIT	CAND	
0-16	N2.5	90	10YR 7/1 2.5YR 3/6	5 5	C	M M	FINE	SAND	
16-18	10YR 7/6	80	10YR 6/8	20	С	М	EINE	SAND	
10-10	1011/1/0	80	1011000	20		IVI	IINL	SAND	
¹Type: C=Cond	 centration, D=De	 epletion	l n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains	. ² Location: PL:	 =Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	·	o all LRR's, unle						roblematic Hydric Soils ³ :
	,	ouble t	·			•	:0\		•
Histosol (A	•			1LRA 1		Surface (S	8) (LRR R,		(A10) (LRR K, L, MLRA 149B)
= ' '	pedon (A2)							=	e Redox (A16) (LRR K, L, R)
■ Black Hist	tic (A3)		п т	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mi	neral (F1)	(LRR K, L)	☐ Dark Surfac	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)		☑ L	.oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
□ Depleted I	Below Dark Surfa	ace (A1	(11) 📝 C	eplete	ed Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		☐ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))		eplete	d Dark Su	urface (F7)		☐ Piedmont FI	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)		☐ Mesic Spodi	ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallov	w Dark Surface (TF12)
	ace (S7) (LRR R	. MLRA	A 149B)					= '	ain in Remarks)
_			·				ess disturbed or pr		
Remarks:									
Description of I	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: 🗹 High	_ r	Moderate	Low			Isolated Wetland	d? ☐ Yes ☑	No Unknown
General Comm	ents:								





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WETLAND DETERMINATION FORM - Northcentral and Northeast Region												
WE	TLAND	DE1	ERN	IINATI	ON FORM -	Northce	entral and	d No	rtheast	Region		
✓ Centerline ☐ Re-Ro	oute [] Acce	ss Roa	d 🗖	Ancillary Facility	·	Transmission	Line	☐ Othe	er		
Project/Site: NED			ı	Milepost:	24865.0	County:	Essex			Date:	12/03/201	4
Applicant/Owner: Kinder Mo	rgan			<u> </u>		State:	MA	Samp	ling Point:	ME-P-W	001-UPL	
Investigators: AF CV		Quad N	ame:	Lawrence		Township	o: Methu	en .				
Logbook No.: 2014P3	Logi	oook Pg	ı.: 17		Tract: 6841	1						
Landform (hillslope, terrace, e	etc.):	UPLA	ND FO	REST	Local R	elief:] Concave	V	Convex	None	Slope%.:	0
Subregion (LRR): Middle	e Atlantic			Lat:	42.740097		Long:	-71.222	2520		Datum: NAI	D83
Soil Map Unit Name: Pip	Soil Map Unit Name: Pipestone loamy sand, 0 to 3 percent slopes NWI Classification: Not mapped											
Are climatic / hydrologic cond	itions on th	ne site t	pical f	or this time	e of year?:	7 Yes	☐ No (If no	o, expla	ain in Rema	rks.)		
Are Vegetation	or H	ydrolog	/ 🗆	significar	ntly disturbed?	√ No	Are "Norma	al" Circ	umstances	present?	✓ Yes	■ No
Are Vegetation	or H	ydrolog	/ V	naturally	problematic?	☐ No						
CLIMMARY OF FINIDIA	ICC A	took .	-:4- n		ina compli		lesstions	. 4			footures	242
SUMMARY OF FINDIN						ig point	locations	s, trai	isects, ii	прогтап	reatures	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☑ No			Is the San	npled	Area _	F	7 N	
Hydric Soil Present?			Yes	☑ No			within a W			Yes 🔽	∐ No	
Wetland Hydrology Present?			Yes	☑ No	1							
Field Wetland Classification:		AND PL										
Remarks: SNOW ME	LT CAUS	ED FLO	ODING	S AND BA	NK FULL CONDIT	TIONS						
HYDROLOGY												
Wetland Hydrology Indicato	rs:							<u>S</u>	econdary Ir	dicators (2	or more requ	uired)
Primary Indicators (minimum	of one rec	uired; c	heck a	ll that appl	y).] Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)				☐ Water	-Stained Leaves (B9)] Drainage	e Patterns (B10)	
☐ High Water Table (A2)				☐ Aquat	ic Fauna (B13)				Moss Tr	im Lines (B	16)	
☐ Saturation (A3)				Marl D	Deposits (B15)] Dry-Sea	son Water	Table (C2)	
□ Water Marks (B1)				☐ Hydro	gen Sulfide Odor	(C1)] Crayfish	Burrows (0	28)	
☐ Sediment Deposits (B2)				Oxidiz	ed Rhizospheres	along Livin	g Roots (C3)] Saturation	on Visible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of Reduced Ir	on (C4)] Stunted	or Stressec	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction i	n Tilled Soi	ils (C6)] Geomor	phic Positio	n (D2)	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7)				Shallow	Aquitard (D	03)	
☐ Inundation Visible on Ae	rial Image	ry (B7)		Other	(Explain in Remai	rks)	<u> </u>					
☐ Sparsely Vegetated Cor	cave Surfa	ace (B8)] FAC-Ne	utral Test (I	D5)	
Field Observations:												
Surface Water Present?	☐ Yes	$\overline{\mathbf{V}}$	No [Depth (inc	hes):							
Water Table Present?	☐ Yes	V	l oV	Depth (inc	hes):		Wetlan	nd Hydi	rology Pres	_		
Saturation Present? (includes capillary fringe)	☐ Yes	V	No [Depth (inc	hes):					Ц	Yes ✓	No
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring we	II, aerial photos, p	revious ins	pections), if a	vailable	e):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% Cc	over	Do	minant	Indicate	or Status
Quercus rubra							20			'ES		CU
Quercus velutina Pinus strobus							10			'ES 'ES		PL ،CU
					T	otal Cover	: 45	5	'		•	



Providence, Ri 02904							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Alnus incana		10	YES	FACW			
	Total Cover:	10	!	ı			
Herb Stratum							
Plot Size: 5							
	1	0/ 0	Dominant	Indicator Status			
Scientific Name		% Cover					
Lycopodium clavatum Fragaria virginiana		15 20	YES YES	FAC FACU			
	Total Cover:	35	1	ı			
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:		I	I			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet					
Number of Dominant Species	Total % Cover of		Multiply by:				
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = 0				
Total Number of Dominant	FACW Species:		$x 2 = \underline{20}$				
Species Across All Strata: 6 (B)	FAC Species:	15	$x = \frac{25}{20}$ $x = \frac{45}{20}$				
Percent of Dominant Species	FACU Species:		$x = \frac{43}{220}$ $x = \frac{220}{220}$				
That Are OBL, FACW, or FAC: 33 (A/B)	UPL Species:	<u>55</u> 10					
	Column Totals:	<u>10</u> 90 (A)	x 5 = <u>50</u> 335 (B)				
							
	F	Prevalence Index :	= B/A = <u>3.72</u>				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
2 - Dominance Test is > 50%							
3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	Hydrophytic Vegetation Present? ☐ Yes ☑ No					
data in Remarks or on a separate sheet)							
Problematic Hydrophytic Vegetation¹ (Explain)							
¹Indicators of hydric soil and wetland hydrology must be							
present, unless disturbed or problematic.							
Remarks:							



	1 02304											C 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to d	ocum	ent the in	dicator o	r confirm t	he abser	nce of indicators.)			
Depth	Matrix		Red	lox Fe	atures							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure		Rei	marks
0-2	10YR2/1	100						ORGA	ANIC			
2-4	10YR4/6	100						SANDY	LOAM			
2 4	1011(4/0	100						0/11401	LOTUVI			
	10)/5=/0											
4-18	10YR7/6	100						SAN	ND			
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced I	√atrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	g, M=M	latrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ss otl	nerwise n	oted.)			Indicators for Pr	oblematio	Hydric	Soils ³ :
☐ Histosol (/	A1)		□Р	olyvalı	ue Below :	Surface (S	88) (LRR R,		2 cm Muck (A10) (LRR	K, L, M	LRA 149B)
☐ Histic Epipedon (A2) ☐ Coast Prairie Redox (A16) (LR									•			
☐ Black Hist			Пт	hin Da	ırk Surface	e (S9) (I R	R R, MLRA	149B)				(LRR K, L, R)
	Sulfide (A4)		_)	☐ Dark Surface		, ,	
				-	-		(LRR K, L)			. , .		•
	Layers (A5)	/ ^ 4		-	Gleyed Ma				Polyvalue Be		. , ,	•
	Below Dark Surfa	ace (A1	_	•	d Matrix (I	•			Thin Dark Su		•	
☐ Thick Dar	k Surface (A12)		□ R	edox I	Dark Surfa	ice (F6)			☐ Iron-Mangan	ese Masse	s (F12)	(LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain S	oils (F19	9) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox l	Depressio	ns (F8)				c (TA6) (M	LRA 144	4A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F	21)	
☐ Stripped N	Matrix (S6)								□ Very Shallov	Dark Surf	ace (TF	12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						☐ Other (Expla	in in Rema	ırks)	
	ovdrophytic vege	tation a	and wetland hydro	loav n	nust he nr	esent unle	ess disturb	ed or prob	lematic			
Restrictive Layer Present?												
									Hydric Soil Prese	nt? 🔲	Yes	✓ No
Remarks:												
Description of	Habitat Characte	ristics.	Aquatic Diversity	or Ge	neral Com	ments:						
		,	,									
Wetland Qualit	v: 🗖 High		Moderate	οω/			leolated	Wetland?		No. I	l Unkr	nown
Welland Qualit	y. 🔲 Iligii	ш '	vioderate	_O W			isolated	vvetiana:	☐ Yes ☐	140 L	Olikii	OWII
General Comm	ents:											





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WETLAND DETERMINATION FORM - Nor	thcentral and Northeast Region							
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other							
Project/Site: NED Milepost: 26807.4 Con	unty: Essex Date: 07/09/2015							
Applicant/Owner: Kinder Morgan Sta	tte: MA Sampling Point: ME-E-W001-PEM							
Investigators: SE JW Quad Name: Lawrence Tox	wnship: Methuen							
Logbook No.: 2015-1 Logbook Pg.: 76 Tract: 6419								
Landform (hillslope, terrace, etc.): Depression Local Relief:	✓ Concave ☐ Convex ☐ None Slope%.: 1							
Subregion (LRR): Middle Atlantic Lat: 42.741749	Long: -71.215648 Datum: NAD83							
Soil Map Unit Name: Deerfield loamy fine sand, 0 to 3 percent slopes	NWI Classification: Not mapped							
Are climatic / hydrologic conditions on the site typical for this time of year?:	'es No (If no, explain in Remarks.)							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No Are "Normal" Circumstances present? ☑ Yes □ No							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No							
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present?	, , , , , , , , , , , , , , , , , , ,							
Hydric Soil Present? ✓ Yes ☐ No	Is the Sampled Area							
Wetland Hydrology Present?	within a Wetland?							
Field Wetland Classification: PEM								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)							
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)							
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)							
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)							
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)							
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)							
☐ Sediment Deposits (B2) ☑ Oxidized Rhizospheres along								
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	Stunted or Stressed Plants (D1)							
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	<u> </u>							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)							
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)							
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)							
Field Observations:								
Surface Water Present?								
Water Table Present?	Wetland Hydrology Present?							
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☑ Yes □ No							
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	us inspections), if available):							
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name	% Cover Dominant Indicator Status							
Total	Cover:							



Providence, Ri 02904						
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Herb Stratum						
Plot Size: 5						
Scientific Name	1	% Cover	Dominant	Indicator Status		
Carex crinita		35	YES	OBL		
Boehmeria cylindrica		15	NO	OBL		
Impatiens capensis Onoclea sensibilis		10 60	NO YES	FACW FACW		
	Total Cover:	120	ı	I		
Woody Vine Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:		l	I		
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:				
Number of Dominant Species That Are OBL FACW or FAC: 2 (A)	Total % Cover	of:	Multiply by:			
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>50</u>	x 1 = <u>50</u>			
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	: <u>70</u>	x 2 = <u>140</u>			
Species Across All Strata: 2 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>			
That Are Obl., FACW, or FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>			
	Column Totals:	120 (A)	<u>190 (B)</u>			
	ı	Prevalence Index =	= B/A = <u>1.58</u>			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
✓ 2 - Dominance Test is > 50%						
3 - Prevalence Index is ≤ 3.0 A Marshalarian Adoptational (Dravide supporting)	Hydrophytic Vegetation Present? ✓ Yes ☐ No					
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Tryatophytic vegetation resent: V 165 LI NO					
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
_ , , , , , ,						
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Remarks:						
Remarks:						



Providence, R	RI 02904										
SOIL											
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the ir	ndicator o	r confirm the abse	ence of indicators.)			
Depth	Matrix		Redox Features						, 		
(inches)	Color (moist) %		Color (moist)	%	Type ¹	Loc2	Tex	cture	Remarks		
0-2	10YR 3/1	100					FINE SANDY LOAM				
2-4	2.5Y 6/3	97	2.5Y 6/6	3	С	М	LOAMY SAND				
4-7	10YR 2/1	100					ORG	ANIC			
7-20	2.5Y 5/3	90	10YR 5/4 2.5Y 6/2	6 2	C D	M M	LOAM	Y SAND			
1Type: C-Cond	contration D_D	nlotion	7.5YR 5/8	2 Motrix	CS-Cov	PL orod Sond	or Coated Grains.	21 postion: DI -	-Poro Lining M-Matrix		
		•	-				or Coaled Grains.		Pore Lining, M=Matrix		
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :											
☐ Histosol (A	,			olyvalı 1LRA 1		Surface (S	8) (LRR R,	_	A10) (LRR K, L, MLRA 14		
☐ Histic Epip	pedon (A2)		.,•	12101	102)			☐ Coast Prairie	e Redox (A16) (LRR K, L,	R)	
■ Black Hist	ic (A3)		□ T	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K	, L, R)	
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1) ((LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)		
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K	, L)	
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔲 🗅	eplete	d Matrix (F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)		
☐ Thick Darl	☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R)										
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLR	A 149B)	
☐ Sandy Gle	eyed Matrix (S4)		□ F	ledox l	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145	, 149B)	
✓ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)		
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)		
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	(149B)					Other (Expla	in in Remarks)		
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.			
Restrictive Lay	ver Present?	<u> </u>	∕es ☑ No	–	nknown			Hydric Soil Prese	ent? ☑ Yes 🗆 N	No	
Remarks:											
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:					
Wetland Qualit	y: High	☑ N	Moderate	Low			Isolated Wetland	? □ Yes ☑	No 🔲 Unknown		
General Comm	ents:										





NE



WETLAND DETERMINATION FORM - North	ncentral and Northeast Region						
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility [☐ Transmission Line ☐ Other						
Project/Site: NED Milepost: 26748.7 Cour	ty: Essex Date: 07/09/2015						
Applicant/Owner: Kinder Morgan State	: MA Sampling Point: ME-E-W001-UPL						
Investigators: SE JW Quad Name: Lawrence Town							
Logbook No.: 2015-1 Logbook Pg.: 76 Tract: 6419							
Landform (hillslope, terrace, etc.): Flat Local Relief:	☐ Concave ☐ Convex ☑ None Slope%.: 0						
Subregion (LRR): Middle Atlantic Lat: 42.741616	Long: -71.215809 Datum: NAD83						
Soil Map Unit Name: Deerfield loamy fine sand, 0 to 3 percent slopes	NWI Classification: Not mapped						
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ N	· — —						
Are vegetation our or riyutology naturally problematic: is							
SUMMARY OF FINDINGS - Attach site map showing sampling po	int locations, transects, important features, etc.						
Hydrophytic Vegetation Present? ☐ Yes ☑ No							
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area ☐ Yes ☑ No within a Wetland?						
Wetland Hydrology Present? ☐ Yes ☑ No	mann a rronana.						
Field Wetland Classification: UPLAND PLOT							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)						
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)						
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	Drainage Patterns (B10)						
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)						
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)						
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	·						
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along I	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)						
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	on (C4) Stunted or Stressed Plants (D1)						
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	_						
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)						
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present?							
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?						
Saturation Present?	☐ Yes ☑ No						
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):							
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name	% Cover Dominant Indicator Status						
Pinus strobus Acer rubrum	45 YES FACU 12 NO FAC						
Quercus rubra Total Co	8 NO FACU over: 65						



Providence, Rt 02904						
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Vaccinium angustifolium Frangula alnus Pinus strobus		20 6 10	YES NO YES	FACU FAC FACU		
	Total Cover:	36		'		
Herb Stratum						
Plot Size: 5						
Scientific Name		% Cover	Dominant	Indicator Status		
LYCOPODIUM OBSCURUM		3	YES	FACU		
Trientalis borealis		3	YES	FAC		
	Total Cover:	6				
Woody Vine Stratum						
Plot Size: 30	1		ı	1		
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:				
Number of Dominant Species	Total % Cover of	of:	Multiply by:			
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>			
Species Across All Strata: 5 (B)	FAC Species:	<u>21</u>	x 3 = <u>63</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)	FACU Species:	<u>86</u>	x 4 = <u>344</u>			
That Ale ODE, I AOW, OIT AO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>			
	Column Totals:	<u>107 (A)</u>	407 (B)			
	F	Prevalence Index :	= B/A = <u>3.80</u>			
Hydrophytic Vegetation Indicators:						
☐ 1 - Rapid Test for Hydrophytic Vegetation						
2 - Dominance Test is > 50%						
☐ 3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☐ Yes ☑ No					
data in Remarks or on a separate sheet)						
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Remarks:	I					



	(1 02004											3 1 6 1 6	
SOIL													
Profile Descrip	otion: (Describe	the de	epth neede	d to do	cume	nt the in	dicator o	r confirm t	he absen	ce of indicators.)			
Depth	Matrix			Redo	x Fea	tures							
(inches)	Color (moist)	%	Color (mo	ist)	%	Type ¹	Loc ²		Text	ure		Remarks	
0-2	5YR 3/2	100							ORGA	NIC		WITH ROOTS	
2-6	7.5YR 4/4	100						F	INE SAND	DY LOAM			
								57 57					
	10YR 4/3	100						FINE SANDY LOAM					
6-16	1018 4/3	100						FINE SANDT LOAW					
16-20	10YR 6/6	100							LOAMY	SAND			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Redu	iced Ma	atrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining	g, M=Matrix	
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's	, unless	s othe	erwise n	oted.)			Indicators for Pr	oblematic	Hydric Soils ³ :	
Histosol (A	A1)		Г	7 Pol	vvalue	e Below S	Surface (S	8) (LRR R,		2 cm Muck (A10) (I RR	K, L, MLRA 149E	3)
= `	pedon (A2)		L		RA 14		- C	0) (=		_		16) (LRR K, L, R)	•
				7 Th:.	. Darl	Curtos	(CO) (LDI		140B)	_	,	, , , , ,	
☐ Black Hist	` '							R R, MLRA	1496)			at (S3) (LRR K, L	., K)
_ ' '	Sulfide (A4)				•	•	, ,	(LRR K, L)		☐ Dark Surface		•	
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L))					
☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thin Dark Surface (S9) (LRR K, L)													
☐ Thick Dar	k Surface (A12)			Rec	dox Da	ark Surfa	ice (F6)			☐ Iron-Mangan	ese Masse	es (F12) (LRR K, I	L, R)
☐ Sandy Mu	ucky Mineral (S1))		Dep	oleted	Dark Su	rface (F7)			☐ Piedmont Flo	odplain So	oils (F19) (MLRA	149B)
☐ Sandy Gl	eyed Matrix (S4)		Г	Red	dox D	epressio	ns (F8)			☐ Mesic Spodi	c (TA6) (ML	_RA 144A, 145, 1	49B)
☐ Sandy Re	dox (S5)									Red Parent I			,
☐ Stripped I	Matrix (S6)											·	
_	, , ,		,								III III Keilla	iks)	
³ Indicators of I	nydrophytic vege	tation a	and wetland	hydrolo	gy mu	ust be pro	esent, unle	ess disturb	ed or prob	lematic.			
Restrictive Lay	er Present?		Yes ☑ N	lo 🔲	Un	known							
										Hydric Soil Prese	nt?	Yes ☑ No	,
Remarks:								I					
Description of	Habitat Characte	eristics,	Aquatic Div	ersity o	r Gen	eral Com	ments:						
Wetland Qualit	ty: 🔲 High		Moderate	☐ Lo	W			Isolated	Wetland?	☐ Yes ☐	No 🔲	Unknown	
Canaral Camm	anta.												
General Comm	ients:												





SOUTH



WETLAND DETERMINATION FORM - Nor	thcentral and Northeast Region				
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other				
Project/Site: NED Milepost: 28327.0 Cou	unty: Essex Date: 07/15/2015				
Applicant/Owner: Kinder Morgan Stat	te: MA Sampling Point: ME-P-W007-PSS				
Investigators: PF JW Quad Name: Lawrence Tow	vnship: Methuen				
Logbook No.: 2015-1 Logbook Pg.: 74 Tract: 9176					
Landform (hillslope, terrace, etc.): Slope - toe Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 2				
Subregion (LRR): Middle Atlantic Lat: 42.743332	Long: -71.210455 Datum: NAD83				
Soil Map Unit Name: Limerick and Rumney soils, 0 to 3 percent slopes	NWI Classification: Not mapped				
Are climatic / hydrologic conditions on the site typical for this time of year?:	es No (If no, explain in Remarks.)				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No Are "Normal" Circumstances present? ☑ Yes ☐ No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No				
SUMMARY OF FINDINGS - Attach site map showing sampling p	oint locations, transects, important features, etc.				
Hydrophytic Vegetation Present?					
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area				
Wetland Hydrology Present?					
Field Wetland Classification: PSS					
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)				
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)				
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)				
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)				
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)				
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)				
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	ron (C4) Stunted or Stressed Plants (D1)				
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	n Tilled Soils (C6) Geomorphic Position (D2)				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)				
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	·				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present?					
Water Table Present?	Wetland Hydrology Present? ✓ Yes ☐ No				
Saturation Present?	V Tes NO				
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	us inspections), if available):				
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name	% Cover Dominant Indicator Status				
Acer rubrum	20 YES FAC				
Total 0	Cover: 20				



Providence, RI 02904							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Carpinus caroliniana Rhamnus alnifolia		20 80	YES YES	FAC OBL			
Knamnus ammona	Total Cover:	100	TES	OBL			
	Total Gover.						
Herb Stratum							
Plot Size: 5	ı			ı			
Scientific Name		% Cover	Dominant	Indicator Status			
Toxicodendron radicans Rhamnus alnifolia		10 60	NO YES	FAC OBL			
Solidago rugosa		20	YES	FAC			
Onoclea sensibilis	Total Cover:	20 110	YES	FACW			
Woody Vina Stratum	Total Cover.	110					
Woody Vine Stratum Plot Size: 30							
	ı	0/ 00/	Domine-t	Indicator Status			
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
	Total Cover:						
Dominance Test Worksheet:		dex Worksheet:					
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)	Total % Cover		Multiply by:				
	OBL Species:	<u>140</u>	x 1 = <u>140</u>				
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species		x 2 = <u>40</u>				
Paraget of Dominant Capaign	FAC Species:	<u>70</u>	x 3 = <u>210</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = <u>0</u>				
	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	230 (A)	<u>390 (B)</u>				
		Prevalence Index =	= B/A = <u>1.70</u>				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ✓ Yes □ No						
data in Remarks or on a separate sheet)							
Problematic Hydrophytic Vegetation¹ (Explain)							
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
Remarks:							



Depth (inches) 0-10 10-20 17ype: C=Concer Hydric Soil Indic Histosol (A1 Histic Epipee Black Histic Hydrogen St Stratified Lat Depleted Be Thick Dark S Sandy Muck Sandy Gleye Sandy Redo Stripped Ma	Matrix Color (moist) 10YR 2/2 10YR 3/1 entration, D=Doicators: (Appliant) (A) edon (A2) (C (A3) Sulfide (A4) ayers (A5) Selow Dark Surface (A12) (C (A3) Color (A3) Sulface (A12) (C (A3) Color (A3) Sulface (A5) (C (A3) Sulface (A5) (C (A3) (C	% (100 80 80 sepletion, Ficable to a sepletion)	Recocolor (moist) 10YR 4/3 7.5Y 3/6 RM=Reduced I III LRR's, unle	Matrix, Polyvalu Thin Da Loamy I Loamy I Deplete Redox I Deplete	D C CS=Covererwise n Lucky Mir Gleyed Matrix (I Dark Surface)	M PL ered Sand oted.) Surface (S e (S9) (LRI neral (F1) (atrix (F2)	FINE SAND or Coated Grains. 8) (LRR R, R R, MLRA 149B) LRR K, L)	LOAM 2Location: PL= Indicators for Pr 2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Br	Remarks =Pore Lining, M=Matrix roblematic Hydric Soils³: A10) (LRR K, L, MLRA 149B) = Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) = (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
Depth (inches) 0-10 10-20 10-20 Type: C=Concer Hydric Soil Indic Histosol (A1 Histic Epiper Black Histic Hydrogen St Stratified Lat Depleted Be Thick Dark S Sandy Muck Sandy Gleye Sandy Redc Stripped Ma Dark Surfac Indicators of hyd Restrictive Layer Remarks: Description of Ha	Matrix Color (moist) 10YR 2/2 10YR 3/1 entration, D=Doicators: (Appliant) (A) edon (A2) (C (A3) Sulfide (A4) ayers (A5) Selow Dark Surface (A12) (C (A3) Color (A3) Sulface (A12) (C (A3) Color (A3) Sulface (A5) (C (A3) Sulface (A5) (C (A3) (C	% (100 80 80 sepletion, Ficable to a sepletion)	Recocolor (moist) 10YR 4/3 7.5Y 3/6 RM=Reduced I III LRR's, unle	Matrix, Polyvalu Thin Da Loamy I Loamy I Deplete Redox I Deplete	D C CS=Cover Mucky Mir Gleyed Matrix (ID Dark Surfaced Dar	M PL ered Sand oted.) Surface (S e (S9) (LRI neral (F1) (atrix (F2)	Text SANDY FINE SANI or Coated Grains. 8) (LRR R, R R, MLRA 149B)	LOAM 2Location: PL= Indicators for Pr 2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Br	Remarks =Pore Lining, M=Matrix roblematic Hydric Soils³: A10) (LRR K, L, MLRA 149B) = Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) = (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
Depth (inches) 0-10 10-20 10-20 10-20 11ype: C=Concer Hydric Soil Indic Epiped Histic Epiped Histic Epiped Hydrogen St Stratified Lat Depleted Be Thick Dark S Sandy Muck Sandy Muck Sandy Redc Stripped Ma Dark Surfac Indicators of hyd Restrictive Layer Remarks: Description of Ha	Matrix Color (moist) 10YR 2/2 10YR 3/1 entration, D=Doicators: (Appliant) (A) edon (A2) (C (A3) Sulfide (A4) ayers (A5) Selow Dark Surface (A12) (C (A3) Color (A3) Sulface (A12) (C (A3) Color (A3) Sulface (A5) (C (A3) Sulface (A5) (C (A3) (C	% (100 80 80 sepletion, Ficable to a sepletion)	Recocolor (moist) 10YR 4/3 7.5Y 3/6 RM=Reduced I III LRR's, unle	Matrix, Polyvalu Thin Da Loamy I Loamy I Deplete Redox I Deplete	D C CS=Cover Mucky Mir Gleyed Matrix (ID Dark Surfaced Dar	M PL ered Sand oted.) Surface (S e (S9) (LRI neral (F1) (atrix (F2)	Text SANDY FINE SANI or Coated Grains. 8) (LRR R, R R, MLRA 149B)	LOAM 2Location: PL= Indicators for Pr 2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Br	Remarks =Pore Lining, M=Matrix roblematic Hydric Soils³: A10) (LRR K, L, MLRA 149B) = Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) = (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
0-10 10-20 10-20 11Type: C=Concer Hydric Soil Indic Histosol (A1 Histic Epiper Black Histic Hydrogen St Stratified Lat Depleted Be Thick Dark S Sandy Muck Sandy Gleye Stripped Ma Dark Surfac Indicators of hyd Restrictive Layer Remarks: Description of Ha	10YR 2/2 10YR 3/1 entration, D=Do ficators: (Applia 1) edon (A2) oc (A3) Sulfide (A4) ayers (A5) Below Dark Surf Surface (A12) ocky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6)	100 80 Repletion, Ficable to a	10YR 4/3 7.5Y 3/6 RM=Reduced I III LRR's, unle D R C R R R R R R R R	Matrix, Polyvalu MLRA 1 Thin Da Loamy I Loamy C Deplete Redox E	D C CS=Cov nerwise n ue Below (49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Surfa	M PL ered Sand oted.) Surface (S e (S9) (LRI neral (F1) (atrix (F2)	SANDY FINE SANI or Coated Grains. 8) (LRR R, R R, MLRA 149B)	LOAM 2Location: PL= Indicators for Pr 2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Br	=Pore Lining, M=Matrix roblematic Hydric Soils³: A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
10-20 Type: C=Concer Hydric Soil Indic Histosol (A1 Histic Epiper Black Histic Hydrogen St Stratified Lat Depleted Be Thick Dark S Sandy Muck Sandy Gleyer Sandy Redo Stripped Ma Dark Surface Indicators of hydrogen Restrictive Layer Remarks: Description of Hat Wetland Quality:	entration, D=Do cators: (Applia 1) edon (A2) c (A3) Sulfide (A4) ayers (A5) delow Dark Surf Surface (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6)	80 Repletion, Ficable to a face (A11)	7.5Y 3/6 RM=Reduced I III LRR's, unle	Matrix, Polyvalu MLRA 1 Thin Da Loamy I Loamy (Deplete	CS=Cov nerwise n ue Below (49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su	PL ered Sand oted.) Surface (S e (S9) (LRI neral (F1) (atrix (F2) F3)	or Coated Grains. 8) (LRR R, R R, MLRA 149B)	2Location: PL= Indicators for Pt 2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface	roblematic Hydric Soils ³ : A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
Hydric Soil Indic Histosol (A1 Histic Epiped Black Histic Hydrogen St Stratified Lat Depleted Be Thick Dark S Sandy Muck Sandy Gleyd Stripped Ma Dark Surfact Indicators of hydrestrictive Layer Remarks: Description of Ha	entration, D=Do ficators: (Applii 11) edon (A2) oc (A3) Sulfide (A4) ayers (A5) Selow Dark Surf Surface (A12) ocky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6)	pepletion, Ficable to a	7.5Y 3/6 RM=Reduced I III LRR's, unle	Matrix, Polyvalu MLRA 1 Thin Da Loamy I Loamy (Deplete	CS=Cov nerwise n ue Below (49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su	PL ered Sand oted.) Surface (S e (S9) (LRI neral (F1) (atrix (F2) F3)	or Coated Grains. 8) (LRR R, R R, MLRA 149B)	²Location: PL= Indicators for Pr	roblematic Hydric Soils ³ : A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
Hydric Soil Indic Histosol (A1 Histic Epipee Black Histic Hydrogen Si Stratified Lay Depleted Be Thick Dark Si Sandy Muck Sandy Redo Stripped Ma Dark Surfac Indicators of hydres Remarks: Description of Har	icators: (Appliant) edon (A2) c (A3) Sulfide (A4) ayers (A5) Below Dark Surfice (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6) latrix (S6)	icable to a	III LRR's, unle	Polyvalu Polyvalu ILRA 1 Thin Da Loamy I Loamy (Deplete Deplete	nerwise n ue Below (49B) urk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su	oted.) Surface (S e (S9) (LRI neral (F1) (atrix (F2)	8) (LRR R, R R, MLRA 149B)	Indicators for Pr 2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface	roblematic Hydric Soils ³ : A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
Histosol (A1 Histic Epiped Black Histic Hydrogen St Stratified Lat Depleted Be Thick Dark S Sandy Muck Sandy Gleyd Stripped Ma Dark Surfact Indicators of hydrogen Remarks: Description of Hat Wetland Quality:	edon (A2) c (A3) Sulfide (A4) ayers (A5) Selow Dark Surf Surface (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6)	face (A11)))	P P M	Polyvalu ILRA 1 Thin Da oamy I oamy (Deplete Deplete	ue Below (149B) ark Surface Mucky Mir Gleyed Ma d Matrix (1) Dark Surfa	Surface (S e (S9) (LRI neral (F1) (atrix (F2)	R R, MLRA 149B)	2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be	A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
Histic Epiped Black Histic Hydrogen Stratified Lag Depleted Be Thick Dark S Sandy Muck Sandy Gleyd Sandy Redo Stripped Ma Dark Surfact Indicators of hyd Restrictive Layer Remarks: Description of Hat Wetland Quality:	edon (A2) c (A3) Sulfide (A4) ayers (A5) delow Dark Surf Surface (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6))		ILRA 1 Thin Da oamy I oamy (Deplete Redox D Deplete	I 49B) Irk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su	e (S9) (LRI neral (F1) (atrix (F2) F3)	R R, MLRA 149B)	Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be	e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
Histic Epiped Black Histic Hydrogen Stratified Lag Depleted Be Thick Dark S Sandy Muck Sandy Gleyd Sandy Redo Stripped Ma Dark Surfact Indicators of hyd Restrictive Layer Remarks: Description of Hat Wetland Quality:	c (A3) Sulfide (A4) ayers (A5) Below Dark Surf Surface (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6))		ILRA 1 Thin Da oamy I oamy (Deplete Redox D Deplete	I 49B) Irk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su	e (S9) (LRI neral (F1) (atrix (F2) F3)	R R, MLRA 149B)	Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be	e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
□ Black Histic □ Hydrogen Si □ Stratified Lay □ Depleted Be □ Thick Dark Si □ Sandy Muck □ Sandy Redci □ Stripped Mai □ Dark Surface ³Indicators of hydrestrictive Layer Remarks: Description of Hailer Wetland Quality:	c (A3) Sulfide (A4) ayers (A5) Below Dark Surf Surface (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6))	Lo	oamy (oamy (Deplete Redox (Deplete	Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su	neral (F1) (atrix (F2) F3)	·	5 cm Mucky Dark Surface Polyvalue Be	Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
Hydrogen Si Stratified La; Depleted Be Thick Dark S Sandy Muck Sandy Gleye Sandy Redo Stripped Ma Dark Surfac Indicators of hyd Restrictive Layer Description of Ha Wetland Quality:	Sulfide (A4) ayers (A5) delow Dark Surf Surface (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6))	Lo	oamy (oamy (Deplete Redox (Deplete	Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su	neral (F1) (atrix (F2) F3)	·	□ Dark Surface □ Polyvalue Be	e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L)
Stratified Lag Depleted Be Thick Dark S Sandy Muck Sandy Gleye Sandy Redo Stripped Ma Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Ha	ayers (A5) delow Dark Surf Surface (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6))	Lu	oamy (Deplete Redox Deplete	Gleyed Ma d Matrix (I Dark Surfa d Dark Su	atrix (F2) F3)	, - - /	Polyvalue B	elow Surface (S8) (LRR K, L)
Depleted Be Thick Dark S Sandy Muck Sandy Gleye Sandy Redo Stripped Ma Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Ha Wetland Quality:	Below Dark Surf- Surface (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6))	D D D R	Deplete Redox Deplete	d Matrix (I Dark Surfa d Dark Su	F3)			
☐ Thick Dark S ☐ Sandy Muck ☐ Sandy Gleye ☐ Sandy Redo ☐ Stripped Ma ☐ Dark Surface ³Indicators of hyo Restrictive Layer Remarks: Description of Ha Wetland Quality:	Surface (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6) ice (S7) (LRR R)	_ □ R □ R	Redox [Dark Surfa d Dark Su	•		☐ Thin Dark St	urface (S9) (LRR K, L)
Sandy Muck Sandy Gleye Sandy Redo Stripped Ma Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Ha Wetland Quality:	cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6) ce (S7) (LRR R)	_ _ D _ R	Deplete	d Dark Su	ICE (FO)			nese Masses (F12) (LRR K, L, R)
Sandy Gleyd Sandy Redo Stripped Ma Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Ha Wetland Quality:	yed Matrix (S4) dox (S5) latrix (S6) ce (S7) (LRR R)	_ □ R			ırface (F7)		_	podplain Soils (F19) (MLRA 149B)
Stripped Ma Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Ha Wetland Quality:	latrix (S6) ce (S7) (LRR R	R, MLRA 14	_						c (TA6) (MLRA 144A, 145, 149B)
Dark Surface Indicators of hyder Restrictive Layer Remarks: Description of Har Wetland Quality:	ice (S7) (LRR R	R, MLRA 14	49R)			. ,			Material (F21)
Dark Surface Indicators of hyder Restrictive Layer Remarks: Description of Har Wetland Quality:	ice (S7) (LRR R	R, MLRA 14	49R)						v Dark Surface (TF12)
3Indicators of hyd Restrictive Layer Remarks: Description of Ha									ain in Remarks)
Restrictive Layer Remarks: Description of Ha Wetland Quality:	vdrophytic vege	atation and	•	ology m	nuet ha nr	ecent unle	see dieturhed or prob		,
Wetland Quality:									
	labitat Characte	eristics, Aq	uatic Diversity	or Ge	neral Com	nments:			
General Commer	r: ☐ High	☐ Mod	derate 🗹 I	Low			Isolated Wetland?	? ☐ Yes ☑	No Unknown





NW



WETLAND DETERMINATION FORM - N	orthce	ntral and N	lortheast Region		
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	□ ™	ransmission Line	e Other		
Project/Site: NED Milepost: 28353.0	County:	Essex	Date:	07/15/2015	
Applicant/Owner: Kinder Morgan	State: N	MA Sar	npling Point: ME-P-W	007-UPL	
Investigators: PF JW Quad Name: Lawrence	Township:	: Methuen	· •	_	
Logbook No.: 2015-1 Logbook Pg.: 75 Tract: 9176					
Landform (hillslope, terrace, etc.): Slope - mid Local Re	lief:	Concave 🗸	Convex None	Slope%.: 20	
Subregion (LRR): Middle Atlantic Lat: 42.743364		Long: -71.2	210368	Datum: NAD83	
Soil Map Unit Name: Udorthents, smoothed			NWI Classification:	Not mapped	
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes [No (If no, ex	xplain in Remarks.)		
	_ ☑ No	— Are "Normal" C	ircumstances present?	✓ Yes ☐ No	
	— ✓ No				
SUMMARY OF FINDINGS - Attach site map showing samplin	a noint	locations tr	ansects importan	t features etc	
Hydrophytic Vegetation Present? ☐ Yes ☑ No	g point	iocations, ti	anscots, importan	- Toutures, etc.	
Hydric Soil Present? ☐ Yes ☑ No		Is the Sample	ed Area	7 No	
Wetland Hydrology Present? ☐ Yes ☑ No		within a Wetl	and?	ı NO	
Field Wetland Classification: UPLAND PLOT					
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicators (2	or more required)	
Primary Indicators (minimum of one required; check all that apply)			☐ Surface Soil Cracks	s (B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B	39)		☐ Drainage Patterns	B10)	
High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16)					
☐ Saturation (A3) ☐ Marl Deposits (B15)			☐ Dry-Season Water	Table (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (0	C1)		☐ Crayfish Burrows (0	28)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	long Living	Roots (C3)	☐ Saturation Visible of	n Aerial imagery (C9)	
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	_				
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	_				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)					
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	ks) Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D5)	
Field Observations:					
Surface Water Present?					
Water Table Present? ☐ Yes ☑ No Depth (inches):		Wetland H	ydrology Present?	Vaa 🗹 Na	
Saturation Present?				Yes ☑ No	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pre	evious insp	ections), if availa	able):		
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name		% Cover	Dominant	Indicator Status	
Populus deltoides Fraxinus americana		10 30	NO YES	FAC FACU	
Quercus rubra		30	YES	FACU	
То	otal Cover:	70			



Trovidence, IXI 02304						
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Acer rubrum Quercus rubra Pyrus communis Juniperus virginiana		15 20 5 5	YES YES NO NO	FAC FACU UPL FACU		
	Total Cover:	45				
Herb Stratum						
Plot Size: 5						
Scientific Name		% Cover	Dominant	Indicator Status		
Solidago rugosa		15	NO	FAC		
Toxicodendron radicans	Total Cover:	90 105	YES	FAC		
Woody Vine Stratum	Total Cover.	103				
Plot Size: 30						
Scientific Name	I	% Cover	Dominant	Indicator Status		
Scientific Name		76 COVEI	Dominant	Indicator Status		
	Total Cover:					
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:				
Number of Dominant Species That Are OBL. FACW. or FAC: 2 (A)	Total % Cover	6 Cover of: Multiply by:				
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>			
Specific Follows Fill Grands	FAC Species:	<u>130</u>	x 3 = <u>390</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)	FACU Species:	: <u>85</u>	x 4 = <u>340</u>			
	UPL Species:	<u>5</u>	x 5 = <u>25</u>			
	Column Totals:	220 (A)	<u>755 (B)</u>			
	1	Prevalence Index =	= B/A = 3.43			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
2 - Dominance Test is > 50%						
3 - Prevalence Index is ≤ 3.0						
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	Hydrophytic Vegetation Present? ☐ Yes ☑ No				
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Remarks:	1					



T TOVIGETICE, I	(1 0200+										
SOIL											
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the in	dicator o	r confirm the a	bsence of indicators.)			
Depth	Matrix		Re	dox Fe	atures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Texture	Remarks		
0-6	10YR 3/2	100					COA	ARSE SAND			
6-18	10YR 5/3	100					SΔ	NDY LOAM			
0 10	1011(3/3	100					Ο Λ	NOT LOTUS			
1T 0. 0		-1-4:	DM Dadward	\ 4 = 4 = ¹ = 1	00.0		0	i 21 DI	Dans Lining M. Matrix		
		•	, RM=Reduced				or Coated Gra		Pore Lining, M=Matrix		
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess otl	herwise n	oted.)		Indicators for Pi	roblematic Hydric Soils³:		
☐ Histosol (A	A1)			olyval 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)		
☐ Histic Epip	pedon (A2)		IV.	ILKA	1496)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)		
■ Black Hist	ic (A3)		П	hin Da	ark Surface	e (S9) (LRI	R R, MLRA 149	BB) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)		
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)		
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)		
☐ Depleted I	Below Dark Surfa	ace (A1	=	-	ed Matrix (I			_	urface (S9) (LRR K, L)		
	k Surface (A12)	,	_		Dark Surfa				nese Masses (F12) (LRR K, L, R)		
_	ıcky Mineral (S1)		_			ırface (F7)			podplain Soils (F19) (MLRA 149B)		
_	eyed Matrix (S4)		_		Depressio						
			ш .	CUUX	Depressio	113 (1 0)			c (TA6) (MLRA 144A, 145, 149B)		
_							Red Parent Material (F21)				
☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12)							, ,				
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	(149B)					Other (Expla	in in Remarks)		
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.											
Hydric Soil Present? ☐ Yes ☑ No Remarks:											
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:					
Wetland Qualit	y: High		Moderate	Low			Isolated Wetl	land? 🔲 Yes 🔲	No 🔲 Unknown		
General Comm	ents:										





NW



WETLAND DETERMINATION FORM -	Northcer	ntral and No	ortheast Regio	n
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Tra	ansmission Line	☐ Other	
Project/Site: NED Milepost: 40053.2	County:	Essex	Dat	e: 07/10/2015
Applicant/Owner: Kinder Morgan	State: M	IA Samp	oling Point: ME-E-	W004-PFO
Investigators: SE JW Quad Name: Salem Depot	Township:	Methuen		
Logbook No.: 2015-1 Logbook Pg.: 80 Tract: 20365				
Landform (hillslope, terrace, etc.): Depression Local R	elief: 🗹	Concave \square	Convex Non	e Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.764825		Long: -71.18	0722	Datum: NAD83
Soil Map Unit Name: Whitman loam, 0 to 3 percent slopes, extremely stony			NWI Classification	n: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	7 Yes 🔽	No (If no, expl	lain in Remarks.)	
		Are "Normal" Circ	cumstances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	✓ No		·	_ _
			_	
SUMMARY OF FINDINGS - Attach site map showing sampling	ng point l	ocations, tra	nsects, importa	nt features, etc.
Hydrophytic Vegetation Present?	1.	s the Sampled	l Aron	
Hydric Soil Present?		s the Sampled within a Wetlar		□ No
Wetland Hydrology Present?				
Field Wetland Classification: PFO				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		S	Secondary Indicators	(2 or more required)
Primary Indicators (minimum of one required; check all that apply)		[Surface Soil Crac	cks (B6)
☐ Surface Water (A1) ☑ Water-Stained Leaves (R9)		☐ Drainage Pattern	s (B10)
	D 3)		Moss Trim Lines	(B16)
		_	☐ Dry-Season Wate	er Table (C2)
	(C1)		Crayfish Burrows	
		-	_	on Aerial imagery (C9)
		110013 (00)	Stunted or Stress	sed Plants (D1)
☐ Drift Deposits (B3) ☐ Presence of Reduced Ir ☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction ir		_	Geomorphic Posi	,
		-(00)		•
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		— Li B F (/DA)		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remai	rks)		FAC-Neutral Tes	• •
Sparsely Vegetated Concave Surface (B8)		L	_ The Neutral Tes	(00)
Field Observations:				
Surface Water Present?				
Water Table Present?		Wetland Hyd	Irology Present?	
Saturation Present?				✓ Yes 🗌 No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pu	revious inspe	ections), if availab	le):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum		80	YES	FAC
	Total Cover:	80	I	I



Providence, Ri 02904							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
llex verticillata Acer rubrum		5 15	YES YES	FACW FAC			
Ace Tubium	Total Cover:	20	ILS	TAC			
Herb Stratum							
Plot Size: 5	1		ı	ı			
Scientific Name		% Cover	Dominant	Indicator Status			
Impatiens capensis		65	YES	FACW			
	Total Cover:	65					
Woody Vine Stratum							
Plot Size: 30	1		l	1			
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:					
Number of Dominant Species	Total % Cover of	of:	Multiply by:				
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species:	: <u>70</u>	x 2 = <u>140</u>				
Species Across All Strata: 4 (B)	FAC Species:	<u>95</u>	x 3 = <u>285</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>				
That Are ODL, FACW, or FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	<u>165 (A)</u>	<u>425 (B)</u>				
	F	Prevalence Index =	= B/A = <u>2.58</u>				
Hydrophytic Vegetation Indicators:							
☐ 1 - Rapid Test for Hydrophytic Vegetation							
✓ 2 - Dominance Test is > 50%							
3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	Hydrophytic Vegetation Present? ✓ Yes ☐ No					
data in Remarks or on a separate sheet)							
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
Remarks:							



SOIL											
Profile Descrip	otion: (Describe	the d	epth needed to d	locum	ent the in	ndicator o	r confirm the absen	nce of indicators.)			
Depth	Matrix		Red	dox Fe	atures				5		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ure	Remarks		
0-10	10YR 2/1	100					ORGA	ANIC			
10-14	10YR 5/1	94	10YR 4/5	6	С	М	LOAMY	SAND			
	· · · · · · · · · · · · · · · · · · ·	·	·				or Coated Grains.		Pore Lining, M=Matrix		
-		cable t	o all LRR's, unle			-			oblematic Hydric Soils ³ :		
Histosol (•			olyvalı 1LRA 1		Surface (S	8) (LRR R,	_	A10) (LRR K, L, MLRA 149B)		
✓ Histic Epi	pedon (A2)				,			Coast Prairie	e Redox (A16) (LRR K, L, R)		
☐ Black Hist			ПТ	hin Da	ark Surface	e (S9) (LR	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)		
	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)		
	Layers (A5)		_	-	Gleyed Ma			☐ Polyvalue Be	elow Surface (S8) (LRR K, L)		
	Below Dark Surfa	ace (A1	_		ed Matrix (I	-			urface (S9) (LRR K, L)		
	k Surface (A12)		_		Dark Surfa				ese Masses (F12) (LRR K, L, R)		
	ıcky Mineral (S1)		_			ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)		
☐ Sandy Gl	eyed Matrix (S4)		□ R	ledox l	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)		
☐ Sandy Re	dox (S5)						☐ Red Parent Material (F21)				
☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12)								v Dark Surface (TF12)			
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	in in Remarks)		
³ Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	lematic.			
Hydric Soil Present? ☑ Yes ☐ No Remarks:											
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:					
Wetland Quali	y: High		Moderate 🗹	Low			Isolated Wetland?	☐ Yes ☑	No 🔲 Unknown		
General Comm	ents:										





NORTH



WETLA	ND DETER	RMINATION FO	ORM - Northo	entral and	d Northeas	Region		
☑ Centerline ☐ Re-Route	☐ Access F	Road	y Facility	Transmission	Line Oth	er		
Project/Site: NED		Milepost: 40179.	.2 County:	Essex		Date:	07/10/2015	
Applicant/Owner: Kinder Morgan			State:	MA ;	Sampling Poin	ME-E-WO	004-UPL	
Investigators: SE JW	Quad Name	e: Salem Depot	Townshi	p: Methue	en			
Logbook No.: 2015-1 I	.ogbook Pg.: 8	2 Tract:	20365					
Landform (hillslope, terrace, etc.):	Flat	'	Local Relief:	Concave	Convex	✓ None	Slope%.: 0	
Subregion (LRR): Middle Atlan	ic	Lat: 42.765	5100	Long: -	71.180330		Datum: NAD83	
Soil Map Unit Name: Whitman I	pam, 0 to 3 per	cent slopes, extremel	ly stony		NWI CI	assification:	Not mapped	
Are climatic / hydrologic conditions of	n the site typic	al for this time of year	?: ☑ Yes	☐ No (If no	o, explain in Rem	arks.)		
Are Vegetation ☐ Soil ☐ c	r Hydrology [significantly distu	rbed? ☑ No	Are "Norma	al" Circumstance:	s present?	☑ Yes 🔲 No	
Are Vegetation Soil C	r Hydrology [naturally problem	natic? 🗹 No					
SUMMARY OF FINDINGS -	Attach site	map showing	sampling poin	t locations	, transects,	mportant	features, etc.	
Hydrophytic Vegetation Present?	□ Ye				· · ·	-	•	
Hydric Soil Present?				Is the Sam	npled Area] Yes ☑	1 No	
Wetland Hydrology Present?	_ Y€			within a W	/etland?			
Field Wetland Classification:	PLAND PLOT							
Remarks:								
LIVEROLOGY								
HYDROLOGY					Casandani	Indiantora (2	or more required)	
Wetland Hydrology Indicators:					_	•	or more required)	
Primary Indicators (minimum of one	required; chec	k all that apply)			_	Soil Cracks	• •	
□ Surface Water (A1) □ Water-Stained Leaves (B9) □ Drainage Patterns (B10)					•			
☐ High Water Table (A2)		☐ Aquatic Fauna	ı (B13)			rim Lines (B	•	
☐ Saturation (A3)			(B15)			ason Water 1		
Water Marks (B1)		Hydrogen Sulf		Cotynation Visible on Assisting son (CO)				
Sediment Deposits (B2)		_		Characteria of Characteria (DA)				
Drift Deposits (B3)			educed Iron (C4)	Comment in Booking (D0)				
Algal Mat or Crust (B4)		_	eduction in Tilled So	Challand Amiliand (DO)				
☐ Iron Deposits (B5)	(D.7)	Thin Muck Sur		Missatana arra-kia Baliat (DA)				
Inundation Visible on Aerial Ima		Other (Explain	in Remarks)	Microtopographic Relief (D4) FAC-Neutral Test (D5)				
Sparsely Vegetated Concave S	ullace (bo)							
Field Observations:								
Surface Water Present?	′es ☑ No	Depth (inches):						
–	′es ☑ No	Depth (inches):		Wetlan	d Hydrology Pro		Yes ☑ No	
Saturation Present? (includes capillary fringe)	′es ☑ No	Depth (inches):				Ц	ies 🗹 ivo	
Remarks (Describe Recorded Data (stream gage, m	nonitoring well, aerial	photos, previous ins	spections), if a	vailable):			
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name				% Co	over D	ominant	Indicator Status	
Acer rubrum				45		YES	FAC	
Pinus strobus			Total Cove	20 r: 65	1	YES	FACU	
			i olai oove	00	•			



Providence, Ri 02904			- 1			
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Frangula alnus Prunus serotina		60 10	YES NO	FAC FACU		
Tranas sereina	Total Cover:	70	110	17.00		
		-				
Herb Stratum						
Plot Size: 5	1			l		
Scientific Name		% Cover	Dominant	Indicator Status		
CAREX PENNSYLVANCUM Maianthemum canadense		15 25	YES YES	FACU FACU		
	Total Cover:	40	1	'		
Woody Vine Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:				
Number of Dominant Species	Total % Cover of	of:	Multiply by:			
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	<u>0</u>	x 2 = <u>0</u>			
Species Across All Strata: 5 (B)	FAC Species:	<u>105</u>	x 3 = <u>315</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)	FACU Species:	<u>70</u>	x 4 = <u>280</u>			
macrite est, rrem, errre.	UPL Species:	<u>0</u>	x 5 = <u>0</u>			
	Column Totals:	<u>175 (A)</u>	<u>595 (B)</u>			
	F	Prevalence Index =	$= B/A = \underline{3.40}$			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
2 - Dominance Test is > 50%						
☐ 3 - Prevalence Index is ≤ 3.0	Hydrophytic Vegetation Present? ☐ Yes ☑ No					
4 - Morphological Adaptations¹ (Provide supporting						
data in Remarks or on a separate sheet)						
Problematic Hydrophytic Vegetation¹ (Explain)						
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
present, unless disturbed or problematic.						
Remarks:						



SOLL Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Depth	T TOVIGETICE, I	(1 02304								The second of the second
Depth	SOIL									
Color (moist)	Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	r confirm the abse	nce of indicators.)	
10-16		Matrix		Red	lox Fe	atures		_		
10-16	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	lex	tture	Remarks
Tippe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.	0-10	10YR 2/2	100					FINE SAN	IDY LOAM	
Tippe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.										
Tippe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.	10-16	10YR 3/3	100					FINE SAN	IDY I OAM	
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.	10 10	1011(3/3	100					T IIVE OTH	IDT EO/W	
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. "Accation: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	40.00	10)/5 5/4						E11 E 0.11	IDV/ 1 0 4 1 4	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)	16-20	10YR 5/4	100					FINE SAN	IDY LOAM	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)										
Histosol (A1)	¹Type: C=Con	centration, D=De	epletion	n, RM=Reduced l	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	=Pore Lining, M=Matrix
Histic Epipedon (A2)	Hydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ss otl	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Polyvalue Surface (S9) (LRR K, L) Polyvalue	☐ Histosol (A	A1)		□Р	olyval	ue Below :	Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black Histic (A3)	_ `	,					,	, ,		
Hydrogen Sulfide (A4)				Пт	hin Da	irk Surface	- (S9) (LR	R R MI RA 149R)	_	
Stratified Layers (A5)				_			. , .	•	_ `	, , , , , , , , , , , , , , , , , , , ,
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Andy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Andy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Andy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? Yes No Unknown Hydric Soil Present? Yes No Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown					-	-		(LIXIX IX, L)	_	
Thick Dark Surface (A12)			200 / 14	· 	-	-				
Sandy Mucky Mineral (S1)			ace (A i	_	•		•		_	
Sandy Gleyed Matrix (S4)	_	` '		· 					=	
Sandy Redox (S5))		eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
Stripped Matrix (S6)	☐ Sandy Gl	eyed Matrix (S4)		□ R	edox	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
Dark Surface (S7) (LRR R, MLRA 149B)	☐ Sandy Re	edox (S5)							□ Red Parent	Material (F21)
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?	☐ Stripped I	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
Restrictive Layer Present?	□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
Restrictive Layer Present?	3Indicators of I	nydrophytic vege	tation a	and wetland hydro	logy n	nust be pr	esent, unle	ess disturbed or pro	blematic.	
Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown	Restrictive Lav	ver Present?		∕es √ No		Inknown				
Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality:	ivestilictive La	er i resent:	ш	163 🗗 110		TIKITOWIT			Undela Call Dassa	
Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality:									Hydric Soil Prese	ent? ∐ Yes ☑ No
Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality:										
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland? ☐ Yes ☐ No ☐ Unknown	Remarks:									
Wetland Quality: ☐ High ☐ Moderate ☐ Low Isolated Wetland? ☐ Yes ☐ No ☐ Unknown										
	Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
	Wetland Quali	ty: 🔲 High		Moderate \square	_ow			Isolated Wetland	? □ Yes □	No ☐ Unknown
General Comments:		, _	_	_						
	General Comm	nents:								





NW



WETLAND DETERMINATION FORM - Northo	entral and N	Northeast Region	
☐ Centerline ☐ Re-Route ☑ Access Road ☐ Ancillary Facility ☐	Transmission Lin	e	
Project/Site: NED Milepost: 74352.0 County:	Worcester	Date:	09/02/2015
Applicant/Owner: Kinder Morgan State:	MA Sai	mpling Point: LU-D-W0	001-PEM1
Investigators: CG JW Quad Name: Fitchburg Townsh	ip: Lunenburç	9	
Logbook No.: 2015-2 Logbook Pg.: 118 Tract: 8455			
Landform (hillslope, terrace, etc.): Depression Local Relief:	✓ Concave □	Convex None	Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.586065	Long: -71.	761017	Datum: NAD83
Soil Map Unit Name: Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stony	1	NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, ex	xplain in Remarks.)	
Are Vegetation $\ \ \ \ \ \ \ \ \ \ \ \ \ $	Are "Normal" (Dircumstances present?	✓ Yes □ No
Are Vegetation $\ \square$ Soil $\ \square$ or Hydrology $\ \square$ naturally problematic? $\ \square$ No			
SUMMARY OF FINDINGS - Attach site map showing sampling poin	t locations ti	ransects important	t features etc
Hydrophytic Vegetation Present? ✓ Yes ☐ No	. 1000110110, 11	anocoto, important	
Hydric Soil Present? ✓ Yes ☐ No	Is the Sample] No
Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetl	and?	_ 110
Field Wetland Classification: PEM			
Remarks: Area significantly altered by ATV traffic			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (2	or more required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks	
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)		□ Drainage Patterns (•
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			16)
☐ Saturation (A3) ☐ Marl Deposits (B15)		☐ Dry-Season Water	Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish Burrows (C	28)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livi	ng Roots (C3)	☐ Saturation Visible o	n Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		☐ Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled So	oils (C6)	☑ Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		☐ Shallow Aquitard (□	03)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			elief (D4)
☐ Sparsely Vegetated Concave Surface (B8)		☐ FAC-Neutral Test (I	05)
Field Observations:			
Surface Water Present? ☐ Yes ☑ No Depth (inches):			
Water Table Present? ☐ Yes ✓ No Depth (inches):	Wetland H	lydrology Present?	
Saturation Present?	- Trottana n	yurology r rocolit. ☑	Yes □ No
(includes capillary fringe)			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections), if availa	able):	
HYDROLOGY DISTURBANCE DUE TO ACTIVE ROW ACCESS ROAD			
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Acer rubrum	10	YES	FAC
Total Cove	er: 10	1	1



T TOVIGETICE, TRI 02304				1 1 1 1 1 1 1 1 1 1
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:	I		
	10101 00101.			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Bidens frondosa		60	YES	FACW
Glyceria striata		15	NO YES	OBL
Lythrum salicaria Persicaria sagittata		25 10	NO NO	OBL OBL
Carex crinita		10	NO	OBL
	Total Cover:	120		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	 Total Cover:		I	I
Dominance Test Worksheet:		dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover	of:	Multiply by:	
That Ale OBE, I AGW, OF I AG.	OBL Species:	<u>60</u>	x 1 = <u>60</u>	
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	s: <u>60</u>	x 2 = <u>120</u>	
Species Across All Strata: 3 (B)	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species	FACU Species	: <u>0</u>	x 4 = <u>0</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:		210 (B)	
			, ,	
		Prevalence Index =	= B/A = <u>1.62</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Presen	it? ☑ Yes □	7 No
data in Remarks or on a separate sheet)	,	3		
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: VEGETATION DISTURBANCE DUE TO ACTIVE ROW ACC	CESS ROAD			



T TOVIGETICE, I	(1 02004								
SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	ence of indicators.)	
Depth	Matrix		Re	dox Fe	atures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	cture	Remarks
0-10	10YR 4/1	85	7.5YR 5/8	15	С	М	SILT	LOAM	
10-16	10YR 4/1	90	10YR 5/2	10	D	M	SANDY	Y LOAM	ROCK REFUSAL AT 16 INCHES
					_		J 15		
¹Type: C=Con	entration D-De	nletion	PM-Paducad	Matrix		ered Sand	or Coated Grains.	2l ocation: DI -	 =Pore Lining, M=Matrix
		·	·				or Coated Grains.		
•	`	cable t	o all LRR's, unle			,			roblematic Hydric Soils³:
Histosol (/	•			'olyvalı /ILRA 1		Surface (S	8) (LRR R,	_	(A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)				,			Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		П Т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	1) 🗹 🖸	eplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		☐ R	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	urface (F7)		☐ Piedmont Fl	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallov	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
_			·	ology n	nust he nr	esent unle	ess disturbed or pro		,
Remarks:								Hydric Soil Prese	ent? ☑ Yes ☐ No
	BANCE DUE TO	TO AC	CTIVE ROW ACC	ESS R	ROAD				
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	nerai Con	nments:			
Wetland Qualit	y: High	□ !	Moderate ☑	Low			Isolated Wetland	? ☐ Yes ☑	No 🔲 Unknown
General Comm	ents:								





WEST



WETLAND DETERMINATION FORM - North	central and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 0 County	: Worcester Date: 09/02/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: LU-D-W001-PEM2
Investigators: CG JW Quad Name: Fitchburg Towns	1
Logbook No.: 2015-2 Logbook Pg.: 119 Tract: 8455	
Landform (hillslope, terrace, etc.): Depression Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.583215	Long: -71.760475 Datum: NAD83
Soil Map Unit Name: Chatfield-Hollis-Rock outcrop complex, 3 to 15 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, explain in Remarks.)
Are Vegetation ✓ Soil ☐ or Hydrology ☐ significantly disturbed? ☐ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS. Attack site man showing compling nois	at leastions, transacts, immertant factures, etc.
SUMMARY OF FINDINGS - Attach site map showing sampling point	it locations, transects, important reatures, etc.
Hydrophytic Vegetation Present?	Is the Sampled Area
Hydric Soil Present? ✓ Yes ☐ No	within a Wetland?
Wetland Hydrology Present? ✓ Yes ☐ No	
Field Wetland Classification: PEM	
Remarks: Agricultural land	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Liv	ing Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	Goils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ✓ Yes ☐ No
Saturation Present?	E 165 E 166
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Total Cov	er:



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Persicaria sagittata		10	NO	OBL
Phalaris arundinacea Onoclea sensibilis		80 5	YES NO	FACW FACW
Chooled Containing	Total Cover:	95	110	17.011
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Total Cover:		l	l
Dominance Test Worksheet:	Prevalence Ind			
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)	Total % Cover o		Multiply by:	
	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant Species Across All Strata: 1 (B)	FACW Species:		x 2 = <u>170</u>	
Percent of Dominant Species	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = <u>0</u>	
	UPL Species:	<u>0</u>	x 5 = 0	
	Column Totals:	<u>95 (A)</u>	<u>180 (B)</u>	
	F	Prevalence Index =	= B/A = <u>1.89</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Preser	t? ☑ Yes □] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



1 TOVIGETICE, IV	0200+																
SOIL																	
Profile Descrip	tion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm	he abser	nce o	f indicat	ors.)						
Depth	Matrix		R	edox Fe	atures			_							_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ture					F	₹em	arks	i
0-18	10YR 4/1	85	7.5YR 5/6	15	С	М		SILT L	OAM								
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduce	d Matrix,	CS=Cov	/ered Sand	l or Coated	Grains.	2[_ocation:	PL=	Pore	Lining	, M=	 =Ма	trix	
Hydric Soil Ind	licators: (Appli	cable 1	to all LRR's, ur	nless oth	nerwise n	oted.)			Indi	icators f	or Pr	obler	natic	Hydr	ric S	Soils	3:
☐ Histosol (A	A1)			Polyvalı	ue Below	Surface (S	8) (LRR R	,	П	2 cm M	uck (A	1 10) ((LRR I	۲. L,	MLI	RA 1	49B)
_ `	pedon (A2)		_	MLRA 1		(-	- / (Coast F							
☐ Black Hist	. ,		П	Thin Da	rk Surfac	e (S9) (LR	R R. MLRA	(149B)					•	, ,			, , K, L, R)
	Sulfide (A4)		_			neral (F1)		- /		Dark Su	-			-			, , ,
	_ayers (A5)		ī	-	Gleyed M		(=: :: : : , =)			Polyval			-				K. L)
_	Below Dark Surfa	ace (A	_	-	ed Matrix (П	Thin Da				-			,
	Surface (A12)		, <u>C</u>	-	Dark Surfa									-		-	K, L, R)
_	cky Mineral (S1)					urface (F7)					-			-			RA 149B)
	eyed Matrix (S4)			•	Depressio	. ,						-					5, 149B)
☐ Sandy Re					· · · · · · · · · · · · · · · · · ·	(. 0)				Red Pa					·-+/-	., .+	o, 140D)
	Matrix (S6)									Very Sh			,	•	TF1	2)	
	ace (S7) (LRR R	MIR	A 149R)							Other (-		-,	
_	ydrophytic vege		•	drology -	nuct ha ==	rocont	nee diet	nd or nee!	_				vomal	1.0)			
					•	esent, unit	255 015(01)	ed of proc	летта	uc.							
Restrictive Lay	er Present?		Yes ☑ No		Inknown												
									Hydr	ic Soil F	rese	nt?	$ \sqrt{} $	Yes	3		No
Remarks:																	
Description of I	Habitat Characte	ristics,	Aquatic Divers	ity or Ge	neral Con	nments:											
Wetland Qualit	y: High		Moderate ✓	Low			Isolated	Wetland?	? [☐ Yes	\checkmark	No		Un	nkno	wn	
General Comm	ents:																





NE



WE	TLAND) DET	ERN	IINATI	ON FOR	M - Nort	hcen	ntral an	d No	ortheas	t Region		
☑ Centerline ☐ Re-Ro	ute _	Acce	ss Roa	nd 🔲	Ancillary Fa	acility [☐ Tra	ansmission	n Line	☐ Oth	ner		
Project/Site: NED				Milepost:	73294.7	Cour	nty:	Worce	ester		Date:	07/27/201	15
Applicant/Owner: Kinder Mo	gan					State	e: M	A	Samp	oling Poin	t: LU-D-W	001-PFO	
Investigators: PF JW		Quad N	ame:	Fitchburg		Towi	nship:	Luner	burg				
Logbook No.: 2015-1	Logi	ook Pg	.: 92		Tract: 84	55							
Landform (hillslope, terrace, e	tc.):	Slope	- mid		Lo	ocal Relief:	$\overline{\mathbf{V}}$	Concave		Convex	☐ None	Slope%.:	2
Subregion (LRR): Middle	Atlantic			Lat	t: 42.587347	7		Long:	-71.75	6809		Datum: NA	D83
Soil Map Unit Name: Wo	odbridge fi	ne sand	ly loan	n, 0 to 8 p	ercent slopes	s, very stony				NWI CI	assification:	Not ma	apped
Are climatic / hydrologic condi	tions on th	ne site ty	pical f	or this tim	ne of year?:	☑ Ye	s \square	No (If n	ю, ехр	lain in Rem	arks.)		
Are Vegetation Soil	or H	ydrology	/ 	significa	antly disturbed	d? 🗹 N	lo 4	Are "Norm	al" Cir	cumstance	s present?	☑ Yes	☐ No
Are Vegetation ✓ Soil	or H	ydrology	/ 	naturally	y problematic	? 🗆 1	lo						
SUMMARY OF FINDIA	ICS 44	took a	nito n	non ch	owina con	nnlina na	int le	nastian	o tro	ncooto	importon	t footuros	oto
SUMMARY OF FINDIN						nping po	אווונ וכ	ocations	5, II a	nsecis,	iiiportan	i realures	, etc.
Hydrophytic Vegetation Prese	nt?	☑	Yes				Is	s the Sar	mpled	I Area _	7 V F	-	
Hydric Soil Present?		☑	Yes				v	vithin a V	Vetlar	nd?	☑ Yes [□ No	
Wetland Hydrology Present? Field Wetland Classification:	PFO	✓	Yes	□ N	0								
	FFO												
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicato	rs:								5	Secondary	Indicators (2	or more requ	uired)
Primary Indicators (minimum o	of one req	uired; c	heck a	ll that app	oly)				[Surface	e Soil Crack	s (B6)	
☐ Surface Water (A1)			E	√ Wate	r-Stained Lea	aves (B9)			[☐ Draina	ge Patterns	(B10)	
☐ High Water Table (A2)			[_ □ Aqua	itic Fauna (B1	13)			[☐ Moss 7	rim Lines (E	316)	
✓ Saturation (A3)			[☐ Marl	Deposits (B1	5)			[☐ Dry-Se	ason Water	Table (C2)	
			[☐ Hydro	ogen Sulfide	Odor (C1)			[☐ Crayfis	h Burrows (C8)	
✓ Sediment Deposits (B2)			[Oxidi	zed Rhizosph	neres along	_iving l	Roots (C3)) [☐ Satura	tion Visible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)			[☐ Prese	ence of Redu	ced Iron (C4)			Stunte	d or Stresse	d Plants (D1)	
☐ Algal Mat or Crust (B4)			[Rece	nt Iron Reduc	ction in Tilled	Soils	(C6)	<u> </u>	√ Geomo	orphic Position	on (D2)	
☐ Iron Deposits (B5)			[Thin	Muck Surface	e (C7)			[☐ Shallov	w Aquitard ([03)	
☐ Inundation Visible on Ae	rial Image	ry (B7)	[Othe	r (Explain in F	Remarks)			[Microto	pographic F	Relief (D4)	
□ Sparsely Vegetated Con	cave Surfa	ace (B8)	1							☐ FAC-N	eutral Test (D5)	
Field Observations:													
Surface Water Present?	□ Voc	[Z] N	No I	Depth (ind	choc).								
Water Table Present?	☐ Yes				•			Watla	nd Uve	drology Dr	200nt2		
Saturation Present?	☐ Yes			Depth (ind	,			wetiai	па нус	drology Pro		Yes □	No
(includes capillary fringe)	✓ Yes	☐ ¹	No I	Depth (ind	ches): 0							_	
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring we	ell, aerial phot	tos, previous	inspe	ctions), if a	availab	le):			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name								% C	over	D	ominant	Indicat	or Status
Acer rubrum								4	0		YES		AC
Tsuga canadensis Pinus strobus								4			YES NO		ACU ACU
						Total C	over:	1	0	1		1	



apling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rosa multiflora Ostrya virginiana Icer rubrum Tsuga canadensis		20 20 5 5	YES YES NO NO	FACU FACU FAC FACU
damamelis virginiana		40	YES	FACU
	Total Cover:	90		
lerb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Solidago rugosa		5	NO	FAC
Osmundastrum cinnamomeum	Total Cover:	80 85	YES	FACW
Mandy Vina Chartum	Total Cover.			
Voody Vine Stratum Plot Size: 30				
Cientific Name	1	9/ Cause	Dominant	Indicator Status
осению ічапів		% Cover	Dominant	Indicator Status
	Total Cover:		I	1
Dominance Test Worksheet:		dex Worksheet:	MA ICA I	
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover of		Multiply by:	
Fotal Number of Dominant	OBL Species:	<u>0</u> . eo	x 1 = 0	
Species Across All Strata: 6 (B)	FACW Species		x 2 = 160 x 3 = 150	
Percent of Dominant Species	FAC Species: FACU Species:	<u>50</u> : <u>135</u>	x = 150 x = 150	
That Are OBL, FACW, or FAC: 33 (A/B)	UPL Species:	. <u>135</u> <u>0</u>	x = 540 x = 540	
	Column Totals:		850 (B)	
		Prevalence Index		
L. L. et al. Western L. Perre		Frevalence index	= B/A = <u>3.21</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0	Usalronbutio V	lamatatian Duaga		T No
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydropnytic v	egetation Prese	nt? ☑ Yes [⊔ мо
☑ Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: Tsuga canadensis and Rosa multiflora are both problematic sp	ecies with can be do	ominant in wetland		
ternants. Tsuga canadensis and ressa mattinora are both problemate spi	colos with carried ac	ommant in welland	15	



T TOVIGETICE, T	1 02304													
SOIL														
Profile Descrip	tion: (Describe	the de	epth needed to	locum	ent the in	dicator o	r confirm t	he absen	псе о	f indicators.)			
Depth	Matrix		Red	dox Fe	atures							-		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure			Re	emarks	
0-4	7.5YR 2.5/1	100						ORGA	ANIC					
	7.011(2.0/1	100						01107						
4-8	10YR 2/1	100					F	NE SANI	DY L	DAM				
8-18	10YR 3/2	90	10YR 4/4	10	С	М	CO	ARSE SA	NDY	LOAM	WITH GF			REFUSAL AT
												1811	NCHES	•
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2	Location: PL:	=Pore Linir	ig, M=N	/latrix	
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Ind	icators for P	roblematic	: Hvdric	: Soils	3-
<u> </u>			_			•	0) /I DD D		_			•		
Histosol (/	•			oiyvait ILRA 1		Suпасе (S	8) (LRR R,			2 cm Muck				
	pedon (A2)		_		•					Coast Prairi				•
☐ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA	149B)		5 cm Mucky	Peat or Pe	at (S3)	(LRR F	(, L, R)
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1)	(LRR K, L)			Dark Surfac	e (S7) (LR	₹ K, L, N	N)	
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)				Polyvalue B	elow Surfa	ce (S8)	(LRR K	(, L)
Depleted	Below Dark Surfa	ace (A1	1) 🗹 🖸	eplete	d Matrix (I	F3)				Thin Dark S	urface (S9)	(LRR K	(, L)	
☐ Thick Dar	k Surface (A12)		□ R	edox [Dark Surfa	ce (F6)				Iron-Mangai	nese Mass	es (F12)	(LRR	K, L, R)
☐ Sandy Mu	ıcky Mineral (S1))		eplete	d Dark Su	ırface (F7)				Piedmont FI	loodplain S	oils (F19	9) (MLF	RA 149B)
☐ Sandy Gle	eyed Matrix (S4)		— П в	edox [Depression	ns (F8)				Mesic Spod	ic (TA6) (M	` I RA 14.	Λ ΔΔ 1Δ!	5 149R)
☐ Sandy Re						(, ,			_	Red Parent			17 (, 1 1	3, 1102)
												•	- 40)	
	Matrix (S6)									Very Shallo			·12)	
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)							Other (Expla	ain in Rema	arks)		
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pre	esent, unle	ess disturbe	ed or prob	olema	ntic.				
Restrictive Lay	er Present?		res ☑ No	□ U	nknown									
									Hvd	ric Soil Prese	ent? ✓	Yes	П	No
									,		·····	103		
Remarks:														
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:								
Wetland Qualit	v: 🔲 High	N N	Moderate	Low			Isolated	Wetland?	, I	☐ Yes 🔽	∫ No □	1 Unkr	nown	
	, _										_			
General Comm	ents:													





SE



WETLAND DETERMINATION FORM - North	central and Northeast Region
☐ Centerline ☐ Re-Route ☑ Access Road ☐ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 72541.0 County	: Worcester Date: 05/28/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: LU-D-W001-UPL
Investigators: PB Quad Name: Fitchburg Townsl	nip: Lunenburg
Logbook No.: 2D Logbook Pg.: 121 Tract: 8455	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 4
Subregion (LRR): Middle Atlantic Lat: 42.589238	Long: -71.755668 Datum: NAD83
Soil Map Unit Name: Chatfield-Hollis-Rock outcrop complex, 15 to 25 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)
Are Vegetation Soil or Hydrology significantly disturbed? □ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point	nt locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No within a Wetland?
Wetland Hydrology Present? ☐ Yes ☑ No	
Field Wetland Classification: UPLAND PLOT	
Remarks: Located within existing utility corridor	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Liv	ing Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	oils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present? Yes V No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Total Cov	er:



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rhus glabra Lonicera morrowii		30 3	YES NO	UPL FACU
Ediloda Monowii	Total Cover:	33	140	17.00
Herb Stratum				
Plot Size: 5	ĺ		l 5	1
Scientific Name		% Cover	Dominant	Indicator Status
Potentilla simplex Solidago canadensis		10 5	YES YES	FACU FACU
Trifolium pratense	Tatal Causes	10	YES	FACU
W 1 17 0	Total Cover:	25		
Woody Vine Stratum Plot Size: 30				
	1	0/ 0	l 5	1 1 1 2 4
Scientific Name Vitis labrusca		% Cover 50	Dominant YES	Indicator Status FACU
VIIIS IADIUSCA	Total Cover:	50 50	1 1 1 1	FACU
Dominance Test Worksheet:	Prevalence Ind		A 4 10 1 1	
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)	Total % Cover of		Multiply by:	
Total Number of Dominant	OBL Species:	<u>0</u>	x 1 = 0	
Species Across All Strata: 5 (B)	FACW Species:		$x 2 = \underline{0}$ $x 3 = \underline{0}$	
Percent of Dominant Species	FAC Species: FACU Species:	<u>0</u> 78	x 3 = 0 x 4 = 312	
That Are OBL, FACW, or FAC: 0 (A/B)	UPL Species:	<u>78</u> 30	$x = \frac{512}{150}$	
	Column Totals:	<u>30</u> 108 (A)	462 (B)	
		Prevalence Index =	, ,	
H. Land, G. Wang et al., Factors		- revalence index =	= B/A = <u>4.20</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0	Usadrombutio V	anatatian Drasan		71 No.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	nyaropnytic v	egetation Presen	nt? ☐ Yes ⊡	☑ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
1Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, T																		
SOIL																		
Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.)																		
Depth	Matrix	Redox Features						.										
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc2		Textu			ure			Remarks			
0-12	7.5YR 6/6	100							SANDY	LOA	M							
¹Type: C=Cond	centration, D=De	epletion	າ, RM=Red	duced	∟⊥⊥ Matrix,	CS=Cov	ered Sand	Lor Coated	Grains.	2[ocatio	n: Pl	.=Pore	Lining	 ع, N	1=Ma	atrix	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :																		
☐ Histosol (A1) ☐ Polyvalue Below Surface (S8) (LRR R, ☐ 2 cm Muck (A10) (LRR K, L, MLRA 1498										49B)								
Histic Epipedon (A2) Coast Prairie Redox (A16) (LRR K,										•								
_ ::								5 cm Mucky Peat or Peat (S3) (LRR K, L, R)										
								- /	Dark Surface (S7) (LRR K, L, M)									
									Polyvalue Below Surface (S8) (LRR K, L)									
_	Below Dark Surfa	ace (A1	11)	_	-	d Matrix (I				Thin Dark Surface (S9) (LRR K, L)								
	k Surface (A12)		,	_	•		•			☐ Iron-Manganese Masses (F12) (LRR K, L, R)								
_									Piedmont Floodplain Soils (F19) (MLRA 149B)									
																	5, 149B)	
	Sandy Redox (S5)										-				/	٠, ١٠٠٠	o, 1 (OD)	
									☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (TF12)									
	ace (S7) (LRR R	MIRA	A 149R)							П	-		lain in I				_,	
_	nydrophytic vege		•	d bydra	ology w	aust bo pr	ocent unl	oo diaturb	ad or prob	_		(LXP	iaiii iii i	rtemai	113)			
						•	esent, unit	sss distuibl	eu oi pioi	Diema					_			
Restrictive Lay	er Present?	☑ '	Yes	No	□ U	nknown						_		_			_	
ROCK										Hydr	ic Soil	Pres	ent?		Ye	2\$	✓	No
12																		
Remarks:																		
Description of I	Habitat Characte	ristics,	Aquatic Di	iversity	or Ge	neral Com	nments:											
Wetland Qualit	y: 🔲 High		Moderate		Low			Isolated	Wetland?	? [] Ye	s [] No		U	Inkno	wn	
0																		
General Comm	ents:																	





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WETLAND DETERMINATION FORM -	Northcentral and Northeast Region									
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	☐ Transmission Line ☐ Other									
Project/Site: NED Milepost: 90817.3	County: Berkshire Date: 08/07/2015									
Applicant/Owner: Kinder Morgan State: MA Sampling Point: WR-M-W023-PEM										
Investigators: CM MN Quad Name: Peru	Township: Windsor									
Logbook No.: 6M Logbook Pg.: 90 Tract: 9318										
Landform (hillslope, terrace, etc.): Slope - toe Local F	telief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 2									
Subregion (LRR): Middle Atlantic Lat: 42.479032	Long: -73.043992 Datum: NAD83									
Soil Map Unit Name: Tunbridge-Lyman association, rolling, extremely stony	NWI Classification: Not mapped									
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)									
Are Vegetation ✓ Soil ✓ or Hydrology ✓ significantly disturbed?	□ No Are "Normal" Circumstances present? ☑ Yes □ No									
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No									
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point locations, transects, important features, etc.									
Hydrophytic Vegetation Present?										
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area									
Wetland Hydrology Present? ✓ Yes ☐ No										
Field Wetland Classification: PEM										
Remarks:										
HYDROLOGY										
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)									
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)									
☐ Surface Water (A1) ☐ Water-Stained Leaves	B9) Drainage Patterns (B10)									
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)									
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)									
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	C1) Crayfish Burrows (C8)									
☐ Sediment Deposits (B2) ☑ Oxidized Rhizospheres	ong Living Roots (C3) Saturation Visible on Aerial imagery (C9)									
☐ Drift Deposits (B3) ☐ Presence of Reduced I	on (C4) Stunted or Stressed Plants (D1)									
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	n Tilled Soils (C6) Geomorphic Position (D2)									
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7	Shallow Aquitard (D3)									
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	rks) Microtopographic Relief (D4)									
☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)										
Field Observations:										
Surface Water Present?										
Water Table Present?	Wetland Hydrology Present? ☑ Yes □ No									
Saturation Present?	V TeS □ NO									
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspections), if available):									
VEGETATION										
Tree Stratum										
Plot Size: 30										
Scientific Name	% Cover Dominant Indicator Status									
	Fotal Cover:									



1 TOVIGENCE, TRI 02304											
Sapling/Shrub Stratum											
Plot Size: 15											
Scientific Name		% Cover	Dominant	Indicator Status							
Prunus virginiana Spiraea alba		5 10	NO NO	FACU FACW							
Зрпаеа аша	Total Cover:	15	l NO	FACVV							
	Total Covol.										
Herb Stratum											
Plot Size: 5	1		I.	I							
Scientific Name		% Cover	Dominant	Indicator Status							
Woodwardia virginica Rubus idaeus		20 15	YES NO	OBL FACU							
Onoclea sensibilis		5 20	NO YES	FACW FAC							
Euthamia graminifolia Phleum pratense		20 5	NO	FACU							
Solidago rugosa Solidago gigantea		30 10	YES NO	FAC FACW							
Galium palustre		30	YES	OBL							
	Total Cover:	135									
Woody Vine Stratum											
Plot Size: 30											
Scientific Name		% Cover	Dominant	Indicator Status							
	Total Cover:										
Dominance Test Worksheet:	Prevalence Ind	Prevalence Index Worksheet:									
Number of Dominant Species	Total % Cover	of:	Multiply by:								
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>50</u>	x 1 = <u>50</u>								
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>25</u>	x 2 = <u>50</u>								
Species Across All Strata: 4 (B)	FAC Species:	<u>50</u>	x 3 = <u>150</u>								
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>25</u>	x 4 = <u>100</u>								
That Are OBL, I AGW, OF I AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>								
	Column Totals:	<u>150 (A)</u>	350 (B)								
	ı	Prevalence Index :	= B/A = 2.33								
Hydrophytic Vegetation Indicators:											
☐ 1 - Rapid Test for Hydrophytic Vegetation											
✓ 2 - Dominance Test is > 50%											
3 - Prevalence Index is ≤ 3.0											
☐ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	Hydrophytic Vegetation Present?									
data in Remarks or on a separate sheet)	,	ogotamon i rocci	🖭 103 [_ 110							
☐ Problematic Hydrophytic Vegetation¹ (Explain)											
¹ Indicators of hydric soil and wetland hydrology must be											
present, unless disturbed or problematic.											
Remarks:											



Providence, r	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to d	docum	ent the ir	ndicator o	r confirm the abs	ence of indicators.)	
Depth	Matrix		-		atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	exture	Remarks
0.7	, ,		` ′				CILT	FLOAM	
0-7	10YR 5/4	20	10YR 5/1 5YR 4/6	75 5	D C	M PL	SILI	LOAM	
7-18	10YR 4/4	20	10YR 6/1 10YR 4/6	65 15	D C	M M	FINE SA	NDY LOAM	
1Type: C-Con	contration D-D	oplotion	PM-Poducod	Matrix	CS-C0	orod Sano	or Coated Grains	2l ocation: DL	 =Pore Lining, M=Matrix
,,	· · · · · · · · · · · · · · · · · · ·	•	<u></u>				Tor Coaled Grains		
Hydric Soil Ind	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	ioted.)		Indicators for P	roblematic Hydric Soils³:
Histosol (A1)			olyvalı 1LRA 1		Surface (S	88) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epi	pedon (A2)		IV	ILIXA	1430)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	tic (A3)		ПΤ	hin Da	rk Surfac	e (S9) (LR	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mi	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			oamy	Gleyed M	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	 11)	eplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
	k Surface (A12)		_	-	` Dark Surfa				nese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1))	_			urface (F7)		_	oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)			-	Depression			_	ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re			ш.	todox i	Боргооого	///o (i o)		=	
= ^	, ,								Material (F21)
	Matrix (S6)								w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, uni	ess disturbed or pr	oblematic.	
Remarks:									
D			A						
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Quali	ty: High		Moderate 🗹	Low			Isolated Wetlan	d? ☑ Yes 🗖	No Unknown
General Comm	nents:								





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WETLAND DETERMINATION FORM - No	rthcentral and Northeast Region
Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility Project/Site: NED Milepost: 90749.7 Co	Transmission Line Other Date: 08/07/2015
	ate: MA Sampling Point: WR-M-W023-UPL
	ownship: Windsor
Logbook No.: 6M Logbook Pg.: 91 Tract: 12003	Tilliago
	f: ☐ Concave ☐ Convex ☐ None Slope%.: 3
	
Subregion (LRR): Middle Atlantic Lat: 42.479027	Long: -73.044203 Datum: NAD83
Soil Map Unit Name: Tunbridge-Lyman association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☑ Soil ☑ or Hydrology □ significantly disturbed? □	No Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	Is the Sampled Area
Hydric Soil Present? ☐ Yes ☑ No	within a Wetland?
Wetland Hydrology Present? ☐ Yes ☑ No	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
□ Surface Water (A1) □ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1	Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres alor	Coturation Visible on Aerial imagery (CO)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (Chunted or Chrosped Diante (D4)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Ti	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	ous inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Tota	l Cover:

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:	·		•
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Duchesnea indica		25	YES	FACU
Poa sp & other upland grasses		20	NA	NONE
Plantago lanceolata Achillea millefolium		10 20	NO YES	FACU FACU
Antennaria plantaginifolia		10 25	NO YES	FACU FACU
Phleum pratense	Total Cover:	110	163	FACU
Woody Vina Stratum	Total Gover.	110		
Woody Vine Stratum Plot Size: 30				
	1	0/ 0	D	Indicates Co.
Scientific Name		% Cover	Dominant	Indicator Status
	Total Carren			
	Total Cover:			
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)	Total % Cover	of:	Multiply by:	
That rue GBE, Friend, Of Frie	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
	FAC Species:	<u>0</u>	$x 3 = \underline{0}$	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>90</u>	x 4 = <u>360</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>90 (A)</u>	<u>360 (B)</u>	
	F	Prevalence Index =	$= B/A = \underline{4.00}$	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	nt? ☐ Yes ⊡	∐ No
data in Remarks or on a separate sheet)	,,			
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
Tromanie.				



i ioviderice, i	(1 0200+									
SOIL										
Profile Descrip	otion: (Describe	the d	epth needed to o	locum	nent the ir	ndicator o	r confirm	the absen	ce of indicators.)	
Depth	Matrix		Red	dox Fe	eatures			- .		5 1
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Textu	ure	Remarks
0-8	10YR 5/4	100						SILT LO	OAM	
8-16	10YR 4/4	100						SILT LO	OAM	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced I	Matrix	, CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess ot	herwise n	oted.)			Indicators for Pr	oblematic Hydric Soils³:
Histosol (A	A1)		□Р	olyval	ue Below	Surface (S	8) (LRR R	,	2 cm Muck (A	A10) (LRR K, L, MLRA 149B)
Histic Epi	oedon (A2)		_ N	ILRA 1	149B)				☐ Coast Prairie	Redox (A16) (LRR K, L, R)
☐ Black Hist	tic (A3)		пτ	hin Da	ark Surface	e (S9) (LR	R R, MLRA	A 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)		□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			-	Gleyed Ma		,		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1		eplete	ed Matrix (F3)			☐ Thin Dark Su	ırface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		R	edox	Dark Surfa	ace (F6)				ese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1))	_			ırface (F7)				podplain Soils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		R	edox	Depressio	ns (F8)			☐ Mesic Spodio	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)									Material (F21)
Stripped I	Matrix (S6)									Dark Surface (TF12)
	ace (S7) (LRR R	, MLRA	\ 149B)							in in Remarks)
			and wetland hydro	oloav r	nust be pr	esent. unle	ess disturb	ed or prob		,
Restrictive Lay					Jnknown	· · · · · · · · · · · · · · · · · · ·		· ·		
ROCK	or r roodine.			Ц,	71111101111				Hydric Soil Prese	nt? ☐ Yes ☑ No
16								'	Tryunc don't reser	III. 🔲 IES 🛂 NO
Remarks:										
Remarks.										
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	eneral Con	nments:				
M. (1. 1.0. 15)								W 41 10		
Wetland Qualit	ty: High		Moderate	Low			isolated	Wetland?	☐ Yes ☐	No Unknown
General Comm	ents:									





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WE	TLAN	ID DE	TERI	MINATI	ON F	FORM -	Northo	entral	and N	ortheas	t Region)	
☐ Centerline ☐ Re-R	oute	☐ Acc	ess Ro	ad ☑	Ancill	lary Facility		Transmis	ssion Line	☐ Ot	her		
Project/Site: NED				Milepost:	0		County:	F	ranklin		Date:	05/20/20	15
Applicant/Owner: Kinder Mo	organ						State:	MA	Sam	pling Poin	t: NO-L-W	002-PFO	
Investigators: BH AK		Quad	Name:	Northfield	l		Townsh	ip: N	lorthfield				
Logbook No.: 2	Lo	gbook F	g.: 56		Tra	ct: 21115							
Landform (hillslope, terrace,	etc.):	Depr	ession			Local R	elief:	✓ Cond	cave 🔲	Convex	☐ None	Slope%.:	2
Subregion (LRR): Middl	e Atlantic	;		Lat	: 42.6	65399		Long	j: -72.4	21083		Datum: NA	AD83
Soil Map Unit Name: Mil	Isite-Woo	odstock o	complex	x, 25 to 60	percer	nt slopes, ve	ery rocky			NWI C	lassification:	Not m	apped
Are climatic / hydrologic cond	litions on	the site	typical	for this tim	ne of ye	ear?:	Yes	☑ No	(If no, exp	olain in Rem	narks.)		
Are Vegetation Soil	☐ or	Hydrolog	gy 🗖	significa	intly dis	sturbed?	√ No	Are "N	Normal" Ci	rcumstance	s present?	☐ Yes	s ☑ No
Are Vegetation Soil	☐ or	Hydrolo	gy 🗖	naturally	y proble	ematic?	— ✓ No						
-			_										
SUMMARY OF FINDII	NGS -	Attach	site	map sh	owing	g sampliı	ng poin	t locati	ions, tra	ansects,	importan	t features	s, etc.
Hydrophytic Vegetation Pres	ent?	✓	Yes	□ N	0			le tha	Sample	d Area			
Hydric Soil Present?		✓	Yes	□ N	0				n a Wetla		☑ Yes [□ No	
Wetland Hydrology Present?		✓	Yes		0								
Field Wetland Classification:	PF	0											
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicate	ors:									Secondary	Indicators (2	or more req	uired)
Primary Indicators (minimum	of one r	equired;	check a	all that app	oly)					☐ Surfac	e Soil Crack	s (B6)	
☐ Surface Water (A1)				■ Wate	r-Stain	ed Leaves (B9)			✓ Draina	ige Patterns	(B10)	
☑ High Water Table (A2)				☐ Aqua	tic Fau	na (B13)				☐ Moss	Trim Lines (E	316)	
✓ Saturation (A3)				☐ Marl	Deposi	ts (B15)				☐ Dry-Se	eason Water	Table (C2)	
				☐ Hydro	ogen S	ulfide Odor	(C1)			☐ Crayfis	sh Burrows (C8)	
☐ Sediment Deposits (B2)				☐ Oxidi	zed Rh	izospheres	along Livi	ng Roots	(C3)	☐ Satura	tion Visible o	on Aerial ima	gery (C9)
☐ Drift Deposits (B3)				☐ Prese	ence of	Reduced Ir	on (C4)			☐ Stunte	d or Stresse	d Plants (D1))
☐ Algal Mat or Crust (B4)				☐ Rece	nt Iron	Reduction i	n Tilled So	oils (C6)		_	orphic Position		
☐ Iron Deposits (B5)				☐ Thin	Muck S	Surface (C7)					w Aquitard (I	· ·	
☐ Inundation Visible on A	erial Imaç	gery (B7))	☐ Othe	r (Expla	ain in Rema	rks)			_	opographic F	` ,	
Sparsely Vegetated Con	ncave Su	rface (B	8)							☐ FAC-N	leutral Test (D5)	
Field Observations:													
Surface Water Present?	□ Ye	es 🗹	No	Depth (inc	ches):								
Water Table Present?	✓ Ye	es 🔲	No	Depth (inc	ches):	4		W	etland Hy	drology Pr	_	· · · -	
Saturation Present? (includes capillary fringe)	✓ Ye	es 🔲	No	Depth (inc	ches):	0					<u>✓</u>	Yes □	l No
Remarks (Describe Recorded	l Data (st	ream ga	ge, mo	nitoring we	ell, aeria	al photos, p	revious ins	spections	s), if availal	ole):			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name									% Cover		ominant	Indicat	tor Status
Fraxinus pennsylvanica									10		NO		ACW
Tsuga canadensis Acer rubrum									50 10		YES NO		ACU FAC
						Т	Total Cove	er:	70	'		1	



1 Tovidence, IXI 02504				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Betula alleghaniensis Salix nigra Unidentified shrub		10 2 2	YES NO NA	FAC OBL NA
	Total Cover:	14		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Viola cucullata Juncus effusus Carex crinita Carex stricta Carex scabrata Glyceria striata	Total Cover:	5 10 15 5 15 15	NO NO YES NO YES YES	OBL OBL OBL OBL OBL OBL
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		I	I
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>67</u>	x 1 = <u>67</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>10</u>	x 2 = <u>20</u>	
1	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)	FACU Species:	<u>50</u>	x 4 = <u>200</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>147 (A)</u>	347 (B)	
	ı	Prevalence Index :	= B/A = <u>2.36</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☑ Yes [] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				

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SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-10	10YR 2/1	95	10YR 4/6	5	С	М	SILT L	OAM	
10-16	10YR 2/1	80	10YR 4/2	20	D	М	SILT L	OAM	
¹Type: C=Cond	centration, D=De	pletion	l n, RM=Reduced	Matrix,	CS=Cov	ered Sand	l or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
			o all LRR's, unle						oblematic Hydric Soils³:
Histosol (A						-	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	,			/ILŔA 1		,			e Redox (A16) (LRR K, L, R)
☐ Black Hist			□ ⊤	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified L	_ayers (A5)		_	-	Gleyed Ma		, ,	☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1		eplete	d Matrix (F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Dark	Surface (A12)		_ ☑ F	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	cky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	podplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)		☐ Mesic Spodi	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	in in Remarks)
3Indicators of h	ydrophytic veget	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	elematic.	
Restrictive Lay	er Present?	V	res ☐ No	пυ	nknown				
COBBL		_	_	_				Hydric Soil Prese	nt? ☑ Yes ☐ No
E								,	
16							I		
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: 🔲 High	√ 1	Moderate	Low			Isolated Wetland?	☐ Yes 🗹	No 🔲 Unknown
General Comm	ents:								
General Comm	ents.								





EAST



WETLAND DETERMINATION FORM - North	central and N	lortheast Region	
		_	
	Transmission Line	e Other	
Project/Site: NED Milepost: 125180.7 County	: Franklin	Date:	05/20/2015
Applicant/Owner: Kinder Morgan State:	MA San	npling Point: NO-L-W00	02-UPL
Investigators: BH AK Quad Name: Northfield Township	nip: Northfield		
Logbook No.: 2 Logbook Pg.: 68 Tract: 21115			
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☐	Convex 🗹 None	Slope%.: 20
Subregion (LRR): Middle Atlantic Lat: 42.665339	Long: -72.4	120827	Datum: NAD83
Soil Map Unit Name: Millsite-Woodstock complex, 3 to 8 percent slopes, very rocky		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, ex	plain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" C	ircumstances present?	✓ Yes ✓ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No			
SUMMARY OF FINDINGS - Attach site map showing sampling poin	nt locations, tra	ansects, important	features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	Is the Sample	od Δrea	
Hydric Soil Present?	within a Wetla		No
Wetland Hydrology Present?			
Field Wetland Classification: UPLAND PLOT			
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (2 o	or more required)
Primary Indicators (minimum of one required; check all that apply)		☐ Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		☐ Drainage Patterns (E	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			6)
☐ Saturation (A3) ☐ Marl Deposits (B15)		☐ Dry-Season Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish Burrows (Ca	8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Liv	ring Roots (C3)	☐ Saturation Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		☐ Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	Soils (C6)	☐ Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		☐ Shallow Aquitard (D3	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			elief (D4)
Sparsely Vegetated Concave Surface (B8)		☐ FAC-Neutral Test (D	5)
Field Observations:			
Surface Water Present?			
Water Table Present?	Wetland Hy	ydrology Present?	_
Saturation Present?			Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	nspections). if availa	able):	
3.3.,	.,	,	
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Betula lenta	5	NO	FACU
Tsuga canadensis Acer rubrum	50 10	YES NO	FACU FAC
Acer saccharum	10	NO	FACU
Total Cov	er: 75		



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer saccharum Fagus grandifolia		2 10	NO YES	FACU FACU
r agus granunona	Total Cover:	12	11.5	1 400
Herb Stratum				
Plot Size: 5	1		ı	I
Scientific Name		% Cover	Dominant	Indicator Status
	T			
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30	1	24.0	l 5	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 2 (B)	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>77</u>	x 4 = <u>308</u>	
That Ale OBE, I AGW, OF AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>87 (A)</u>	338 (B)	
	F	Prevalence Index =	= B/A = 3.89	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☐ Yes ⊡	∑ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



	(1 0200+											
SOIL												
Profile Descrip	otion: (Describe	the de				dicator o	r confirm t	he absen	nce of indicators.)			
Depth (inches)	Matrix		Red	lox Fe	atures			Text	uro		Po	marks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		1680	uie		1761	Ilaiks
0-3	10YR 2/1	100						SILT L	OAM			
3-8	10YR 4/3	100						SILT L	OAM			
8-12	2.5Y 5/4	100						SILT L	OAM			
¹Type: C=Cond	entration D-De	nletion	l n, RM=Reduced I	Aatriy		ered Sand	or Coated	Grains	² Location: PL=	-Pore Linin		
		<u> </u>	o all LRR's, unle				- Coalca	Oranio.	Indicators for Pi			
		cable t					a) // DD D				-	
Histosol (A	•			olyvalı LRA 1		Surface (S	8) (LRR R,		2 cm Muck (
	pedon (A2)								Coast Prairie			•
☐ Black Hist			_			. , .	R R, MLRA	149B)			. , ,	(LRR K, L, R)
	Sulfide (A4)		_	-	-		(LRR K, L)		☐ Dark Surface	. , .		,
_	Layers (A5)		=	•	Gleyed Ma	` '			☐ Polyvalue Be			
	Below Dark Surfa	ace (A1	_		d Matrix (I	•			☐ Thin Dark Su		-	•
☐ Thick Darl	k Surface (A12)		☐ R	edox l	Dark Surfa	ice (F6)			☐ Iron-Mangar	ese Masse	s (F12)	(LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain So	oils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		☐ R	edox l	Depressio	ns (F8)				c (TA6) (MI	LRA 144	IA, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent	Material (F	21)	
☐ Stripped N	Matrix (S6)								□ Very Shallov	/ Dark Surf	ace (TF	12)
□ Dark Surfa	ace (S7) (LRR R	, MLRA	\ 149B)						Other (Expla	in in Rema	ırks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	logy n	nust be pr	esent, unle	ess disturbe	ed or prob	lematic.			
Restrictive Lay	ver Present?	V	Yes □ No □	7 U	Inknown							
ROCK		_							Hydric Soil Prese	nt? 🔽	Yes	□ No
12									,	🛂	103	
Remarks:												
ivemarks.												
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: High		Moderate	_ow			Isolated	Wetland?	☐ Yes ☐	No 🔲	Unkn	own
General Comm	ents:											
Conoral Comm	iorito.											





EAST



WE	TLANI	D DE1	ΓERN	IINAT	ION F	FORM -	Northo	ent	ral an	d No	ortheas	st Regio	on		
☐ Centerline ☐ Re-R	oute [Acce	ss Roa	ad 🔽	Ancill	lary Facility	′ □	Tran	smission	Line	□ O:	ther			
Project/Site: NED				Milepost:	1250	094.8	County:		Frankl	lin		Da	ate: 05/	28/2015	5
Applicant/Owner: Kinder Mo	rgan						State:	MA		Sam	oling Poi	nt: NO-L	-W016-PI	0	
Investigators: BH AK		Quad N	ame:	Northfield	t		Townsh	ip:	Northf	ield					
Logbook No.: 2	Log	book Po	j.: 126		Tra	ct: 21116									
Landform (hillslope, terrace,	 etc.):	Depre	ssion			Local F	Relief:	7 C	Concave		Convex	☐ No	ne Slop	e%.:	2
Subregion (LRR): Middl	e Atlantic			La	t: 42.6	663977		L	.ong:	-72.41	8476		Datu	m: NAD	083
Soil Map Unit Name: Me	tacomet fi	ne sand	y loam	, 3 to 8 p	ercent s	slopes					NWI C	Classification	on:	Not map	pped
Are climatic / hydrologic cond	litions on t	he site t	ypical f	or this tir	ne of ye	ear?: [✓ Yes		No (If n	o, exp	lain in Rer	marks.)			
Are Vegetation Soil	☐ or H	lydrolog	у 🗖	significa	antly dis	sturbed?	☑ No	Aı	re "Norm	al" Cir	cumstance	es present	? ☑	Yes	☐ No
Are Vegetation Soil	or H	lydrolog	v П	naturall	y proble	ematic?	— ☑ No								
_	_						_								
SUMMARY OF FINDI	NGS - A	ttach	site n	nap sh	owing	g sampli	ing poin	t loc	cations	s, tra	nsects,	import	ant feat	ures,	etc.
Hydrophytic Vegetation Prese	ent?		Yes	⊘ N	lo			lo.	tha Can	nnloc	l Aroo				
Hydric Soil Present?		$\overline{\checkmark}$	Yes		lo				the San thin a V			☑ Yes	□ N)	
Wetland Hydrology Present?		<u> </u>	Yes		lo										
Field Wetland Classification:	PFC)													
Remarks:															
HYDROLOGY															
Wetland Hydrology Indicate	ors:									<u> </u>	Secondary	Indicators	s (2 or mo	re requi	ired)
Primary Indicators (minimum	of one red	quired; c	heck a	ll that ap	ply)					[Surfac	ce Soil Cra	acks (B6)		
✓ Surface Water (A1)			[√ Wate	er-Stain	ed Leaves	(B9)			[☐ Draina	age Patter	ns (B10)		
✓ High Water Table (A2)			[☐ Aqua	atic Fau	na (B13)				[Moss	Trim Lines	s (B16)		
✓ Saturation (A3)			[☐ Marl	Deposi	ts (B15)				[☐ Dry-S	eason Wa	ter Table	(C2)	
☐ Water Marks (B1)			[☐ Hydr	ogen S	ulfide Odor	r (C1)			[Crayfi	sh Burrow	s (C8)		
☐ Sediment Deposits (B2)			[Oxid	ized Rh	izospheres	s along Livi	ng Ro	oots (C3)	, [Satura	ation Visib	le on Aeri	al image	ery (C9)
☐ Drift Deposits (B3)			[Pres	ence of	Reduced I	Iron (C4)			[Stunte	ed or Stres	sed Plan	s (D1)	
☐ Algal Mat or Crust (B4)			[Rece	ent Iron	Reduction	in Tilled So	oils (C	26)	[☑ Geom	orphic Pos	sition (D2)	
☐ Iron Deposits (B5)			[Thin	Muck S	Surface (C7	7)			[Shallo	w Aquitar	d (D3)		
☐ Inundation Visible on A	erial Image	ery (B7)	[Othe	r (Expla	ain in Rema	arks)			[Micro	topographi	ic Relief (D4)	
☐ Sparsely Vegetated Con	ncave Surf	ace (B8)							[☐ FAC-I	Neutral Te	st (D5)		
Field Observations:															
Surface Water Present?	☐ Yes		No I	Depth (in	ches):										
Water Table Present?	✓ Yes		No I	Depth (in	ches):	0			Wetlan	nd Hyd	drology P	resent?	-	_	
Saturation Present? (includes capillary fringe)	✓ Yes		No I	Depth (in	ches):	0							✓ Ye	s 🗆	No
Remarks (Describe Recorded	Data (stre	eam gag	je, mon	nitoring w	ell, aeri	al photos, p	previous in	spect	ions), if a	availab	le):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Co	over	[Dominant		ndicato	r Status
Acer rubrum Betula alleghaniensis Tsuga canadensis									20 10 50	0		YES NO YES		FA FA	/C
							Total Cove	er:	80		I	3	ſ		



1 TOVIDENCE, TRI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Tsuga canadensis		10	YES	FACU
	Total Cover:	10		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Osmunda claytoniana		5	YES	FAC
Arisaema triphyllum	T.110	5	YES	FAC
	Total Cover:	10		
Woody Vine Stratum				
Plot Size: 30			1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species	s: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: <u>5 (B)</u>	FAC Species:	<u>40</u>	x 3 = <u>120</u>	
Percent of Dominant Species That Are OBL_FACW_or_FAC: 60 (A/B)	FACU Species	: <u>60</u>	x 4 = <u>240</u>	
That Are OBL, FACW, or FAC: 60 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	100 (A)	360 (B)	
		Prevalence Index	= B/A = <u>3.60</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
✓ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Prese	nt? 🗌 Yes 🛭	7 No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: SHALLOW HEMLOCK ROOTS	I			

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Providence, R	1 02904										
SOIL											
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the ir	ndicator o	r confirm the absen	nce of	indicators.)		
Depth	Matrix				atures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure		Remarks	
0.0			Color (moles)	,,,	.,,,,		0004	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
0-8	10YR 2/1	100					ORGANIC				
8-14	2.5Y 5/1	80	10YR 6/6	10	C	M	SAN	ND			
			10YR 5/6	10		M					
¹Type: C=Cond	entration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	2 <u>L</u>	ocation: PL=	Pore Lining, M=Matrix	
Hydric Soil Ind	icators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indi	cators for P	roblematic Hydric Soils³:	
						-	:8) /I PP P	_			
_	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) MLRA 149B)										
Histic Epip						(00) (1.5	D D 141 D1 (10D)			e Redox (A16) (LRR K, L, R)	
☐ Black Hist			_				R R, MLRA 149B)		-	Peat or Peat (S3) (LRR K, L, R)	
	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	П	Dark Surface	e (S7) (LRR K, L, M)	
☐ Stratified L	ayers (A5)			oamy	Gleyed Ma	atrix (F2)			Polyvalue Be	elow Surface (S8) (LRR K, L)	
☐ Depleted B	Below Dark Surfa	ace (A1	I1) 🔲 🖸	eplete	d Matrix (F3)			Thin Dark Su	urface (S9) (LRR K, L)	
☐ Thick Dark	Surface (A12)		□ R	ledox l	Dark Surfa	ace (F6)			Iron-Mangar	nese Masses (F12) (LRR K, L, R)	
☐ Sandy Mu	cky Mineral (S1)			eplete	d Dark Su	ırface (F7)			Piedmont Flo	oodplain Soils (F19) (MLRA 149B)	
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			Mesic Spodi	c (TA6) (MLRA 144A, 145, 149B)	
✓ Sandy Re	dox (S5)								•	Material (F21)	
☐ Stripped N	Matrix (S6)									v Dark Surface (TF12)	
	ace (S7) (LRR R	MIDA	\ 140R)					П	-	in in Remarks)	
_			·					_		iii iii ixeiiiaiks)	
andicators of n	iyaropnytic vege	tation a	and wetland nydro	ology n	nust be pr	esent, uni	ess disturbed or prob	piemai	tic.		
Restrictive Lay	er Present?	⊘ ′	Yes 🔲 No	□ U	Inknown						
COBBL								Hydr	ic Soil Prese	ent? ☑ Yes ☐ No	
Ε											
14							'				
Remarks:											
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:					
Wetland Qualit	y: 🗹 High	П	Moderate	Low			Isolated Wetland?	. г	☐ Yes ☐	No ☐ Unknown	
	, _ ,	_	_							_	
General Comm	ents:										





SOUTH



WETLAND DETERMINATION FORM - Northcei	ntral and Northeast Region						
│ │	ransmission Line						
Project/Site: NED Milepost: 125159.4 County:	Franklin Date: 05/28/2015						
	MA Sampling Point: NO-L-W016-UPL						
Investigators: BH AK Quad Name: Northfield Township:	Northfield						
Logbook No.: 2 Logbook Pg.: 123 Tract: 21116							
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave ☑ Convex ☐ None Slope%.: 5						
Subregion (LRR): Middle Atlantic Lat: 42.664006	Long: -72.418087 Datum: NAD83						
Soil Map Unit Name: Millsite-Woodstock complex, 25 to 60 percent slopes, very rocky NWI Classification: Not mapped							
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No							
SUMMARY OF FINDINGS - Attach site map showing sampling point I	ocations transects important features etc						
Hydrophytic Vegetation Present? ☐ Yes ☑ No							
	Is the Sampled Area □ Yes ☑ No						
Hydric Soil Present?	within a Wetland? ☐ Yes ☑ No						
Field Wetland Classification: UPLAND PLOT							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)						
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)						
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)						
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)							
Saturation (A3) Marl Deposits (B15)	□ Dry-Season Water Table (C2)						
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)						
Sediment Deposits (B2) Oxidized Rhizospheres along Living	Roots (C3) Saturation Visible on Aerial imagery (C9)						
□ Drift Deposits (B3) □ Presence of Reduced Iron (C4)	ron (C4) Stunted or Stressed Plants (D1)						
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils	Occurrent in Decition (DO)						
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	ks) Microtopographic Relief (D4)						
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? ☐ Yes ☑ No Depth (inches):							
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ✓ No						
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)							
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspe	ections), if available):						
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name	% Cover Dominant Indicator Status						
Tsuga canadensis Acer saccharum	30 YES FACU 25 YES FACU						
Fagus grandifolia Quercus rubra	10 NO FACU 10 NO FACU						
Total Cover:	75						
l sia Garan							



T TOVIGETICE, TRI 02304							
Sapling/Shrub Stratum							
Plot Size: 15			1				
Scientific Name		% Cover	Dominant	Indicator Status			
Acer pensylvanicum Acer saccharum		5 5	YES YES	FACU FACU			
	Total Cover:	10	1				
Harb Chrahina							
Herb Stratum Plot Size: 5							
	1	0/ Cayor	Dominant	Indiantor Status			
Scientific Name		% Cover	Dominant	Indicator Status			
	 Total Cover:						
Woody Vine Stratum	Total Covol.						
Plot Size: 30							
Scientific Name	1	% Cover	Dominant	Indicator Status			
		70 0010.	20111110111	maioaior otatao			
	Total Cover:		1	I			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:					
Number of Dominant Species That Are OBL FACW or FAC: 0 (A)	Total % Cover of	of:	Multiply by:				
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species:	: <u>0</u>	x 2 = <u>0</u>				
oposico / to/osco / till Gitatian	FAC Species:	<u>0</u>	x 3 = <u>0</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species: <u>85</u> x 4 = <u>340</u>						
	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	<u>85 (A)</u>	<u>340 (B)</u>				
	F	Prevalence Index	$= B/A = \underline{4.00}$				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
2 - Dominance Test is > 50%							
☐ 3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? 🗌 Yes 🔽	∐ No			
data in Remarks or on a separate sheet)							
Problematic Hydrophytic Vegetation¹ (Explain)							
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
Remarks: USE AS REPRESENTATIVE UPLAND PLOT FOR NO-L-W0	17-PFO						



T TOVIGETICE, I	(1 02004								1 1 2 1 2 1 2 1 2 1 2 1
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	dicator o	confirm the abse	ence of indicators.))
Depth	Matrix		Re	dox Fe	atures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Tex	xture	Remarks
0-4	10YR 2/2	100					SILT		
4-18	2.5Y 5/4	100					SILT	LOAM	
1 10	2.01 0/1	100					O.E.	207111	
1Tunas C. Cana	controtion D Do	nletion	DM Dadwaad	Matrix	CC Co.	arad Cand	ar Castad Crains	21 agetion, DI	Dave Lining M. Metrix
		•					or Coated Grains.		=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils ³ :
Histosol (A	A1)			olyval ILRA 1		Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		IV.	ILIXA	1490)			☐ Coast Prairi	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ⊺	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	LRR K, L)	Dark Surfac	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	selow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	1) 🔲 🖸	eplete	d Matrix (I	F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont FI	loodplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)		_	•	Depressio			_	ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)		_		•	,		=	Material (F21)
_	Matrix (S6)							_	w Dark Surface (TF12)
		MIDA	140P)						
_	ace (S7) (LRR R		•						ain in Remarks)
andicators of r	nyaropnytic vege	tation a	ind wetland nydro	ology n	nust be pr	esent, unie	ess disturbed or pro	oblematic.	
Restrictive Lay	er Present?	□ <i>/</i>	∕es ☑ No	□ '	Inknown				
								Hydric Soil Prese	ent? 🗌 Yes 🗹 No
Remarks:							·		
Description of	Habitat Characte	ristics	Aquatic Diversity	or Ge	neral Com	ments:			
2000.191.01.01	. iaznat Griaracio	,	, .qualic 2110.01.y	0. 00					
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland	d? ☐ Yes ☐	No □ Unknown
Welland Qualit	y. 🔲 Tilgii	ш "	vioderate 🔟	LOW			isolated Wetland	i? ∐ Yes ∐	I NO DIKHOWII
General Comm	ents:								





EAST



WE	TLAND) DET	ERMI	NATI	ON FORM	- Northco	entra	I and No	ortheast R	Region		
Centerline Re-R	oute] Acces	ss Road		Ancillary Facil			ission Line	☐ Other	- In :	0.5 (5.5 (5.5 (5.5 (5.5 (5.5 (5.5 (5.5 (
Project/Site: NED			M	ilepost:	125713.4	County:		Franklin		Date:	05/28/201	5
Applicant/Owner: Kinder Mo	_					State:	MA		oling Point:	NO-L-W0	07-PEM	
Investigators: BH AK		Quad Na	ame: N	orthfield		Township	o: N	Northfield				
Logbook No.: 2	Logi	book Pg	.: 110		Tract: 2111	5						
Landform (hillslope, terrace, e	etc.):	Slope -	- mid		Loca	al Relief: ▼	₫ Con	cave	Convex] None	Slope%.:	2
Subregion (LRR): Middl	e Atlantic			Lat	42.665669		Long	g: -72.41	7807		Datum: NAI	D83
Soil Map Unit Name: Mil	lsite-Wood	stock co	mplex, 1	15 to 25	percent slopes	, very rocky			NWI Class	sification:	Not ma	pped
Are climatic / hydrologic cond	litions on th	ne site ty	pical for	this tim	e of year?:	√ Yes		o (If no, expl	ain in Remark	(s.)		
Are Vegetation ✓ Soil	□ or H	ydrology	, _П ;	significa	ntly disturbed?	_ No	Are "	Normal" Circ	cumstances pi	resent?	√ Yes	☐ No
Are Vegetation		ydrology		-	problematic?	☑ No					_	
SUMMARY OF FINDIN	NGS - At	tach s	site ma	ap sho	owing samp	oling point	locat	tions, trai	nsects, im	portant	features	, etc.
Hydrophytic Vegetation Prese	ent?	\checkmark	Yes	☐ No)		ls the	e Sampled	Δrea			
Hydric Soil Present?			Yes	☐ No)			n a Wetlar	1./1	Yes 🗆] No	
Wetland Hydrology Present?		$\overline{\square}$	Yes	☐ No)							
Field Wetland Classification:	PEM	1										
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	ors:							5	Secondary Ind	icators (2	or more requ	iired)
Primary Indicators (minimum	of one red	uired; cl	heck all	that app	ly)				Surface S	oil Cracks	(B6)	
☐ Surface Water (A1)					r-Stained Leave	es (B9)			☐ Drainage	Patterns (B10)	
☐ High Water Table (A2)					tic Fauna (B13)		☐ Moss Trim Lines (B16)					
✓ Saturation (A3)					Deposits (B15)				☐ Dry-Seaso	on Water	Γable (C2)	
☐ Water Marks (B1)					ogen Sulfide Od	lor (C1)	Crayfish Burrows (C8)					
Sediment Deposits (B2)					-		ong Living Roots (C3) Saturation Visible on Aerial imagery (C9)					
☐ Drift Deposits (B3)					ence of Reduce	_	Chunted or Streeged Blants (D4)					
Algal Mat or Crust (B4)							n Tilled Soils (C6) ☑ Geomorphic Position (D2)					
☐ Iron Deposits (B5)					Muck Surface ((00)		Shallow A	quitard (D	3)	
☐ Inundation Visible on Ae	erial Image	rv (B7)			(Explain in Re	•			_ ☐ Microtopo	graphic R	elief (D4)	
☐ Sparsely Vegetated Cor	_		_	011101	(Explain in No.	maritoj			FAC-Neut	ral Test (E	05)	
	- Carro	200 (20)						_		•		
Field Observations:	- v	- .										
Surface Water Present?	Yes	_		epth (inc	•							
Water Table Present?	∐ Yes			epth (inc	•		V\	Vetland Hyd	Irology Prese	ent? ☑	Yes □	No
Saturation Present? (includes capillary fringe)	✓ Yes		No De	epth (inc	hes): 0						.00 🗖	
Remarks (Describe Recorded	Data (stre	am gage	e, monito	oring we	II, aerial photos	s, previous ins	pections	s), if availabl	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name								% Cover	Dom	inant	Indicato	or Status
						Total Cover	: '		'			



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:	l		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Scirpus atrovirens		5	NO	OBL
Carex scoparia Eleocharis obtusa		10 15	NO YES	FACW OBL
Lolium perenne		10	NO	FACU
Impatiens capensis Carex crinita		5 10	NO NO	FACW OBL
Juncus effusus		25	YES	OBL
	Total Cover:	80	•	•
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover	of:	Multiply by:	
, , , , , , , , , , , , , , , , , , ,	OBL Species:	<u>55</u>	x 1 = <u>55</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	: <u>15</u>	x 2 = <u>30</u>	
Species Across All Strata: 2 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL_FACW_or FAC: 100 (A/B)	FACU Species:	<u>10</u>	x 4 = <u>40</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	80 (A)	125 (B)	
			* *	
		Prevalence Index =	= B/A = <u>1.56</u>	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	it? ☑ Yes 🗆] No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
· · · · · · · · · · · · · · · · · · ·				



Providence, F	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	ence of indicators.)	1
Depth	Matrix		-		atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Te	xture	Remarks
0.4	` ′		` ′				CLAY	(1 O A M	
0-4	10YR 3/1	95	10YR 4/6	5	С	М	CLAY	LOAM	
4-16	2.5Y 5/1	80	10YR 6/6 10YR 4/6	10 10	C	M PL	COARSE S	ANDY LOAM	
			1011(4/0	10		'-			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL:	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)			Polvval	ue Below	Surface (S	88) (LRR R,	☐ 2 cm Muck ((A10) (LRR K, L, MLRA 149B)
_ `	pedon (A2)			/ILŔA 1			-/(/		e Redox (A16) (LRR K, L, R)
☐ Black Hist			П 1	hin Da	rk Surface	e (S9) (I R	R R, MLRA 149B)	=	Peat or Peat (S3) (LRR K, L, R)
							•		
	Sulfide (A4)		_	-	-		(LRR K, L)		e (S7) (LRR K, L, M)
_	Layers (A5)			-	Gleyed M				elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	•	d Matrix (☐ Thin Dark S	urface (S9) (LRR K, L)
_	k Surface (A12)		_		Dark Surfa			_	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))		Peplete	d Dark Su	urface (F7)		☐ Piedmont Fl	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		☐ F	Redox	Depression	ons (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
☐ Stripped I	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
□ Dark Surf	ace (S7) (LRR R	, MLR	A 149B)					Other (Expla	ain in Remarks)
3Indicators of I	ovdronhytic vege	tation a	and wetland hydro	ology n	nust he nr	esent unl	ess disturbed or pro	oblematic	
Remarks:									
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: 🔲 High		Moderate □	Low			Isolated Wetland	d? □ Yes ▽	No ☐ Unknown
	, _								
General Comm	ients:								





EAST



WETLAND DETERMINATION FORM - North	central and I	Northeast Regior	1				
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐	Transmission Lin	ne					
Project/Site: NED Milepost: 125909.4 County	: Franklin	Date	: 05/28/2015				
Applicant/Owner: Kinder Morgan State:	MA Sa	mpling Point: NO-L-W	007-UPL				
Investigators: BH AK Quad Name: Northfield Townsl	nip: Northfield						
Logbook No.: 2 Logbook Pg.: 112 Tract: 21115							
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave 🔽	Convex None	Slope%.: 5				
Subregion (LRR): Middle Atlantic Lat: 42.666238	Long: -72	.417666	Datum: NAD83				
Soil Map Unit Name: Millsite-Woodstock complex, 15 to 25 percent slopes, very rocky		NWI Classification:	Not mapped				
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, e	explain in Remarks.)					
Are Vegetation ✓ Soil ✓ or Hydrology significantly disturbed? No	Are "Normal" (Circumstances present?	✓ Yes ✓ No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No							
SUMMARY OF FINDINGS - Attach site map showing sampling point	nt locations, t	ransects, importan	t features, etc.				
Hydrophytic Vegetation Present? ☐ Yes ☑ No							
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampl within a Wet	led Area land? □ Yes [√ No				
Wetland Hydrology Present? ☐ Yes ☑ No							
Field Wetland Classification: UPLAND PLOT							
Remarks: ALSO REPRESENTATIVE UPLAND PLOT FOR NO-L-W006-PSS, NO-L-W008-PEM, AND NO-L-W008-PSS							
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicators (2	2 or more required)				
Primary Indicators (minimum of one required; check all that apply)		☐ Surface Soil Crack	s (B6)				
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) ☐ Drainage Patterns (B10)							
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		☐ Moss Trim Lines (E	316)				
☐ Saturation (A3) ☐ Marl Deposits (B15)		□ Dry-Season Water	Table (C2)				
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish Burrows (C8)				
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Liv	ing Roots (C3)	☐ Saturation Visible of	on Aerial imagery (C9)				
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	on (C4) Stunted or Stressed Plants (D1)						
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	n Tilled Soils (C6) Geomorphic Position (D2)						
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	ks) Microtopographic Relief (D4)						
☐ Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test ((D5)				
Field Observations:							
Surface Water Present?							
Water Table Present?	Wetland F	Hydrology Present?	l Voc. ☑ No				
Saturation Present? Yes Mo Depth (inches): (includes capillary fringe)		L] Yes ☑ No				
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	spections), if avail	lable):					
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name	% Cove	r Dominant	Indicator Status				
Quercus rubra	20	YES	FACU				
Total Cov	er: 20	ı	1				



1 Tovidence, IXI 02504				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Quercus rubra Comptonia peregrina Rhus typhina		5 5 5	YES YES YES	FACU FACU UPL
Tillo typiilla	Total Cover:	15	120	012
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Taraxacum officinale Trifolium repens Plantago major Trifolium pratense Poa annua		5 10 5 10 60	NO NO NO NO YES	FACU FACU FACU FACU FACU
	Total Cover:	90		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species:	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: <u>5 (B)</u>	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL FACW or FAC: 0 (A/B)	FACU Species:	<u>120</u>	x 4 = <u>480</u>	
That Are OBL, FACW, or FAC:	UPL Species:	<u>5</u>	x 5 = <u>25</u>	
	Column Totals:	125 (A)	<u>505 (B)</u>	
	ļ	Prevalence Index :	= B/A = <u>4.04</u>	
Hydrophytic Vegetation Indicators:				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ⊡	☑ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	1			



Providence, R	KI 02904												
SOIL													
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm t	he absen	nce of in	ndicators.))		
Depth	Matrix			dox Fe									
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		Text	ture			Rem	narks
0-2	10YR 4/4	100					SILT LOAM						
2-18	2.5Y 5/4	100						SILT L	_OAM				
Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	²Lo	cation: PL:	=Pore Linir	ıg, M=Ma	ıtrix
Hydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Indica	tors for P	roblemation	: Hydric	Soils³:
☐ Histosol (A	A1)					Surface (S	88) (LRR R,		□ 2	cm Muck ((A10) (LRF	K, L, ML	RA 149B)
☐ Histic Epip	oedon (A2)		N.	ILRA 1	(49B)					oast Prairi	e Redox (A	ປາ6) (LRR	K, L, R)
☐ Black Hist	tic (A3)		П 1	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)	□ 5	cm Mucky	Peat or Pe	eat (S3) (L	RR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)			ark Surfac	e (S7) (LR	R K, L, M)	ı
Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)			☐ P	olyvalue B	elow Surfa	ce (S8) (L	.RR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	11) 🔲 🗆	eplete	d Matrix (F3)			□⊤	hin Dark S	urface (S9	(LRR K,	L)
☐ Thick Darl	k Surface (A12)		F	Redox [Dark Surfa	ace (F6)			_ Ir	on-Mangar	nese Mass	es (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1)			eplete	d Dark Su	ırface (F7)			□Р	iedmont FI	oodplain S	oils (F19)	(MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		F	Redox I	Depressio	ns (F8)			_ N	lesic Spodi	ic (TA6) (N	LRA 144	A, 145, 149B)
☐ Sandy Re	edox (S5)								_ R	ed Parent	Material (F	21)	
☐ Stripped N	Stripped Matrix (S6) Very Shallow Dark Surface (TF12)							2)					
□ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks)													
			and wetland hydro	ology n	nust he nr	esent unle	ess disturbe	d or prob				,	
Remarks:													
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:							
W (L. 10. 15							1. 1. (. 1)	A 10	. –	v –			
Wetland Qualit	ty:	<u></u> П	Moderate	Low			Isolated	Wetland?	? 🗆	Yes 🔲	No [] Unkno	own
General Comm	ients:												

AECOM
10 Orms Street, Suite 405
Providence, RI 02904



PHOTOS	



WETLAND DETERMINATION FORM -	Northcer	ntral and No	rtheast Region				
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	□ Tra	ansmission Line	Other				
Project/Site: NED Milepost: 5289.2	County:	Middlesex	Date:	06/18/2015			
Applicant/Owner: Kinder Morgan	State: M	IA Sampl	ing Point: DR-N-W0	09-PFO			
Investigators: PL JW Quad Name: Lowell	Township:	Dracut					
Logbook No.: 2015-1 Logbook Pg.: 36 Tract: 21267							
Landform (hillslope, terrace, etc.): Flat Local F	Relief: 🗹	Concave	Convex None	Slope%.: 0			
Subregion (LRR): Middle Atlantic Lat: 42.695600		Long: -71.271	713	Datum: NAD83			
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8 percent slopes			NWI Classification:	Not mapped			
Are climatic / hydrologic conditions on the site typical for this time of year?:	√ Yes □	No (If no, expla	in in Remarks.)				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	_ No	- Are "Normal" Circ	umstances present?	✓ Yes □ No			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No						
CLIMMARY OF FINDINGS. Attack site man abouting compile				factions at			
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point i	ocations, tran	sects, important	teatures, etc.			
Hydrophytic Vegetation Present?	ŀ	s the Sampled	Area				
Hydric Soil Present?	v	within a Wetlan	d?	No			
Wetland Hydrology Present? ✓ Yes No							
Field Wetland Classification: PFO							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:		Se	econdary Indicators (2 o	or more required)			
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cracks	(B6)			
☐ Surface Water (A1) ☐ Water-Stained Leaves	(B9)		Drainage Patterns (E	310)			
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines (B1	6)			
✓ Saturation (A3) ☐ Marl Deposits (B15)			Dry-Season Water T	able (C2)			
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1)		Crayfish Burrows (Ca	8)			
☐ Sediment Deposits (B2) ☑ Oxidized Rhizospheres	along Living	Roots (C3)	Saturation Visible on	Aerial imagery (C9)			
☐ Drift Deposits (B3) ☐ Presence of Reduced I	ron (C4)		Stunted or Stressed	Plants (D1)			
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	in Tilled Soils	(C6)	Geomorphic Position	n (D2)			
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3	3)			
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	ırks)		Microtopographic Re	elief (D4)			
□ Sparsely Vegetated Concave Surface (B8) □ FAC-Neutral Test (D5)							
Field Observations:							
Surface Water Present?							
Water Table Present? ☐ Yes ☑ No Depth (inches):		Wetland Hydr	ology Present?				
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)			✓	Yes □ No			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspe	ections), if available	e):				
VEGETATION							
Tree Stratum							
Plot Size: 30		1	1	1			
Scientific Name		% Cover	Dominant	Indicator Status			
Acer rubrum Pinus strobus		75 25	YES YES	FAC FACU			
	Total Cover:	100	1	ı			



Providence, Ri 02904						
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Frangula alnus		30	YES	FAC		
	Total Cover:	30		ı		
Herb Stratum						
Plot Size: 5						
	I	ov 0	l 5 · .	l		
Scientific Name		% Cover	Dominant	Indicator Status		
Osmundastrum cinnamomeum Osmunda claytoniana		30 40	YES YES	FACW FAC		
•	Total Cover:	70	ı	1		
Woody Vine Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:		I	I		
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:				
Number of Dominant Species	Total % Cover of		Multiply by:			
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = 0			
Total Number of Dominant	FACW Species:		x = 0 x = 0			
Species Across All Strata: 5 (B)	FAC Species:	<u>30</u> 145	$x 3 = \frac{435}{}$			
Percent of Dominant Species	FACU Species:		$x = \frac{100}{100}$			
That Are OBL, FACW, or FAC: 80 (A/B)	UPL Species:	<u>23</u> <u>0</u>	x 5 = 0			
	Column Totals:	<u>o</u> 200 (A)	595 (B)			
						
	F	revalence Index :	= B/A = <u>2.98</u>			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
☑ 2 - Dominance Test is > 50%						
3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	Hydrophytic Vegetation Present? ✓ Yes □ No				
data in Remarks or on a separate sheet)						
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹ Indicators of hydric soil and wetland hydrology must be						
present, unless disturbed or problematic.						
Remarks:						



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SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the ir	dicator o	confirm the abse	ence of indicators.)	
Depth	Matrix		Red	dox Fe	atures				-
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	l ex	xture	Remarks
0-8	10YR 2/1	97	10YR 3/3	3	С	М	FINE SANDY LOAM		ROOT CHANNELS
8-12	10YR 4/2	95	10YR 4/4	5	С	М	SAND	Y LOAM	E HORIZON
12-16	7.5YR 3/3	92	7.5YR 4/4	8	С	M	SAND	SPODIC HORIZON	
¹Type: C=Cond	centration, D=De	L epletion	l n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	l =Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	•	·						
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histoic (A3) Histoson Sulfide (A4) Black Histoic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Back Juriace (A12) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144B, 145B) Redox Dark Surface (F7) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Redox Dark Surface (F8) Hydric Soil Present? Yes No Hydric Soil Present? Yes No									
Remarks:		• • •	A si Di si						
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	y: High	V	Moderate	Low			Isolated Wetland	l? ☐ Yes ☐	No 🗹 Unknown
General Comm	ents:								





NW



WETLAND DETERMINATION FORM - N	orthce	ntral and No	ortheast Region		
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	☐ Tr	ransmission Line	Other		
Project/Site: NED Milepost: 5320.0	County:	Middlesex	Date:	06/18/2015	
Applicant/Owner: Kinder Morgan	State: M	//A Sam	oling Point: DR-N-W0	09-UPL	
Investigators: PL JW Quad Name: Lowell	Township:	Dracut			
Logbook No.: 2015-1 Logbook Pg.: 37 Tract: 21267					
Landform (hillslope, terrace, etc.): Flat Local Reli	ief:	Concave	Convex 🗹 None	Slope%.: 0	
Subregion (LRR): Middle Atlantic Lat: 42.695548		Long: -71.27	1615	Datum: NAD83	
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8 percent slopes			NWI Classification:	Not mapped	
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes [☐ No (If no, exp	lain in Remarks.)		
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑			cumstances present?	✓ Yes □ No	
Are Vegetation □ Soil □ or Hydrology □ naturally problematic? ☑	_		·	_	
The vegetation con or rightnoisty naturally problematic:	<u> </u>				
SUMMARY OF FINDINGS - Attach site map showing sampling	g point l	locations, tra	nsects, important	features, etc.	
Hydrophytic Vegetation Present? ☐ Yes ☑ No					
Hydric Soil Present? ☐ Yes ☑ No		Is the Sampled within a Wetlar		No	
Wetland Hydrology Present? ☐ Yes ☑ No	,	within a would			
Field Wetland Classification: UPLAND PLOT					
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:		<u> </u>	Secondary Indicators (2 of	or more required)	
Primary Indicators (minimum of one required; check all that apply)		[☐ Surface Soil Cracks	(B6)	
□ Surface Water (A1) □ Water-Stained Leaves (B9) □ Drainage Patterns (B10)					
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		Ι	Moss Trim Lines (B1	6)	
☐ Saturation (A3) ☐ Marl Deposits (B15)		[☐ Dry-Season Water T	able (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C	:1)	[☐ Crayfish Burrows (C	8)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres ale	ong Living	Roots (C3)	Saturation Visible or	Aerial imagery (C9)	
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	n (C4)	[☐ Stunted or Stressed	Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Geomorphic Position (D2)					
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3)			
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks	s)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)		[FAC-Neutral Test (D	95)	
Field Observations:					
Surface Water Present?					
Water Table Present? ☐ Yes ☑ No Depth (inches):		Wetland Hyd	drology Present?	Vaa 🗹 Na	
Saturation Present?				Yes ☑ No	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, prev	vious inspe	ections), if availab	le):		
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name		% Cover	Dominant	Indicator Status	
Pinus strobus		45	YES	FACU	
Acer rubrum		55	YES	FAC	
Tot	tal Cover:	100			



Providence, Rt 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus		15	YES	FACU
Vaccinium corymbosum	Total Cover:	8 23	YES	FACW
	Total Cover.	23		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Osmundastrum cinnamomeum		50	YES	FACW
Maianthemum canadense Dennstaedtia punctilobula		8 10	NO NO	FACU UPL
Osmunda claytoniana		15	NO	FAC
	Total Cover:	83		
Woody Vine Stratum				
Plot Size: 30			1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:	-	
Number of Dominant Species That Are OBL. FACW. or FAC: 3 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	: <u>58</u>	x 2 = <u>116</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>70</u>	x 3 = <u>210</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)	FACU Species:	<u>68</u>	x 4 = <u>272</u>	
That Ale ODE, I AGW, OF I AG.	UPL Species:	<u>10</u>	x 5 = <u>50</u>	
	Column Totals:	206 (A)	648 (B)	
	F	Prevalence Index :	= B/A = <u>3.15</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? □ Yes ि	7 No
data in Remarks or on a separate sheet)	i i juropii juo t	ogotation i rocci	🗀 163 🖟	_ 140
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
1Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
Nomano.				



T TOVIGETICE, I	(1 02304								The second second
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
0-8	10YR 2/1	100					FINE SANI	DY LOAM	UNCOATED SAND GRAINS OF OLD E HORIZON
8-14	10YR 3/3	100					SANDY	LOAM	
14-20	7.5YR 2.5/3	100					SANDY	LOAM	
¹Type: C=Cond	 centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	²Location: PL=	 =Pore Lining, M=Matrix
Hydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
Black Hist Hydrogen Stratified I Depleted Thick Dari Sandy Mt Sandy Gle Sandy Re Stripped I Dark Surf	bedon (A2) siic (A3) Sulfide (A4) Layers (A5) Below Dark Surfa k Surface (A12) ucky Mineral (S1) eyed Matrix (S4) bdox (S5) Matrix (S6) ace (S7) (LRR R	, MLRA	T	Thin Da oamy oamy Deplete Redox I Deplete Redox I	ark Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	e (S9) (LRI neral (F1) (atrix (F2) F3) ace (F6) urface (F7) ns (F8)	8) (LRR R, R R, MLRA 149B) (LRR K, L) ess disturbed or prob	Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark St Iron-Mangar Piedmont Fle Mesic Spodi Red Parent Very Shallov Other (Explain	(A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) oodplain Soils (F19) (MLRA 149B) ic (TA6) (MLRA 144A, 145, 149B) Material (F21) w Dark Surface (TF12) ain in Remarks) Pent?
	Llabitat Characta	wiation.	Agustia Diversita		naral Cam				
Description of	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualif	ty: High		Moderate	Low			Isolated Wetland?	P Yes	No 🔲 Unknown
General Comm	ents:								





EAST



WETLAND DETERMINATION FORM - Northc	entral and No	rtheast Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐	Transmission Line	Other	
Project/Site: NED Milepost: 5390.0 County:	Middlesex	Date:	06/18/2015
Applicant/Owner: Kinder Morgan State:	MA Samp	oling Point: DR-N-W01	10-PFO
Investigators: PL JW Quad Name: Lowell Townshi	p: Dracut		
Logbook No.: 2015-1 Logbook Pg.: 28 Tract: 21267			
Landform (hillslope, terrace, etc.): Flat Local Relief:	Concave	Convex 🗹 None	Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.694666	Long: -71.272	2903	Datum: NAD83
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8 percent slopes		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, expla	ain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circ	cumstances present?	☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No			
OUMMADY OF FINIDINGS. Attack after many abouting a small and a significant			f1
SUMMARY OF FINDINGS - Attach site map showing sampling point	t locations, trai	nsects, important	reatures, etc.
Hydrophytic Vegetation Present?	Is the Sampled	Area	
Hydric Soil Present? ☑ Yes ☐ No	within a Wetlan	nd? ☑ Yes ☐	No
Wetland Hydrology Present? ☑ Yes ☐ No			
Field Wetland Classification: PFO			
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:	<u>s</u>	Secondary Indicators (2 c	or more required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		Drainage Patterns (E	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines (B1	6)
✓ Saturation (A3) ☐ Marl Deposits (B15)		Dry-Season Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (Ca	3)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livir	ng Roots (C3)	Saturation Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled So	ils (C6)	Geomorphic Position	(D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		Microtopographic Re	lief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D	5)
Field Observations:			
Surface Water Present?			
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hyd	rology Present?	–
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)		⊻	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous ins	pections), if available	e):	
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Pinus strobus Acer rubrum	20 60	NO YES	FACU FAC
Ulmus rubra	10	NO	FAC
Quercus rubra Total Cove	15 r: 105	NO	FACU
l otal Cove	. 105		



Providence, RI 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus americana		8	NO	FACU
Vaccinium corymbosum		40	YES	FACW
	Total Cover:	48		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Viburnum dentatum		5	NO	FAC
Fragaria vesca		8	YES	UPL
Vaccinium corymbosum Unknown plant		25 15	YES NA	FACW NONE
	Total Cover:	53	I	1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Total Cover:			I
Davidson Tax Walder	I			
Dominance Test Worksheet:		dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover		Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>65</u>	x 2 = <u>130</u>	
	FAC Species:	<u>75</u>	x 3 = <u>225</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)	FACU Species:	<u>43</u>	x 4 = <u>172</u>	
	UPL Species:	<u>8</u>	x 5 = <u>40</u>	
	Column Totals:	<u>191 (A)</u>	<u>567 (B)</u>	
		Prevalence Index =	= B/A = <u>2.97</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
	Usalnambustia V	lamatation Dracen	42	7 Na
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydropnytic V	egetation Presen	t? ☑ Yes [□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	<u> </u>			



SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures		- .		D 1
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ture	Remarks
0-8	10YR 2/1	100					FINE SANI	DY LOAM	
8-16+	2.5Y 4/2	92	2.5Y 5/4	8	С	M	SANDY	LOAM	
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated Grains.		Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Applic	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
☐ Histosol (A	A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epip					•			_	e Redox (A16) (LRR K, L, R)
☐ Black Hist			п т	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			-	-		(LRR K, L)		e (S7) (LRR K, L, M)
	_ayers (A5)		_	-	Gleyed Ma			☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🗹 D	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Dark	Surface (A12)		□ R	ledox [Dark Surfa	ice (F6)		☐ Iron-Mangan	nese Masses (F12) (LRR K, L, R)
	cky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		□ R	Redox [Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped N	/latrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of h	ydrophytic veget	tation a	and wetland hydro	ology m	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Remarks:								Hydric Soil Prese	ent? ☑ Yes ☐ No
Description of I			Aquatic Diversity	or Ge	neral Com	nments:	Isolated Wetland?	² □ Yes □	No √ Unknown
General Comm			vicaciate				iodatoa vvotiaria.		THE ELIMINATION





NW



WETL	AND D	ETER	RMINATI	ON FORM - I	Northce	entral and	d No	rtheast F	Region		
☐ Centerline ☐ Re-Route		Access R	oad 🗹	Ancillary Facility	□ ™	ransmission	Line	☐ Other			
Project/Site: NED			Milepost:	5359.1	County:	Middle	sex		Date:	06/18/201	5
Applicant/Owner: Kinder Morga	1		_		State: I	MA	Sampl	ling Point:	DR-N-W	10-UPL	
Investigators: PL JW	Qua	ad Name	: Lowell		Township	: Dracut	t				
Logbook No.: 2015-1	Logboo	k Pg.: 29	9	Tract: 21267							
Landform (hillslope, terrace, etc.)	: Fla	at	<u>'</u>	Local R	elief:	Concave		Convex 🔽	None	Slope%.:	0
Subregion (LRR): Middle Ai	antic		Lat	42.694794		Long: -	-71.272	2852		Datum: NA	D83
Soil Map Unit Name: Scituat	e fine sand	dy loam,	3 to 8 perce	nt slopes				NWI Class	sification:	Not ma	apped
Are climatic / hydrologic condition	s on the s	site typica	al for this tim	e of year?:	Yes [☐ No (If no	o, expla	ain in Remark	(s.)		-
Are Vegetation	or Hydro	ology [] significa	ntly disturbed?	√ No	Are "Norma	al" Circu	umstances p	resent?	✓ Yes	☐ No
Are Vegetation Soil	or Hydro	ology [naturally	problematic?	✓ No						
SUMMARY OF FINDING	S - Atta	ch site	map sho	owing samplir	ng point	locations	s, tran	sects, im	portant	features	, etc.
Hydrophytic Vegetation Present?		☐ Ye	s 🗹 No)							
Hydric Soil Present?		☐ Ye	s 🗹 No)		Is the Sam within a W	npled	Area	Yes ⊻	∐ No	
Wetland Hydrology Present?		☐ Ye	s 🗹 No)		within a w	veliani	ur			
Field Wetland Classification:	UPLANI	D PLOT									
Remarks:											
HYDROLOGY											
Wetland Hydrology Indicators:							Se	econdary Ind	licators (2	or more requ	uired)
Primary Indicators (minimum of	ne require	ed; check	all that app	l <u>y)</u>] Surface S	oil Cracks	(B6)	
☐ Surface Water (A1)			☐ Water	r-Stained Leaves (B9)] Drainage	Patterns (B10)	
☐ High Water Table (A2)			☐ Aquat	tic Fauna (B13)				Moss Trin	n Lines (B	16)	
☐ Saturation (A3)			☐ Marl [Deposits (B15)				Dry-Seaso	on Water ⁻	Table (C2)	
☐ Water Marks (B1)			☐ Hydro	ogen Sulfide Odor	(C1)			Crayfish E	Burrows (C	28)	
☐ Sediment Deposits (B2)			☐ Oxidiz	zed Rhizospheres	along Living	g Roots (C3)] Saturation	n Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)			☐ Prese	ence of Reduced Ire	on (C4)			Stunted o	r Stressed	l Plants (D1)	
☐ Algal Mat or Crust (B4)			☐ Recei	nt Iron Reduction in	n Tilled Soil	ls (C6)] Geomorpl	hic Positio	n (D2)	
☐ Iron Deposits (B5)			☐ Thin I	Muck Surface (C7)				Shallow A	quitard (D	93)	
☐ Inundation Visible on Aerial	Imagery (E	B7)	☐ Other	(Explain in Remar	ks)] Microtopo	graphic R	elief (D4)	
☐ Sparsely Vegetated Concav	e Surface	(B8)] FAC-Neut	tral Test ([O5)	
Field Observations:											
Surface Water Present?	Yes 🔽	Z No	Depth (inc	hes):							
Water Table Present?	Yes 🔽	Z No	Depth (inc	hes):		Wetlan	d Hydr	rology Prese		Vac 🖂	No
Saturation Present? [Includes capillary fringe]	Yes 🔽	☑ No	Depth (inc	hes):					Ц	Yes ⊻	NO
Remarks (Describe Recorded Da	a (stream	gage, m	onitoring we	ll, aerial photos, pr	revious insp	pections), if a	vailable	e):			
VEGETATION											
Tree Stratum											
Plot Size: 30											
Scientific Name						% Co	over	Dom	inant	Indicate	or Status
Acer rubrum Pinus strobus Quercus rubra						15 50 30)	NO YE YE	S	FA	AC ACU ACU
Quotous tubiu				Т	otal Cover:	1		1 12	.5	1	



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Prunus serotina Pinus strobus		3 5	NO YES	FACU FACU
T mas strongs	Total Cover:	8	120	17.00
		-		
Herb Stratum				
Plot Size: 5	1		l -	1
Scientific Name		% Cover	Dominant	Indicator Status
Vaccinium corymbosum Osmunda claytoniana		30 18	YES YES	FACW FAC
Maianthemum canadense	7.10	5	NO	FACU
	Total Cover:	53		
Woody Vine Stratum				
Plot Size: 30	1		l	1
Scientific Name		% Cover	Dominant	Indicator Status
	T + + 0			
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind			
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover of		Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:		x 2 = <u>60</u>	
Percent of Dominant Species	FAC Species:	<u>33</u>	x 3 = <u>99</u>	
That Are OBL, FACW, or FAC: 40 (A/B)	FACU Species:		x 4 = <u>372</u>	
	UPL Species:	0	x 5 = 0	
	Column Totals:	<u>156 (A)</u>	<u>531 (B)</u>	
	F	Prevalence Index =	= B/A = <u>3.40</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Presen	it? ☐ Yes 🖸	☑ No
data in Remarks of on a separate sneet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	I			



SOIL									
JOIL									
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm the abse	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	ture	Remarks
0-8	10YR 2/1	100					FINE SAN	DY LOAM	
8-16	10YR 3/3	100					SANDY	LOAM	
Type: C=Cond	centration, D=De	pletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	l or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unio	ess oth	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils3:
☐ Histosol (A	A1)		ПБ	Polyvalı	ue Below :	Surface (S	88) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
_	pedon (A2)			/ILRA 1		,		_	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		_ T	hin Da	ırk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			.oamy	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
■ Depleted I	Below Dark Surfa	ace (A1	1) 🔲 [Peplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		□ F	Redox I	Dark Surfa	ce (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	in in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prol	olematic.	
Restrictive Lay	er Present?		∕es √ No	□ u	Inknown			Hydric Soil Prese	ent? □ Yes ☑ No
Restrictive Lay	er Present?		Yes ☑ No		Inknown			Hydric Soil Prese	ent? □ Yes ☑ No
Remarks:			res ☑ No Aquatic Diversity	_		nments:		Hydric Soil Prese	ent? □ Yes ☑ No
Remarks:			_	_		nments:		Hydric Soil Prese	ent? □ Yes ☑ No
Remarks:	Habitat Characte	ristics,	Aquatic Diversity	_		nments:	Isolated Wetland		ent? ☐ Yes ☑ No
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of l	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?		
Remarks: Description of I Wetland Qualit	Habitat Characte y:	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland		





EAST



WETLAND DETERMINATION FORM - North	central and N	Northeast Regio	on
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐	Transmission Line	e 🔲 Other	
Project/Site: NED Milepost: 5965.4 Count	y: Middlesex	Da	te: 06/18/2015
Applicant/Owner: Kinder Morgan State:			W003-PFO
Investigators: PL JW Quad Name: Lowell Towns			
Logbook No.: 2015-1 Logbook Pg.: 42 Tract: 21268			
Landform (hillslope, terrace, etc.): Depression Local Relief:		Convex Nor	ie Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.694003	Long: -71.	270428	Datum: NAD83
Soil Map Unit Name: Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely sto	ny	NWI Classificatio	n: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, ex	plain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" C	Circumstances present?	Yes 🔲 No
Are Vegetation \square Soil \square or Hydrology \square naturally problematic? \square No)		
SUMMARY OF FINDINGS - Attach site map showing sampling poi	nt locations tr	ansacts imports	unt features etc
Hydrophytic Vegetation Present? ✓ Yes ☐ No	in iocations, ti	anscots, importe	The real area, etc.
	Is the Sample	ed Area ☑ Yes	□ No
Hydric Soil Present? ✓ Yes ☐ No Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetl	and?	□ NO
Field Wetland Classification: PFO			
Remarks:			
Tomano.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators	(2 or more required)
Primary Indicators (minimum of one required; check all that apply)		☐ Surface Soil Cra	cks (B6)
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)		□ Drainage Patterr	s (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			(B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)		□ Dry-Season Wat	er Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish Burrows	s (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Li	ving Roots (C3)	☐ Saturation Visible	e on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		☐ Stunted or Stress	sed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (C6)	☐ Geomorphic Pos	ition (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		☐ Shallow Aquitard	(D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)		☐ FAC-Neutral Tes	t (D5)
Field Observations:			
Surface Water Present?			
Water Table Present?	Wetland H	ydrology Present?	
Saturation Present?	Wettand 11		☑ Yes 🗆 No
(includes capillary fringe)			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	nspections), if availa	able):	
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Acer rubrum	20	YES	FAC
Nyssa sylvatica	40	YES	FAC
Total Co	ver: 60		



Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name	1	% Cover	Dominant	Indicator Status
Pinus strobus		5	NO	FACU
Vaccinium corymbosum		45	YES	FACW
	Total Cover:	50		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		'	'
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		'	'
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	: <u>45</u>	x 2 = <u>90</u>	
Species Across All Strata: 3 (B)	FAC Species:	<u>60</u>	x 3 = <u>180</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>5</u>	x 4 = <u>20</u>	
That Are OBL, I AGW, OF I AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>110 (A)</u>	290 (B)	
	F	Prevalence Index =	= B/A = <u>2.64</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydronhytic V	egetation Presen	nt? ☑ Yes □	7 No
data in Remarks or on a separate sheet)	Try di opiny no v	egetation i reser	m. V les L] NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks: VERY SPARSE GROUND COVER				
Tomano. 12tt of Angle of Control				



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ture	Remarks
0-4	10YR 2/1	100					FINE SANI	DY LOAM	
4-14+	10YR 4/2	95	10YR 5/2	5	D	М	SANDY	LOAM	
**		·	·				or Coated Grains.		Pore Lining, M=Matrix
-		cable t	o all LRR's, unle			-			oblematic Hydric Soils ³ :
Histosol (A	,			olyvalı 1LRA 1		Surface (S	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
Histic Epip						(00) (10)		_	Redox (A16) (LRR K, L, R)
☐ Black Hist							R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		· <u> </u>	-	-		(LRR K, L)		e (S7) (LRR K, L, M)
	_ayers (A5)		_	-	Gleyed Ma				elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1			d Matrix (I			_	urface (S9) (LRR K, L)
	Surface (A12)		_		Dark Surfa			_	ese Masses (F12) (LRR K, L, R)
	cky Mineral (S1)		_	•		ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		□ F	Redox [Depressio	ns (F8)		☐ Mesic Spodi	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of h	ydrophytic veget	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	ei Fieseitt	<u> </u>	∕es ☑ No	<u> </u>	nknown			Hydric Soil Prese	nt? ☑ Yes ☐ No
Remarks:									
Description of I	Hahitat Characte	ristics	Aquatic Diversity	or Ge	neral Com	ments:			
2000р	iaziai oriai aoto	,	riqualio Divololly	0. 00					
Wetland Qualit	y: High	V	Moderate	Low			Isolated Wetland?	Yes 🗖	No 🔲 Unknown
General Comm	ents:								
WETLAND CO	NTAINS VERNA	L POC	DL						





EAST



WETLAND DETERMINATION FORM -	Northcer	ntral and No	rtheast Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	☐ Tra	ansmission Line	☐ Other	
Project/Site: NED Milepost: 6444.9	County:	Middlesex	Date:	06/18/2015
Applicant/Owner: Kinder Morgan	State: M	1A Samp	oling Point: DR-N-W0	04-PFO
Investigators: PL JW Quad Name: Lowell	Township:	Dracut		
Logbook No.: 2015-1 Logbook Pg.: 44 Tract: 21267				
Landform (hillslope, terrace, etc.): Depression Local F	Relief: 🗹	Concave	Convex None	Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.692257		Long: -71.270	0732	Datum: NAD83
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8 percent slopes			NWI Classification:	PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year?:	√ Yes □	No (If no, expla	ain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?		- Are "Normal" Circ	cumstances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	✓ No		·	
The vegetation coil of Hydrology hatdrainy problematics	<u>V</u> 140			
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point l	ocations, trar	nsects, important	features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No				
Hydric Soil Present? ☑ Yes ☐ No	I:	ls the Sampled within a Wetlan	Area ☑ Yes □	No
Wetland Hydrology Present? ☑ Yes ☐ No	•	within a wetian	iu :	
Field Wetland Classification: PFO				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		<u>S</u>	Secondary Indicators (2 of	or more required)
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cracks	(B6)
Surface Water (A1) Water-Stained Leaves	(B9)		Drainage Patterns (E	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	. ,		Moss Trim Lines (B1	6)
☐ Saturation (A3) ☐ Marl Deposits (B15)			Dry-Season Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1)		Crayfish Burrows (C	8)
Sediment Deposits (B2) Oxidized Rhizospheres	along Living	Roots (C3)	Saturation Visible or	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced I	ron (C4)		Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	in Tilled Soils	s (C6)	Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D:	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	arks)		Microtopographic Re	elief (D4)
☐ Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D	5)
Field Observations:				
Surface Water Present?				
Water Table Present? ☑ Yes ☐ No Depth (inches): 6		Wetland Hyd	rology Present?	
Saturation Present?				Yes No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspe	ections), if available	e):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Quercus bicolor		15	NO	FACW
Acer rubrum	Total Cover:	75 90	YES	FAC



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Vaccinium corymbosum		15	YES	FACW
Frangula alnus	Total Cover:	25 40	YES	FAC
	Total Cover.	40		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Osmundastrum cinnamomeum		25	YES	FACW
	Total Cover:	25		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inde	ex Worksheet:		
Number of Dominant Species	Total % Cover o	f:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species:	<u>55</u>	x 2 = <u>110</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>100</u>	x 3 = <u>300</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>	
That Are OBL, FACW, OF FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>155 (A)</u>	410 (B)	
	P	revalence Index	= B/A = 2.65	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)	Trydrophytic V	cyclation i resc	V les L	_ NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks: SPARSE GROUND COVER				
Tomania.				



T TOVIGETICE, I	1 02304											
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to o	locum	ent the in	ndicator o	r confirm t	he absen	ce of indicators.)			
Depth (inches)	Matrix		Red	lox Fe	atures			Text	uro		P.o.	marks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure		Kei	Haiks
0-8	10YR 2/2	100						ORGA	NIC		HE	EMIC
8-14	10YR 4/2	100						SANDY	LOAM			
14-20+	10YR 4/2	100						SANDY	LOAM		STA	AINING
¹Type: C=Cond	centration, D=De	epletion	ı ı, RM=Reduced l	Matrix,	CS=Cov	ered Sand	l or Coated	Grains.	² Location: PL=	Pore Linin	g, M=M	 latrix
		•	o all LRR's, unle						Indicators for Pr			
☐ Histosol (/						•	8) (LRR R,		2 cm Muck (•	
_ `	pedon (A2)			ILRA 1		ounace (C	(LIXIX IX,		☐ Coast Prairie			•
			Пт	hin Da	rk Surface	, (SO) (I P	R R, MLRA	140R)				(LRR K, L, R)
	Sulfide (A4)						(LRR K, L)	1490)	_ ′		. , ,	
	Layers (A5)		_	•	Gleyed Ma	, ,	(LKK K, L)					
	Below Dark Surfa	nco (A1	_	•	•	, ,			Polyvalue Be			
	k Surface (A12)	ace (A i	_	•	d Matrix (I	•			☐ Thin Dark Su		•	•
_	, ,				Dark Surfa				_			(LRR K, L, R)
_	icky Mineral (S1)			-		ırface (F7)				-)) (MLRA 149B)
	eyed Matrix (S4)		□ R	eaox	Depressio	ns (F8)				, , ,		4A, 145, 149B)
☐ Sandy Re									Red Parent I		•	
	Matrix (S6)		= .						☐ Very Shallow			12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	rks)	
³ Indicators of h	nydrophytic vege	tation a	and wetland hydro	logy r	nust be pr	esent, unle	ess disturbe	d or prob	lematic.			
Restrictive Lay	er Present?		res ☑ No	□ L	Inknown							
									Hydric Soil Prese	nt? ✓	Yes	□ No
Remarks:							1					
Description of	Habitat Characte	ristics	Aquatic Diversity	or Ge	neral Com	ments:						
2 cccinption of		,	riqualio Divolony	0. 00								
Wetland Qualit	v· 🗖 High	IJ N	Moderate	ΟW			Isolated \	Wetland?	☐ Yes 🗹	No 🗖	Unkn	nown
Welland Qualit	y. 🔲 iligii	, T	vioderate	_0**			isolated	wonana:	103 V _	110 Ц	Onkn	OWII
General Comm	ents:											
WETLAND CO	NTAINS POTEN	ITIAL V	ERNAL POOL									





EAST



WE	TLANI	DE1	ΓERN	IINATI	ION FORM -	Northce	entral an	nd No	ortheast	Region		
☐ Centerline ☐ Re-Re	oute [Acce	ss Roa	nd 🗹	Ancillary Facility		Transmissior	n Line	☐ Othe	r		
Project/Site: NED				Milepost:	6477.2	County:	Middle	esex		Date:	06/18/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	oling Point:	DR-N-W	004-UPL	
Investigators: PL JW		Quad N	ame:	Lowell		Township	o: Dracu	ıt				
Logbook No.: 2015-1	Log	book Po	j.: 45		Tract: 21267							
Landform (hillslope, terrace, e	etc.):	Flat		<u> </u>	Local F	Relief:] Concave		Convex [✓ None	Slope%.:	1
Subregion (LRR): Middle	e Atlantic			Lat	t: 42.692235		Long:	-71.27	0563		Datum: NAI	D83
Soil Map Unit Name: Sci	tuate fine	sandy Ic	am, 3	to 8 perce	ent slopes				NWI Clas	sification:	PFO10	
Are climatic / hydrologic cond	itions on t	ne site t	ypical f	or this tim	ne of year?:	✓ Yes	☐ No (If r	no, expl	ain in Remar	ks.)		
Are Vegetation	☐ or H	ydrolog	у 🗖	significa	antly disturbed?	☑ No	Are "Norm	nal" Circ	cumstances p	oresent?	✓ Yes	☐ No
Are Vegetation Soil	— or H	ydrolog	y 🗆	naturally	y problematic?	— ☑ No						
	_	, ,	_	•	, ,	_						
SUMMARY OF FINDIN	IGS - A	ttach	site r	nap sh	owing sampli	ng point	location	s, trai	nsects, in	nportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?	\checkmark	Yes	☐ N	0		la tha Sai	mplad	Aron			
Hydric Soil Present?			Yes	✓ N	0		Is the Sar within a \	Metlan	nd?	Yes ⊻	∐ No	
Wetland Hydrology Present?			Yes	√ N	0							
Field Wetland Classification:	UPL	AND PI	LOT									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	rs:							<u>S</u>	Secondary In	dicators (2	or more requ	uired)
Primary Indicators (minimum	of one red	quired; c	heck a	ll that app	oly)				Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)			ı	☐ Wate	er-Stained Leaves	(B9)			☐ Drainage	Patterns (B10)	
☐ High Water Table (A2)			Ī	_ □ Aqua	tic Fauna (B13)				Moss Tri	m Lines (B	16)	
☐ Saturation (A3)			1	☐ Marl	Deposits (B15)				Dry-Seas	son Water	Table (C2)	
□ Water Marks (B1)			1	☐ Hydro	ogen Sulfide Odor	(C1)			Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2)			I	Oxidi	ized Rhizospheres	along Livin	g Roots (C3)) [Saturation	n Visible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)			I	Prese	ence of Reduced I	ron (C4)			Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)			I	Rece	ent Iron Reduction	in Tilled Soi	ils (C6)		Geomorp	ohic Positio	n (D2)	
☐ Iron Deposits (B5)			[☐ Thin	Muck Surface (C7	")			Shallow .	Aquitard (D	03)	
☐ Inundation Visible on Ae	rial Image	ry (B7)	I	Othe	r (Explain in Rema	arks)			Microtop	ographic R	elief (D4)	
☐ Sparsely Vegetated Cor	cave Surf	ace (B8)						☐ FAC-Net	utral Test ([D5)	
Field Observations:												
Surface Water Present?	☐ Yes	V	No	Depth (inc	ches):							
Water Table Present?	☐ Yes	=		Depth (inc	,		Wetla	nd Hyd	Irology Pres	ent?		
Saturation Present? (includes capillary fringe)	☐ Yes			Depth (inc	•			·			Yes ☑	No
Remarks (Describe Recorded	Data (stre	am gag	je, mor	itoring we	ell, aerial photos, p	revious insp	pections), if a	availabl	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Dor	ninant	Indicato	or Status
Acer rubrum Pinus strobus Quercus rubra							2	35 20 20	Y	ES ES ES	FA	AC ICU ICU
Querous rubia						Total Cover	1	75	1	LO	FA	



Providence, RI 02904				-LCOM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus		40	YES	FACU
Vaccinium corymbosum Frangula alnus		10 15	NO YES	FACW FAC
3	Total Cover:	65		
Herb Stratum				
Plot Size: 5			1	1
Scientific Name		% Cover	Dominant	Indicator Status
Maianthemum canadense Dendrolycopodium obscurum		5 5	NO NO	FACU FACU
Osmundastrum cinnamomeum		20	YES	FACW
Osmunda claytoniana	Total Cover:	10 40	YES	FAC
Manaka Vina Charlesan	Total Cover.	40		
Woody Vine Stratum Plot Size: 30				
	1	0/ 0	1 5	1
Scientific Name		% Cover	Dominant	Indicator Status
	T-: 10		1	
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover	of:	Multiply by:	
That Are OBE, I ACW, OF I AC.	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species	s: <u>30</u>	x 2 = <u>60</u>	
Opedies Actoss All Strata.	FAC Species:	<u>60</u>	x 3 = <u>180</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 57 (A/B)	FACU Species	: <u>90</u>	x 4 = <u>360</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	180 (A)	600 (B)	
		Prevalence Index	= B/A = <u>3.33</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
	Hydrophytic	/egetation Prese	nt? ☑ Yes I	□ No
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	riyaropriyac	regetation Fresei	iii: 🗹 162	NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, T	(1 0200+								The second of the second
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the in	dicator o	confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ture	Remarks
0-12	10YR 2/1	100					FINE SAN	DY LOAM	
12-18	10YR 3/3	100					SANDY	LOAM	
12 10	10110 3/3	100					0/1101	LO/ (IVI	
1T 0. 0			DM Dadward	\ 4 = 4 = ¹ = 1	00.0			31	Dans Lining M. Matain
	· · · · · · · · · · · · · · · · · · ·	·	·				or Coated Grains.		Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils³:
☐ Histosol (A	A1)			olyval 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		IV	ILIXA	1490)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		П Т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thin Dark Surface (S9) (LRR K, L)									urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		□ F	edox l	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1))		eplete	d Dark Su	ırface (F7)			oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)			edox	Depressio	ns (F8)		_	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)		_		·	. ,		_	Material (F21)
	Matrix (S6)							_	v Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	1.140R)					_ '	in in Remarks)
_			·				oo diatuubad ar arab		iii ii Keliaks)
						esent, unit	ess disturbed or prob	Diemanc.	
Restrictive Lay	er Present?		Yes ☑ No	□ '	Inknown				
								Hydric Soil Prese	ent? ☐ Yes ☑ No
Remarks:									
Description of I	Habitat Characte	ristics.	Aquatic Diversity	or Ge	neral Com	nments:			
,		,	,,,,,,						
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland?	?	No Unknown
Welland Qualit	y. 🗀 Tilgii	ш.	vioderate	LOW			isolated Wetland		THE CHIMIOWIT
General Comm	ents:								





EAST



WE	TLAI	ND DE	TER	MINA	TIO	N FO	ORM -	Northc	en	itral an	d No	ortheas	st Regi	on		
☐ Centerline ☐ Re-R	oute	☐ Ac	cess R	oad		Ancillar	ry Facility		Tra	ansmission	Line		ther			
Project/Site: NED				Milepo	st:	0		County:		Middle	esex		Da	ate:	06/29/201	5
Applicant/Owner: Kinder Mo	rgan							State:	MA	A	Sam	oling Poi	nt: DR-N	-W00	05-PFO	
Investigators: PL JW		Quad	Name:	Lowel	I			Townshi	ip:	Dracu	t					
Logbook No.: 2015-1	L	ogbook	Pg.: 53	3		Tract:	: 21268	·								
Landform (hillslope, terrace,	etc.):	Stre	am frin	ge			Local R	Relief:	<u> </u>	Concave		Convex	☐ No	ne	Slope%.:	0
Subregion (LRR): Middl	e Atlant	tic			Lat:	42.692	2303			Long:	-71.26	8369			Datum: NAI	083
Soil Map Unit Name: Urb	oan land	b										NWI (Classification	on:	Not ma	pped
Are climatic / hydrologic cond	litions o	n the site	typica	I for this	time	of year	r?: [Yes		No (If n	o, exp	lain in Re	marks.)			
Are Vegetation Soil	□ ∘	r Hydrolo	gy 🗀] signi	ficant	ly distu	ırbed?	☑ No	A	Are "Norm	al" Cir	cumstanc	es present	?	✓ Yes	☐ No
Are Vegetation Soil		r Hydrolo	gy 🗆	natu	rally p	roblem	natic?	— ✓ No								
0		•														
SUMMARY OF FINDI		_	_			ving :	sampli	ng poin	t Ic	ocations	s, tra	nsects	import	ant	teatures	, etc.
Hydrophytic Vegetation Pres	ent?	Ŀ	Yes	s 🔲	No				Is	s the Sar	mpled	l Area				
Hydric Soil Present?		5		_	No				W	vithin a V	Vetla	nd?	✓ Yes		No	
Wetland Hydrology Present?			/ Yes	s 🔲	No											
Field Wetland Classification:	P	PFO														
Remarks:																
HYDROLOGY																
Wetland Hydrology Indicate	ors:										<u> </u>	Secondar	/ Indicators	s (2 o	or more requ	<u>iired)</u>
Primary Indicators (minimum	of one	required	check	all that	apply)					[☐ Surfa	ce Soil Cra	acks ((B6)	
☐ Surface Water (A1)				☑ W	ater-S	Stained	Leaves ((B9)			E	√ Drain	age Patter	ns (B	310)	
✓ High Water Table (A2)				□ Ac	quatic	Fauna	a (B13)				[Moss	Trim Lines	s (B1	6)	
✓ Saturation (A3)				М	arl De	posits	(B15)				[Dry-S	eason Wa	ter Ta	able (C2)	
☐ Water Marks (B1)				□ H;	ydrog	en Sulf	fide Odor	(C1)			[Crayf	ish Burrow	s (C8	3)	
☐ Sediment Deposits (B2)					xidize	d Rhiz	ospheres	along Livi	ng F	Roots (C3)) [Satur	ation Visib	le on	Aerial imag	jery (C9)
☐ Drift Deposits (B3)				☐ Pi	resen	ce of R	Reduced II	ron (C4)			[Stunt	ed or Stres	ssed	Plants (D1)	
☐ Algal Mat or Crust (B4)				☐ R	ecent	Iron R	eduction i	in Tilled So	oils ((C6)	[Geon	norphic Po	sition	(D2)	
☐ Iron Deposits (B5)				□ т	hin Mı	uck Sui	rface (C7))			[Shall	ow Aquitar	d (D3	3)	
☐ Inundation Visible on A	erial Ima	agery (B7	')		ther (I	Explain	n in Rema	rks)			[Micro	topographi	ic Re	lief (D4)	
☐ Sparsely Vegetated Cor	ncave S	Surface (E	88)								[☐ FAC-	Neutral Te	st (D	5)	
Field Observations:																
Surface Water Present?	□ Y	∕es 🗹	No	Depth	(inche	es):										
Water Table Present?	✓ Y	∕es 🔲	No	Depth	(inche	es):	0			Wetlar	nd Hyd	drology P	resent?	_	–	
Saturation Present? (includes capillary fringe)	√ Y	∕es □	No	Depth	(inche	es):	0							✓	Yes □	No
Remarks (Describe Recorded	Data (s	stream g	age, mo	onitoring	g well,	aerial	photos, p	revious ins	spec	ctions), if a	availab	ile):				
VEGETATION																
Tree Stratum																
Plot Size: 30																
Scientific Name										% C	over		Dominant		Indicato	or Status
Ulmus rubra Acer rubrum										1:			NO YES			AC AC
							-	Total Cove	er:	8	5					



1 10 Vide lice, 1(1 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Viburnum dentatum		5 10	YES YES	FAC FAC
Frangula alnus	Total Cover:	15	TES	FAC
	Total Cover.			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Impatiens capensis Carex Iurida		30 5	YES NO	FACW OBL
Onoclea sensibilis		15	YES	FACW
Glyceria striata	Total Cover:	20 70	YES	OBL
W LV C	Total Cover:	70		
Woody Vine Stratum				
Plot Size: 30	1	0/ 0		Lasta (Or :
Scientific Name		% Cover	Dominant	Indicator Status
Vitis sp	Total Course	5	NA	NA
	Total Cover:	5		
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)	Total % Cover of	of:	Multiply by:	
	OBL Species:	<u>25</u>	x 1 = <u>25</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species		x 2 = <u>90</u>	
•	FAC Species:	<u>100</u>	x 3 = <u>300</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = <u>0</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>170 (A)</u>	<u>415 (B)</u>	
	F	Prevalence Index =	B/A = <u>2.44</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	t? ☑ Yes 🗆] No
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, I	(1 02004								11 2 2 3 3 3 3 3 3	
SOIL										
Profile Descrip	otion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	confirm the al	bsence of indicators.)	1	
Depth (inches)	Matrix				atures			Texture	Remarks	
(11101162)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		- CALUIG	I/GIIIGIV2	
0-2	10YR 3/2	100					0	RGANIC		
2-6	10YR 3/2	93	10YR 3/4	7	С	М		LOAM		
6-16	10YR 4/2	92	10YR 3/4	8	С	M		LOAM		
0 10	10111112	02	1011(0,1	Ü				2071111		
1T 0.0			DM D 1				0 1 10 1		<u></u>	
		•	n, RM=Reduced				or Coated Grai		=Pore Lining, M=Matrix	
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils ³ :	
Histosol (A	A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)	
☐ Histic Epip	oedon (A2)		IV	ILIXA I	490)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)	
■ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 1491	B)	Peat or Peat (S3) (LRR K, L, R)	
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)	
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)	
□ Depleted	Below Dark Surfa	ace (A1	I1) 🗹 🗅	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)	
☐ Thick Dar	k Surface (A12)		ΠR	edox [Dark Surfa	ce (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)	
	ıcky Mineral (S1)					ırface (F7)		=	oodplain Soils (F19) (MLRA 149B)	
_	eyed Matrix (S4)		_	•	Depressio				ic (TA6) (MLRA 144A, 145, 149B)	
☐ Sandy Re			· ·	icuox i	эсргоззіо	113 (1 0)				
								_	Material (F21)	
	☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12)									
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or	problematic.		
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown					
								Hydric Soil Prese	ent? ☑ Yes ☐ No	
								•	_ 135 <u>_</u> 115	
Remarks:										
Nemarks.										
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:				
Wetland Qualit	y: 🔲 High	√ 1	Moderate	Low			Isolated Wetla	and? 🔲 Yes 🗹	No 🔲 Unknown	
General Comm	ents:									





NW



WETLAND DETERMINATION FORM - Northcentral and Northeast Region										
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐] Tra	ınsmission	Line	☐ Other						
Project/Site: NED Milepost: 6705.7 Count	ty:	Middle	esex		Date:	06/29/2015				
Applicant/Owner: Kinder Morgan State:	: MA	Α	Sampl	ing Point:	DR-N-W00	05-UPL				
Investigators: PL JW Quad Name: Lowell Towns	ship:	Dracu								
Logbook No.: 2015-1 Logbook Pg.: 54 Tract: 21267										
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:		Concave	d	Convex	None	Slope%.:	2			
Subregion (LRR): Middle Atlantic Lat: 42.692411		Long:	-71.268	708		Datum: NAD8	3			
Soil Map Unit Name: Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely sto	ny			NWI Classi	fication:	Not mapp	ed			
Are climatic / hydrologic conditions on the site typical for this time of year?:	. 🗆	No (If n	o, expla	in in Remarks	s.)					
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	0 /	Are "Norm	al" Circu	umstances pre	esent?	√ Yes	☐ No			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	0									
SUMMARY OF FINDINGS - Attach site map showing sampling po	int la	ocations	e tran	sacts imr	ortant	foaturos c	at c			
Hydrophytic Vegetation Present? ☐ Yes ☑ No		Cations	s, traii	isects, iiiip	Jortant	reatures, e				
	Is	the Sar	npled	Area	Vac 🖂	No				
Hydric Soil Present?	W	ithin a V	Vetlan	d? □	Yes ⊻	No				
Field Wetland Classification: UPLAND PLOT										
Remarks:										
remars.										
HYDROLOGY										
Wetland Hydrology Indicators:			Se	econdary Indic	cators (2 c	or more require	ed)			
Primary Indicators (minimum of one required; check all that apply)				Surface So	il Cracks	(B6)				
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)				Drainage P	Patterns (B	310)				
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)				Moss Trim	Lines (B1	6)				
☐ Saturation (A3) ☐ Marl Deposits (B15)				Dry-Season	n Water T	able (C2)				
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)				Crayfish Bu	urrows (C8	3)				
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along L	iving F	Roots (C3)		Saturation	Visible on	Aerial imager	y (C9)			
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	1			Stunted or	Stressed	Plants (D1)				
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils	(C6)] Geomorphi	ic Position	(D2)				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)				Shallow Ac	uitard (D3	3)				
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)				Microtopog	raphic Re	lief (D4)				
☐ Sparsely Vegetated Concave Surface (B8)				FAC-Neutr	al Test (D	5)				
Field Observations:										
Surface Water Present?										
Water Table Present?		Wetlar	nd Hvdr	ology Preser	nt?					
Saturation Present?			,	3,		Yes ☑ I	No			
(includes capillary fringe)										
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	insped	ctions), if a	vailable	e):						
VECETATION										
VEGETATION Tree Streeture										
Tree Stratum Plot Size: 30										
Scientific Name		% Co	over	Domir	nant l	Indicator S	Statue			
Acer rubrum		25		YES		FAC				
Pinus strobus Quercus rubra		3:	5	YES YES	3	FACI FACI	J			
Total Co	over:	9	0	1	'					



1 Tovidence, Rt 02504				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus americana Acer rubrum Ulmus rubra		5 10 5	YES YES YES	FACU FAC FAC
	Total Cover:	20		1
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Carex pensylvanica		25	YES	UPL
Maianthemum canadense	Total Cover:	10 35	YES	FACU
Woody Vine Stratum	Total Cover.			
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Scientific Name		76 COVEI	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover	of:	Multiply by:	
That Are ODL, FACW, or FAC.	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 8 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>	
	FAC Species:	<u>40</u>	x 3 = <u>120</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 38 (A/B)	FACU Species	: <u>80</u>	x 4 = <u>320</u>	
	UPL Species:	<u>25</u>	x 5 = <u>125</u>	
	Column Totals:	145 (A)	<u>565 (B)</u>	
		Prevalence Index =	$= B/A = \underline{3.90}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	egetation Preser	nt? ☐ Yes ⊡	∐ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



SOIL													
Profile Descrip	Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.)												
Depth (inches)	Matrix		Red	lox Fe	atures		Tex	ture	Remarks				
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Tex	lure	Remarks				
0-2	10YR 2/2	100					FINE SAN	DY LOAM					
2-10	10YR 3/3	100					FINE SAN	DY LOAM					
40.40	10)/D 5/4	400					CANDY	1044					
10-16	10YR 5/4	100					SANDY	LOAM					
1Type: C-Cond	centration D-De	nletion	PM-Peduced I	Astriv	CS-C0V	ered Sand	or Coated Grains.	2l ocation: DI -	Pore Lining, M=Matrix				
	· · · · · · · · · · · · · · · · · · ·	·	o all LRR's, unle				or coated Grains.		roblematic Hydric Soils ³ :				
☐ Histosol (A						-	8) (LRR R,		A10) (LRR K, L, MLRA 149B)				
	pedon (A2)			LRA 1		- C	o, (= · · · ·,		e Redox (A16) (LRR K, L, R)				
☐ Black Hist			Пт	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)				
									e (S7) (LRR K, L, M)				
☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2) ☐ Polyvalue Below Surface (S8) (LRR K, L)													
_	Below Dark Surfa	ace (A1		-	d Matrix (f			_	urface (S9) (LRR K, L)				
	k Surface (A12)	,	_	•	Dark Surfa	•		_	nese Masses (F12) (LRR K, L, R)				
_	ıcky Mineral (S1)					ırface (F7)		_	podplain Soils (F19) (MLRA 149B)				
_	eyed Matrix (S4)			•	Depressio				c (TA6) (MLRA 144A, 145, 149B)				
☐ Sandy Re	dox (S5)		_		•	, ,			Material (F21)				
Stripped Matrix (S6) Stripped Matrix (S6) Very Shallow Dark Surface (TF12)													
	ace (S7) (LRR R	. MLR/	A 149B)					_	in in Remarks)				
_			•	loav n	nust be pre	esent unle	ess disturbed or prob		,				
Restrictive Lay					nknown								
Nestrictive Lay	er i resent:	ш	163 <u>[v]</u> 110	_	TIKHOWH			Hydric Soil Prese	int? 🗆 Voc 🗹 No				
								riyuric 30ii Frese	nt? ☐ Yes ☑ No				
Remarks:													
remand.													
Description of I	Habitat Characto	rictics	Aquatic Diversity	or Go	noral Com	monte:							
Description of t	Habitat Characte	ilistics,	Aqualic Diversity	oi Ge	nerai Con	imenis.							
Wetland Qualit	y: 🔲 High	_ ,	Moderate	OW			Isolated Wetland?	?	No 🔲 Unknown				
Welland Quant	y. 🔲 Tilgii	Ь,	vioderate	_O W			isolated Wetland		NO CHRIOWII				
General Comm	ents:												





NW



WETLAND DETERMINATION FORM - North	WETLAND DETERMINATION FORM - Northcentral and Northeast Region											
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other											
Project/Site: NED Milepost: 90875.0 Cou	unty: Berkshire Date: 06/12/2015											
Applicant/Owner: Kinder Morgan Stat	te: MA Sampling Point: WR-M-W011-PEM											
Investigators: CM Quad Name: Peru Tow	vnship: Windsor											
Logbook No.: 3 Logbook Pg.: 90 Tract: 1315												
Landform (hillslope, terrace, etc.): Depression Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 1											
Subregion (LRR): Middle Atlantic Lat: 42.480296	Long: -73.044274 Datum: NAD83											
Soil Map Unit Name: Pillsbury loam, 0 to 8 percent slopes, extremely stony	NWI Classification: Not mapped											
Are climatic / hydrologic conditions on the site typical for this time of year?:	es 🔲 No (If no, explain in Remarks.)											
Are Vegetation ☑ Soil ☐ or Hydrology ☐ significantly disturbed? ☐	No Are "Normal" Circumstances present? ✓ Yes No											
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No											
SUMMARY OF FINDINGS - Attach site map showing sampling p	oint locations transects important features etc											
Hydrophytic Vegetation Present? ✓ Yes ☐ No												
	Is the Sampled Area											
Hydric Soil Present? ✓ Yes ☐ No Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetland? ✓ Yes ☐ No											
Field Wetland Classification: PEM												
Remarks:												
Tenung.												
HYDROLOGY												
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)											
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)											
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)											
✓ High Water Table (A2) □ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)											
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)											
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)											
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	Living Roots (C3) Saturation Visible on Aerial imagery (C9)											
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C-	Chunted or Chronood Dianta (D4)											
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	Coomarabia Desition (D2)											
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)											
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)											
□ Sparsely Vegetated Concave Surface (B8)	✓ FAC-Neutral Test (D5)											
Field Observations:												
Surface Water Present? ☐ Yes ☑ No Depth (inches):												
Water Table Present? ✓ Yes No Depth (inches): 8	Wetland Hydrology Present? ✓ Yes ☐ No											
Saturation Present? Yes No Depth (inches): 2 (includes capillary fringe)	<u>_</u>											
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	us inspections), if available):											
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name	% Cover Dominant Indicator Status											
Total C	Cover:											

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Eleocharis acicularis		40	YES	OBL
Onoclea sensibilis Iris versicolor		25 10	YES NO	FACW OBL
Carex alopecoidea		10	NO	FACW
	Total Cover:	85		
Woody Vine Stratum				
Plot Size: 30			ı	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 2 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>50</u>	x 1 = <u>50</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	: <u>35</u>	x 2 = <u>70</u>	
oposios / to/oss / till Gildida	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>	
111at746 GSE, 171GW, 61171G.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>85 (A)</u>	120 (B)	
	ı	Prevalence Index =	= B/A = <u>1.41</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	it? ☑ Yes [] No
data in Remarks or on a separate sheet)		J		_
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



SOIL													
Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.)													
Depth	Matrix		Redox Features				_						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Texture		Remarks				
0-5	2.5YR 2.5/1	100					ORG <i>A</i>	ANIC					
5-12	2.5Y 5/1	40	N6 N8	30 30	D D	M M	FINE SANDY LOAM						
¹Type: C=Cor	centration, D=De	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix					
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :													
							8) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)				
☐ Histic Ep		/ILŔA 1		,		☐ Coast Prairie Redox (A16) (LRR K, L,							
				Thin Dark Surface (S9) (LRR R, MLRA 149B)				5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)				
☐ Hydroger	Sulfide (A4)			.oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	ark Surface (S7) (LRR K, L, M)				
☐ Stratified								☐ Polyvalue Be	e Below Surface (S8) (LRR K, L)				
□ Depleted	Below Dark Surfa	ace (A	11) 🔲 🛭	Deplete	d Matrix (I	F3)		☐ Thin Dark Surface (S9) (LRR K, L)					
☐ Thick Da	rk Surface (A12)		☐ F	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangan	ganese Masses (F12) (LRR K, L, R)				
☐ Sandy M	ucky Mineral (S1))		Deplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	ont Floodplain Soils (F19) (MLRA 149B)				
✓ Sandy G	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)		☐ Mesic Spodie	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
☐ Sandy R	edox (S5)							Red Parent Material (F21)					
☐ Stripped	Stripped Matrix (S6)							☐ Very Shallow Dark Surface (TF12)					
☐ Dark Sur	face (S7) (LRR R	, MLR	A 149B)					Other (Expla	in in Remarks)				
3Indicators of	hydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.					
Remarks:								Hydric Soil Prese	nt? ☑ Yes □ No				
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:							
Wetland Qual	ty: High		Moderate ✓	Low			Isolated Wetland?	☐ Yes ☑	No Unknown				
General Comr	nents:												





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WETLAND DETERMINATION FORM - Northcentral and Nor	theast Region				
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Transmission Line	☐ Other				
Project/Site: NED Milepost: 90766.9 County: Berkshire	Date: 06/12/2015				
Applicant/Owner: Kinder Morgan State: MA Sampli	ing Point: WR-M-W011-UPL				
Investigators: CM Quad Name: Peru Township: Windsor					
Logbook No.: 3 Logbook Pg.: 92 Tract: 1315					
Landform (hillslope, terrace, etc.): Flat Local Relief: ☐ Concave ☑ C	Convex None Slope%.: 2				
Subregion (LRR): Middle Atlantic Lat: 42.479977 Long: -73.0448	555 Datum: NAD83				
Soil Map Unit Name: Tunbridge-Lyman association, rolling, extremely stony	NWI Classification: Not mapped				
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain	in in Remarks.)				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No Are "Normal" Circu	ımstances present? ☑ Yes ☐ No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No					
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, trans	sects, important features, etc.				
Hydrophytic Vegetation Present? ✓ Yes ☐ No	-				
Hydric Soil Present? Yes V No Is the Sampled A within a Wetland	Area □ Yes ☑ No				
Wetland Hydrology Present? ☐ Yes ☑ No	1, — —				
Field Wetland Classification: UPLAND PLOT					
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:	econdary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)				
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) ☐	☐ Drainage Patterns (B10)				
☐ High Water Table (A2) ☐ Aquatic Fauna (B13) ☐	☐ Moss Trim Lines (B16)				
☐ Saturation (A3) ☐ Marl Deposits (B15) ☐	☐ Dry-Season Water Table (C2)				
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐	C1) Crayfish Burrows (C8)				
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)				
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) ☐	on (C4) Stunted or Stressed Plants (D1)				
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐	Tilled Soils (C6) Geomorphic Position (D2)				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐	Shallow Aquitard (D3)				
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? ☐ Yes ☑ No Depth (inches):					
Water Table Present? ☐ Yes ☑ No Depth (inches): Wetland Hydro	Wetland Hydrology Present?				
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No				
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):				
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name % Cover	Dominant Indicator Status				
Populus grandidentata 30 PYRUS MALUS 40	YES FACU YES FAC				
Acer rubrum 10 Total Cover: 80	NO FAC				



1 Tovidence, IXI 02304							
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Alnus incana		15	NO NO	FACW			
Acer pensylvanicum Fraxinus pennsylvanica		5 10	NO NO	FACU FACW			
Prunus serotina	T	20	YES	FACU			
	Total Cover:	50					
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
Equisetum pratense		5	NO NO	FACW FAC			
Dryopteris intermedia Onoclea sensibilis		5 15	NO NO	FACW			
	Total Cover:	25					
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:			'			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:					
Number of Dominant Species	Total % Cover	of:	Multiply by:				
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	: <u>45</u>	x 2 = <u>90</u>				
Species Across All Strata: 3 (B)	FAC Species:	<u>55</u>	x 3 = <u>165</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)	FACU Species	<u>55</u>	x 4 = <u>220</u>				
That Ale ODE, I AOW, OF I AC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	<u>155 (A)</u>	475 (B)				
		Prevalence Index :	= B/A = 3.06				
Hydrophytic Vegetation Indicators:							
☐ 1 - Rapid Test for Hydrophytic Vegetation							
2 - Dominance Test is > 50%							
☐ 3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ✓ Yes No						
data in Remarks or on a separate sheet)	, , , , , , , , , , , , , , , , , , , ,						
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹ Indicators of hydric soil and wetland hydrology must be							
present, unless disturbed or problematic.							
Remarks:							



T TOVIGETICE, I	(1 02304											
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to o	locum	ent the in	ndicator o	r confirm t	he absen	ce of indicators.)			
Depth	Matrix		Red	dox Fe	atures							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Text	ure		Rei	marks
0-2	10YR 3/3	100					LOAM					
2-8	7.5YR 4/6	100						SANDY	LOAM			
20	7.0110	100						0, 1110 1	207 1111			
0.40	7.570.574	400						CANDY	1.0004			
8-16	7.5YR 5/4	100						SANDY	LOAM			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	g, M=M	latrix
Hydric Soil Inc	dicators: (Appli	cable t	to all LRR's, unle	ss otl	nerwise n	oted.)			Indicators for Pr	oblematio	Hydric	Soils ³ :
☐ Histosol (/	A1)		□ P	olyval	ue Below :	Surface (S	8) (LRR R,		☐ 2 cm Muck (A10) (LRR	K, L, M	LRA 149B)
☐ Histic Epip	oedon (A2)		N	ILRA 1	149B)				☐ Coast Prairie	e Redox (A	16) (LR	R K, L, R)
☐ Black Hist	tic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)	5 cm Mucky	Peat or Pe	at (S3)	(LRR K, L, R)
	Sulfide (A4)						(LRR K, L)	•	☐ Dark Surface	e (S7) (LRF	۲ K, L, ۱۸	л)
	Layers (A5)			-	Gleyed Ma		. ,		☐ Polyvalue Be	. , .		•
_	Below Dark Surfa	ace (A1	_	-	d Matrix (I				☐ Thin Dark Su		. , ,	•
_	k Surface (A12)		_	•	Dark Surfa	•			_		•	(LRR K, L, R)
	ucky Mineral (S1)		_			ırface (F7)			_) (MLRA 149B)
_	eyed Matrix (S4)		_			` ,				•		
				euox	Depressio	115 (F0)			_			4A, 145, 149B)
									Red Parent I		•	
	Matrix (S6)								☐ Very Shallov			12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	\ 149B)						Other (Expla	in in Rema	ırks)	
³ Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	d or prob	lematic.			
Restrictive Lay	er Present?		Yes ☑ No	□ L	Inknown							
									Hydric Soil Prese	nt?	Yes	☑ No
Remarks:												
D			A .: 5: ::									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:						
Wetland Qualit	ty: High		Moderate	Low			Isolated	Wetland?	☐ Yes ☐	No _	l Unkn	iown
General Comm	ents:											

AECOM
10 Orms Street, Suite 405
Providence, RI 02904

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Δ	-			N	ı
	_	-	_	••	

PHOTOS	



WET	AND	DET	ERN	IINATI	ON FORM	- Northc	entral	and No	ortheast	Region	ı	
☐ Centerline ☐ Re-Rout		Acce	ss Roa	nd 🗹	Ancillary Faci	lity 🔲	Transmi	ssion Line	☐ Oth	er		
Project/Site: NED				Milepost:	0.0	County:	N	liddlesex		Date:	04/22/201	5
Applicant/Owner: Kinder Morga	n					State:	MA	Sam	pling Point	DR-G-W	003-PFO	
Investigators: NF CM	C	Quad N	ame:	Lowell		Townshi	p: D	racut				
Logbook No.: 2015-1	Logb	ook Pg	.: 99		Tract: 4907	7						
Landform (hillslope, terrace, etc.):	Slope	- mid		Loca	al Relief:	₫ Cond	cave 🔲	Convex	☐ None	Slope%.:	1
Subregion (LRR): Middle A	tlantic			Lat	t: 42.680364		Long	j: -71.28	82642		Datum: NAI	083
Soil Map Unit Name: Scitua	te fine sa	andy lo	am, 3	to 8 perce	ent slopes, extre	emely stony			NWI Cla	assification:	Not ma	pped
Are climatic / hydrologic condition	Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.)											
Are Vegetation Soil	or Hy	drology	/ 	significa	antly disturbed?	☑ No	Are "N	Normal" Cir	rcumstances	s present?	✓ Yes	☐ No
Are Vegetation	or Hy	drology	∕ □	naturally	y problematic?	☑ No						
SUMMARY OF FINDING	S - Att	ach	site n	nap sh	owing sam	pling point	locati	ions, tra	ınsects, i	mportant	t features	etc.
Hydrophytic Vegetation Present)	$\overline{\checkmark}$	Yes	□ No	0							
Hydric Soil Present?			Yes	☐ No	0		Is the withir	Sampled a Wetla	d Area nd? ☑	∐ Yes [] No	
Wetland Hydrology Present?		$\overline{\checkmark}$	Yes	□ No	0							
Field Wetland Classification:	PFO											
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicators									Secondary I	Indicators (2	or more requ	ired)
Primary Indicators (minimum of	one requ	uired; c	heck a	ll that app	oly)				☐ Surface	e Soil Cracks	s (B6)	
☐ Surface Water (A1)			[☐ Wate	r-Stained Leave	es (B9)			✓ Drainag	ge Patterns ((B10)	
☐ High Water Table (A2)			[☐ Aqua	itic Fauna (B13))				rim Lines (B	16)	
✓ Saturation (A3)			[Marl	Deposits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
☐ Water Marks (B1)			[Hydro	ogen Sulfide Od	dor (C1)			☐ Crayfisl	h Burrows (0	C8)	
☐ Sediment Deposits (B2)			[Oxidi	zed Rhizosphei	res along Livir	ng Roots	(C3)	☐ Saturat	ion Visible o	n Aerial imag	ery (C9)
☐ Drift Deposits (B3)			[Prese	ence of Reduce	d Iron (C4)			☐ Stunted	d or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)			[Rece	ent Iron Reduction	on in Tilled So	ils (C6)		✓ Geomo	rphic Positio	on (D2)	
☐ Iron Deposits (B5)			[Thin	Muck Surface (C7)			☐ Shallow	v Aquitard (D	03)	
☐ Inundation Visible on Aeria	Imagery	y (B7)		Othe	r (Explain in Re	marks)				pographic R	telief (D4)	
Sparsely Vegetated Conca	/e Surfa	ce (B8)	1						☐ FAC-Ne	eutral Test (I	D5)	
Field Observations:												
Surface Water Present?	Yes	√ 1	No I	Depth (inc	ches):							
Water Table Present?	Yes	√ 1	No I	Depth (inc	ches):		W	etland Hy	drology Pre	_	Voc 🗆	No
Saturation Present? (includes capillary fringe)	Yes	1	No I	Depth (ind	ches): 0					<u>v</u>	Yes □	NO
Remarks (Describe Recorded Da	ta (strea	ım gag	e, mon	itoring we	ell, aerial photos	s, previous ins	pections	s), if availat	ole):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name								% Cover	Do	ominant	Indicato	r Status
Fraxinus pennsylvanica Acer rubrum						T-: 10		20 30		YES YES		AC CW
						Total Cove	1.	50				



Providence, Ri 02904			- 17				
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Vaccinium corymbosum Fraxinus pennsylvanica		5 5	YES YES	FACW FACW			
Traxinas perinsyivaniea	Total Cover:	10	120	17.000			
		-					
Herb Stratum							
Plot Size: 5	1	a. a	1 5				
Scientific Name		% Cover	Dominant	Indicator Status			
Onoclea sensibilis Vaccinium corymbosum		15 10	YES YES	FACW FACW			
	Total Cover:	25	'	•			
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:		•				
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:					
Number of Dominant Species	Total % Cover of	of:	Multiply by:				
That Are OBL, FACW, or FAC: 6 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species:	<u>55</u>	x 2 = <u>110</u>				
Species Across All Strata: 6 (B)	FAC Species:	<u>30</u>	x 3 = <u>90</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>				
macrito obe, interior, or interior	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	<u>85 (A)</u>	200 (B)				
	F	Prevalence Index =	$= B/A = \underline{2.35}$				
Hydrophytic Vegetation Indicators:							
☐ 1 - Rapid Test for Hydrophytic Vegetation							
☑ 2 - Dominance Test is > 50%							
☑ 3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ✓ Yes ☐ No						
data in Remarks or on a separate sheet)							
Problematic Hydrophytic Vegetation¹ (Explain)							
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
present, unless disturbed or problematic.							
Remarks:							



Providence, F	KI 02904								
SOIL									
Profile Descrir	otion: (Describe	the de	enth needed to	docum	ent the ir	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		-		atures			,	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
	` ′		` '				011.7.1	0414	
0-3	10YR 2/1	95	7.5YR 4/6	5	D	М	SILT L	OAM	
3-10	7.5YR 4/2	95	7.5YR 4/6	5	D	М	SILT L	.OAM	
Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils³:
Histosol (/	A1)		_ F	Polyvali	ue Below	Surface (S	88) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
_ `	pedon (A2)			/ILRA 1		- Canado (C	(=:,	_	e Redox (A16) (LRR K, L, R)
= ' '			П т	hin Da	rk Surface	o (SO) (LD	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
☐ Black Hist							·		
	Sulfide (A4)			-	-		(LRR K, L)		e (S7) (LRR K, L, M)
_	Layers (A5)		<u> </u>	-	Gleyed M				elow Surface (S8) (LRR K, L)
_ ·	Below Dark Surfa	ace (A1		•	d Matrix (•			urface (S9) (LRR K, L)
	k Surface (A12)		_		Dark Surfa				nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			Deplete	d Dark Su	urface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		☐ F	Redox I	Depression	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	nin in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unl	ess disturbed or prob	olematic.	
Restrictive Lay	er Present?	v	Yes No	□ U	Inknown				
FRAGI			_					Hydric Soil Prese	ent? ☑ Yes ☐ No
PAN									
10									
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: High	√ 1	Moderate	Low			Isolated Wetland?	Yes 🗖	No Unknown
General Comm	ients:								





EAST



WETLAND DETERMINATION FORM - Nort	hcentral and Northeast Region					
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	☐ Transmission Line ☐ Other					
Project/Site: NED Milepost: 14899.4 Cou	nty: Middlesex Date: 04/22/2015					
Applicant/Owner: Kinder Morgan State	e: MA Sampling Point: DR-G-W003-UPL					
Investigators: NF CM Quad Name: Lowell Tow	nship: Dracut					
Logbook No.: 2015-1 Logbook Pg.: 112 Tract: 4907						
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 2					
Subregion (LRR): Middle Atlantic Lat: 42.680597	Long: -71.283473 Datum: NAD83					
Soil Map Unit Name: Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes NWI Classification: Not mapped						
Are climatic / hydrologic conditions on the site typical for this time of year?:						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ I	No Are "Normal" Circumstances present? ☑ Yes ☐ No					
	No — — —					
SUMMARY OF FINDINGS - Attach site map showing sampling pe	pint locations, transects, important features, etc.					
Hydrophytic Vegetation Present? ☐ Yes ☑ No	, , , , , , , , , , , , , , , , , , , ,					
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area Western d2					
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland? ☐ Yes ☑ No					
Field Wetland Classification: UPLAND PLOT						
Remarks:						
Tellians.						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)					
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)					
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	Drainage Patterns (B10)					
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)					
☐ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)					
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)					
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along						
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	<u> </u>					
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	_					
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)					
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present?						
Water Table Present?	Wetland Hydrology Present? ☐ Yes ☑ No					
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ TES ☑ NO					
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	s inspections), if available):					
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name	% Cover Dominant Indicator Status					
Quercus rubra	20 YES FACU					
Pinus strobus Acer rubrum	30 YES FACU 10 NO FAC					
Total C	cover: 60					



Trovidence, Ri 02504				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus Quercus rubra		15 15	YES YES	FACU FACU
Quercus rubra	Total Cover:	30	123	FACU
	Total Gover.			
Herb Stratum				
Plot Size: 5	1		I	ı
Scientific Name		% Cover	Dominant	Indicator Status
	T 0			
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30	1		1	l
Scientific Name		% Cover	Dominant	Indicator Status
	T			
	Total Cover:			
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)	Total % Cover		Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species		x 2 = <u>0</u>	
Percent of Dominant Species	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:		x 4 = 320	
	UPL Species:	00 (4)	x = 0	
	Column Totals:		<u>350 (B)</u>	
		Prevalence Index	= B/A = 3.89	
Hydrophytic Vegetation Indicators:				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Prese	nt? ☐ Yes ☑	∐ No
data in Remarks of on a separate sheety				
Drablemetic Hydrophytic Vegetation (Cyclein)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Depth (inches) Matrix Redox Features Texture Remarks	ioviderice, iv	1 02304									
Depth	OIL										
Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-18	ofile Descrip	tion: (Describe	the d	epth needed t	o docum	ent the ir	ndicator o	r confirm the abse	nce of indicators.)		
0-18	Depth	Matrix		ı	Redox Fe	atures					
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Calcation: PL=Pore Lining, M=Matrix	(inches)	Color (moist)	%	Color (moist	:) %	Type ¹	Loc2	Text	ture		Remarks
Histosol (A1)	0-18	10YR 4/3	100					SILT L	_OAM		
Histosol (A1)											
Histosol (A1)	l ype: C=Cond	centration, D=De	epletion	ı, RM=Reduce	ed Matrix,	CS=Cov	rered Sand	or Coated Grains.	² Location: PL=	L =Pore Lining, M	======================================
Histosol (A1)	dric Soil Ind	licators: (Appli	cable t	o all LRR's, u	nless otl	nerwise n	oted.)		Indicators for P	roblematic Hyd	 Iric Soils³:
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, L) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144 Sandy Redox (S5)) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Idicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer Present? Yes No Unknown Hydric Soil Present? Yes No Unknown Hydric Soil Present? Yes No Unknown] Histosol (A	\1)			Polyval	ue Below	Surface (S	8) (LRR R.		=	
Black Histic (A3)	•	,		_			(-	-,(,			
Hydrogen Sulfide (A4)				П	Thin Da	ırk Surfac	e (S9) (LR	R R, MLRA 149B)			•
Stratified Layers (A5)				_				•		•	
Thick Dark Surface (A12)	Stratified L	ayers (A5)		_	-	-		,	☐ Polyvalue B	elow Surface (S	8) (LRR K, L)
Sandy Mucky Mineral (S1)	Depleted I	Below Dark Surfa	ace (A1	=	-	-			☐ Thin Dark S	urface (S9) (LRF	R K, L)
Sandy Gleyed Matrix (S4)	Thick Dark	Surface (A12)			Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F	12) (LRR K, L, R)
Sandy Redox (S5)] Sandy Mu	cky Mineral (S1)			Deplete	d Dark Su	urface (F7)		☐ Piedmont Fl	oodplain Soils (f	F19) (MLRA 149B)
Stripped Matrix (S6)] Sandy Gle	eyed Matrix (S4)			Redox	Depressio	ns (F8)			c (TA6) (MLRA	144A, 145, 149B)
Dark Surface (S7) (LRR R, MLRA 149B)	Sandy Re	dox (S5)							☐ Red Parent	Material (F21)	
Addicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer Present?	Stripped N	Matrix (S6)							□ Very Shallow	v Dark Surface	(TF12)
Hydric Soil Present?	Dark Surfa	ace (S7) (LRR R	, MLRA	4 149B)					Other (Expla	ain in Remarks)	
Hydric Soil Present?	ndicators of h	ydrophytic vege	tation a	and wetland hy	drology n	nust be pr	esent, unle	ess disturbed or prob	olematic.		
etland Quality:	emarks:										
	escription of I	Habitat Characte	ristics,	Aquatic Divers	sity or Ge	neral Con	nments:				
neral Comments:	etland Qualit	y: High	□ 1	Moderate	Low			Isolated Wetland?	Yes 🗆	No 🔲 U	nknown
	eneral Comm	ents:									





NORTH



WETLAND DETERMINATION FORM - No	orthcentr	al and No	ortheast Regio	on	
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	☐ Trans	mission Line	☐ Other		
Project/Site: NED Milepost: 0 Co	ounty:	Middlesex	Da	ate: 05/30/2015	
Applicant/Owner: Kinder Morgan St	tate: MA	Samp	oling Point: DR-D	-W002-PFO	
Investigators: PB Quad Name: Lowell To	ownship:	Dracut			
Logbook No.: 2D Logbook Pg.: 131 Tract: 5501					
Landform (hillslope, terrace, etc.): Depression Local Relief	f: 🗹 Co	oncave 🔲	Convex No	ne Slope%.: 3	
Subregion (LRR): Middle Atlantic Lat: 42.683376	Lo	ong: -71.28	1567	Datum: NAD83	
Soil Map Unit Name: Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes	S		NWI Classification	on: Not mapped	
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes	No (If no, expl	ain in Remarks.)		
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No Are	e "Normal" Circ	cumstances present	? ☑ Yes 🗆] No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	No				
			_		
SUMMARY OF FINDINGS - Attach site map showing sampling	point loca	ations, tra	nsects, importa	ant features, etc	:.
Hydrophytic Vegetation Present?	le ti	he Sampled	Area		
Hydric Soil Present? ✓ Yes No		hin a Wetlar		□ No	
Wetland Hydrology Present?					
Field Wetland Classification: PFO					
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:		<u>s</u>	Secondary Indicators	s (2 or more required)	
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cra	acks (B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)			☐ Drainage Patter	ns (B10)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines	s (B16)	
✓ Saturation (A3)			☐ Dry-Season Wa	ter Table (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1))		☐ Crayfish Burrow	s (C8)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres alor	ng Living Roo	ots (C3)	☐ Saturation Visib	le on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron ((C4)		☐ Stunted or Stres	ssed Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Til	illed Soils (C6	6) [Geomorphic Pos	sition (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)			☐ Shallow Aquitare	d (D3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			Microtopographi	ic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Te	st (D5)	
Field Observations:					
Surface Water Present?					
Water Table Present?		Wetland Hyd	Irology Present?		
Saturation Present?				✓ Yes □ No)
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous)	ous inspectio	ons), if availabl	le):		
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name		% Cover	Dominant	Indicator Sta	atus
Quercus palustris Acer rubrum		30 40	YES YES	FACW FAC	
Pinus strobus Tota	ll Cover:	5 75	NO	FACU	



Providence, Ri 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Alnus glutinosa		5	YES	FACW
	Total Cover:	5	'	
Herb Stratum				
Plot Size: 5				
	1	0/ Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	
Osmundastrum cinnamomeum Eriophorum virginicum		5 40	NO YES	FACW OBL
Solidago gigantea		10	NO	FACW
	Total Cover:	55 		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover o	ıf:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>40</u>	x 1 = <u>40</u>	
Total Number of Dominant	FACW Species:	<u>50</u>	x 2 = <u>100</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>40</u>	x 3 = <u>120</u>	
Percent of Dominant Species	FACU Species:	<u>5</u>	x 4 = <u>20</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	135 (A)	280 (B)	
		Prevalence Index :		
Hadron katis Vonstation Indicators	'	TOVAICTICE ITIGEX	= <u>B//(</u> = <u>2.01</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☑ Yes 🗆] No
data in Normania di dii a separate sheety				
_				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
present, unless disturbed or problematic.				
Remarks:				



1 TOVIGETICE, I	02004																
SOIL																	
Profile Descrip	tion: (Describe	the d	epth needed	d to doc	ument the i	ndicator o	r confirm	he abser	nce o	indicat	tors.)						
Depth	Matrix			Redox	Features			_									
(inches)	Color (moist)	%	Color (mo	ist) %	Type ¹	Loc ²	1	Text	ture					R	Rema	arks	
0-18	2.5Y 2.5/1	90	5YR 4/6	6 10) D	M,PL		SIL	_T								
¹Type: C=Cond	centration, D=De	epletio	ı. n, RM=Redu	uced Mat	rix, CS=Cov	vered Sand	l or Coated	Grains.	2[ocation	l : PL=	Pore	Lining	. M=	Mat	rix	
	licators: (Appli		-							cators							3 -
Histosol (A		oubio	_		/alue Below	•	(8) (I PP P		П	2 cm M				•			
_ `	pedon (A2)				A 149B)	ounace (c	O) (LIXIX IX			Coast F							•
	` ,		_	■ Thin	Dork Surface	o (SO) (LB	DD MIDA	140P)	_				•	, ,			•
☐ Black Hist					Dark Surfac			1490)		5 cm M	-			-		XIX IV	λ, L, N)
	Sulfide (A4)		[_	ny Mucky Mi		(LKK K, L)			Dark S						- L	(1)
_	_ayers (A5)	200 (A		_	ny Gleyed M					Polyval							., L)
:	Below Dark Surfa	ace (A			eted Matrix (Thin Da							K I D)
	k Surface (A12)		_		ox Dark Surf						-						K, L, R)
_	icky Mineral (S1)	'	_		eted Dark S	, ,						-					RA 149B)
_	eyed Matrix (S4)			_ Redo	x Depression	ons (F8)					-				44A	, 145	5, 149B)
☐ Sandy Re										Red Pa				•			
	Matrix (S6)									Very SI					F12	<u>'</u>)	
☐ Dark Surfa	ace (S7) (LRR R	, MLR	A 149B)							Other (Expla	in in F	≀emar	ks)			
3Indicators of h	nydrophytic vege	tation	and wetland	hydrolog	y must be p	resent, unle	ess disturb	ed or prob	olema	tic.							
Restrictive Lay	er Present?		Yes 🗹 N	lo 🔲	Unknown												
									Hydr	ic Soil F	rese	nt?	\checkmark	Yes	; [_ i	No
Remarks:																	
Description of I			Ati Di		0												
Description of i	Habitat Characte	HSUCS	Aqualic Div	ersity or	General Cor	nments:											
W (I 10 II		_					1			- ./.	_		_				
Wetland Qualit	y: High	✓	Moderate	☐ Low	′		Isolated	Wetland?	Ĺ	Yes	✓	No		Uni	knov	vn	
General Comm	ents:																





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WE	TLAND	DET	ERMIN	ATI	ON FORM - N	Northce	entral an	d No	ortheast	Region		
☐ Centerline ☐ Re-R	oute	Acces	s Road	$\overline{\checkmark}$	Ancillary Facility		Transmissior	n Line	☐ Oth	er		
Project/Site: NED			Mile	post:	0	County:	Middle	esex		Date:	05/30/201	5
Applicant/Owner: Kinder Mo	rgan		'			State:	MA	Samp	oling Point	DR-D-W	002-UPL	
Investigators: PB	(Quad Na	me: Low	ell		Township	o: Dracu	it				
Logbook No.: 2D	Logb	ook Pg.	: 132		Tract: 5501							
Landform (hillslope, terrace, e	etc.):	Hilltop			Local Re	elief:	Concave	$\overline{\checkmark}$	Convex	None	Slope%.:	3
Subregion (LRR): Middl	e Atlantic			Lat:	42.683295		Long:	-71.28	1749		Datum: NA	D83
Soil Map Unit Name: Ch	arlton-Hollis	s-Rock o	utcrop co	mplex	, 3 to 8 percent slo	pes			NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	itions on th	e site ty	pical for th	is time	e of year?: ✓	1 Yes	☐ No (If n	o, expl	lain in Rema	arks.)		-
Are Vegetation	or Hy	drology	☐ sig	nificar	ntly disturbed?	√ No	Are "Norm	al" Circ	cumstances	present?	☑ Yes	☐ No
Are Vegetation	or Hy	drology	nat	turally	problematic?	✓ No						
SUMMARY OF FINDIN	NGS - At	tach s	ite map	sho	wing samplin	ng point	locations	s, tra	nsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes 🔽] No	1							
Hydric Soil Present?			Yes ✓] No			Is the Sar within a V	mpled Netlar	l Area nd? □] Yes ⊡	∑ No	
Wetland Hydrology Present?			Yes 🔽] No	ı							
Field Wetland Classification:	UPLA	AND PLO	TC									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	ors:							5	Secondary I	ndicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one requ	uired; ch	eck all tha	at appl	<u>y)</u>				Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)				Water	-Stained Leaves (E	B9)			Drainag	e Patterns ((B10)	
☐ High Water Table (A2)				Aquat	ic Fauna (B13)				Moss T	rim Lines (B	16)	
☐ Saturation (A3)				Marl D	Deposits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
□ Water Marks (B1)				Hydro	gen Sulfide Odor ((C1)			☐ Crayfish	Burrows (C	C8)	
☐ Sediment Deposits (B2)				Oxidiz	ed Rhizospheres	along Livin	g Roots (C3)) [Saturati	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of Reduced Iro	on (C4)			Stunted	or Stressec	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction in	n Tilled Soi	ils (C6)			rphic Positio	, ,	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7)				Shallow	Aquitard (D	03)	
☐ Inundation Visible on A	rial Imager	y (B7)		Other	(Explain in Remar	ks)				pographic R		
☐ Sparsely Vegetated Cor	ncave Surfa	ice (B8)							☐ FAC-Ne	eutral Test ([D5)	
Field Observations:												
Surface Water Present?	☐ Yes	✓ N	lo Dept	h (inc	hes):							
Water Table Present?	Yes	☑ N	-	h (inc	•		Wetlar	nd Hyd	Irology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ N	lo Dept	th (inc	hes):						163 🗹	
Remarks (Describe Recorded	Data (strea	am gage	, monitori	ng we	ll, aerial photos, pr	evious insp	pections), if a	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Do	minant	Indicate	or Status
Quercus rubra Pinus strobus Quercus palustris							2 3	0	\	YES YES NO	F.A	ACU ACU ACW
adorodo paladirio					Т	otal Cover	1	5	I		1	V V



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15			,	
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus Acer rubrum		35 10	YES NO	FACU FAC
Acci tubium	Total Cover:	45	140	1710
		-		
Herb Stratum				
Plot Size: 5	1		1	ı
Scientific Name		% Cover	Dominant	Indicator Status
Parathelypteris simulata Erythronium albidum		5 5	YES YES	FACW FACU
•	Total Cover:	10	1	l
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	ı
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet		
Number of Dominant Species	Total % Cover of		Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species:		x 2 = <u>20</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species	FACU Species:		x 4 = 360	
That Are OBL, FACW, or FAC: 20 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:		410 (B)	
	 	Prevalence Index	= B/A = 3.73	
Hydrophytic Vegetation Indicators:				
_				
	Hydrophytic V	egetation Prese	nt? □ Voc □	7 No
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Fresei	nt? ☐ Yes ☑] NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
Tomano.				



T TOVIGETICE, IV	02004																	
SOIL																		
Profile Descrip	tion: (Describe	the d	epth need	ed to d	docum	ent the ir	ndicator o	r confirm	he abser	nce o	f indica	itors.)					
Depth	Matrix			Re	dox Fe	atures			.									
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc2		Text	ure					F	кеm	arks	
0-8	10YR 4/4	100							SIL	т_								
¹Type: C=Cond	centration, D=De	epletion	∟ า, RM=Re≀	duced	Matrix,	CS=Cov	ered Sand	l or Coated	Grains.	2	_ocation	n: PL	=Pore	Lining	, М:	=Ma	trix	
Hydric Soil Ind	licators: (Appli	cable t	o all LRR'	s, unle	ess oth	nerwise n	oted.)			Ind	icators	for P	roblei	matic	Hyd	ric §	Soils	3:
Histosol (A	\1)			_ F	olvvalu	ue Below	Surface (S	8) (LRR R		П	2 cm l				-			
_ `	pedon (A2)				ILRA 1			-, (=			Coast							•
☐ Black Hist	. ,			Пт	hin Da	rk Surface	- (S9) (I R	R R, MLRA	149R)									(, L, R)
	Sulfide (A4)			_				(LRR K, L)	,		Dark S	_						ν, =, · · /
	_ayers (A5)				-	Gleyed Ma		(=:::::::::::::::::::::::::::::::::::::			Polyva							(1)
_	Below Dark Surfa	ace (A1	11)		-	d Matrix (П	Thin D				-			·, <i>-</i>)
	Surface (A12)	200 (71)	,	_	-	Dark Surfa	•										-	K, L, R)
_	cky Mineral (S1)						ırface (F7)					_			-			RA 149B)
	eyed Matrix (S4)					o Daik Sc Depressio	` '			_			-					•
☐ Sandy Re				_ '	LOUUX I	-chi e9910	(1 0)				Red P	-				· · · · · / ·	۱, 14	5, 149B)
										_	Very S				•	TC1	2)	
	ace (S7) (LRR R	MID/	\ 140B\								-					11 1.	۷)	
_			•								Other	(Expi	alli III I	Kemai	K5)			
	ydrophytic vege						esent, uni	ess disturb	ea or proc	olema	tic.							
Restrictive Lay	er Present?	✓ ′	Yes	No	□ ∪	nknown												
ROCK										Hydr	ic Soil	Pres	ent?		Yes	s [\checkmark	No
8																		
Remarks:																		
Description of I	Habitat Characte	ristics,	Aquatic D	iversity	or Ge	neral Com	nments:											
Wetland Qualit	y: High		Moderate		Low			Isolated	Wetland?	? [☐ Ye	s \square] No		Ur	nkno	wn	
													-					
General Comm	ents:																	





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WE	TLAND) DET	ERN	IINATI	ON FORM -	Northce	entral an	d No	rtheast	Region		
Centerline Re-R	oute _] Acces	ss Roa	d 🗹	Ancillary Facility	у 🔲 Т	ransmission	Line	☐ Othe	er		
Project/Site: NED			ľ	Milepost:	0	County:	Middle	esex		Date:	05/30/201	5
Applicant/Owner: Kinder Mo	rgan					State: N	MA	Samp	ling Point:	DR-D-W	003-PFO	
Investigators: PB	(Quad Na	ame: l	Lowell		Township:	: Dracu	t				
Logbook No.: 2D	Logk	ook Pg	.: 134		Tract: 5329							
Landform (hillslope, terrace, e	etc.):	Depres	ssion	<u> </u>	Local	Relief: 🗹	Concave		Convex	None	Slope%.:	2
Subregion (LRR): Middl	e Atlantic			Lat	42.683076		Long:	-71.280	0747		Datum: NA	D83
Soil Map Unit Name: Ch	arlton-Holli	s-Rock	outcrop	complex	, 3 to 8 percent s	slopes			NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	ne site ty	pical fo	or this tim	e of year?:	✓ Yes [No (If n	o, expla	ain in Rema	rks.)		
Are Vegetation	or Hy	ydrology	/ □	significa	ntly disturbed?	√ No	Are "Norm	al" Circ	cumstances	present?	 ✓ Yes	☐ No
Are Vegetation Soil	or Hy	ydrology	, _П	naturally	problematic?	— ☑ No						
, <u> </u>	_	, 0,	_	,		_						
SUMMARY OF FINDIN	NGS - At	tach	site m	nap sho	owing sampl	ing point	locations	s, trar	nsects, ir	nportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?	V	Yes	☐ No)		la tha Car	mplad	Aroo			
Hydric Soil Present?		$\overline{\checkmark}$	Yes	☐ No)		Is the Sar within a V			Yes [] No	
Wetland Hydrology Present?		$\overline{\mathbf{A}}$	Yes	☐ No)							
Field Wetland Classification:	PFO											
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicate	ors:							<u>S</u>	Secondary In	ndicators (2	or more requ	uired)
Primary Indicators (minimum	of one req	uired; cl	heck al	II that app	<u>ly)</u>				Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)			5	⊘ Water	r-Stained Leaves	(B9)			☐ Drainage	e Patterns (B10)	
☐ High Water Table (A2)			_	_] Aquat	tic Fauna (B13)				Moss Tr	im Lines (B	16)	
✓ Saturation (A3)				☐ Marl [Deposits (B15)				Dry-Sea	son Water	Table (C2)	
☐ Water Marks (B1)				_ Hydro	gen Sulfide Odo	r (C1)			Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizosphere:	s along Living	Roots (C3)	, [] Saturation	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)] Prese	ence of Reduced	Iron (C4)			Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction	in Tilled Soil	s (C6)		Geomor	phic Positio	n (D2)	
☐ Iron Deposits (B5)				☐ Thin N	Muck Surface (C7	7)			Shallow	Aquitard (D	03)	
☐ Inundation Visible on A	rial Imagei	ry (B7)		Other	(Explain in Rem	arks)			☐ Microtop	ographic R	elief (D4)	
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)							FAC-Ne	utral Test ([D5)	
Field Observations:	- v	- .										
Surface Water Present?	Yes	Ξ.		Depth (inc	•							
Water Table Present?	☐ Yes			Depth (inc	*		Wetlar	nd Hyd	rology Pres		Yes □	No
Saturation Present? (includes capillary fringe)	✓ Yes	☐ r	No [Depth (inc	hes): 0					ت		
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring we	II, aerial photos,	previous insp	ections), if a	availabl	e):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% Co	over	Do	minant	Indicate	or Status
Quercus palustris Acer rubrum						T	20	0		ES ES		ICW AC
						Total Cover:	8	U				



T TOVIGETICE, THE OZDOT				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus		3	NO	FACU
Vaccinium corymbosum Quercus bicolor		25 10	YES YES	FACW FACW
Acer rubrum		5	NO	FAC
	Total Cover:	43		
Herb Stratum				
Plot Size: 5				
Scientific Name	I	% Cover	Dominant	Indicator Status
- Colettuite Name		76 COVEI	Dominant	indicator Status
	Total Cover:			1
Mandy Vina Ctratum	Total Cover.			
Woody Vine Stratum Plot Size: 30				
	1		l <u> </u>	1
Scientific Name		% Cover	Dominant	Indicator Status
	_			
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species	: <u>55</u>	x 2 = <u>110</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>65</u>	x 3 = <u>195</u>	
Percent of Dominant Species	FACU Species	<u>3</u>	x 4 = <u>12</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:		317 (B)	
		Prevalence Index :		
		rievalence index -	= B/A = <u>2.58</u>	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	egetation Preser	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



SOIL									
Profile Descript	tion: (Describe	the d	epth needed to	docum	ent the in	ndicator o	r confirm the absen	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures				5 .
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ure	Remarks
0-10	2.5Y 2.5/1	100					SIL	.T	
10-18	10YR 4/1	90	5YR 4/6	10	D	М	SIL	.Т	
	· · · · · · · · · · · · · · · · · · ·	•	•				or Coated Grains.		Pore Lining, M=Matrix
-		cable t	to all LRR's, unle			-			roblematic Hydric Soils ³ :
☐ Histosol (A	,			olyvalı 1LRA 1		Surface (S	8) (LRR R,	_	A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	edon (A2)				,			Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Histic	c (A3)		ПΤ	hin Da	ark Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen S	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified L	ayers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted B	Below Dark Surfa	ace (A1	11) 🗹 C	eplete	ed Matrix (I	F3)		☐ Thin Dark St	urface (S9) (LRR K, L)
☐ Thick Dark	Surface (A12)		□ R	ledox l	Dark Surfa	ace (F6)		☐ Iron-Mangar	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mud	cky Mineral (S1)			eplete	ed Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	yed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Red	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped M	latrix (S6)							□ Very Shallov	v Dark Surface (TF12)
□ Dark Surfa	ice (S7) (LRR R	, MLR	A 149B)					Other (Expla	iin in Remarks)
3Indicators of h	vdrophytic vege	tation a	and wetland hydro	oloav n	nust be pr	esent. unle	ess disturbed or prob	elematic.	
Remarks:								Hydric Soil Prese	nt? ☑ Yes □ No
Description of H	labitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Quality	r: ☐ High	7 1	Moderate	Low			Isolated Wetland?	☑ Yes 🗖	No 🔲 Unknown
General Comme	ents:								





ΝE



WETLAND DETERMINATION FORM - North	central and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 0 County	/: Middlesex Date: 05/30/2015
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: DR-D-W003-UPL
Investigators: PB Quad Name: Lowell Towns	hip: Dracut
Logbook No.: 2D Logbook Pg.: 135 Tract: 5501	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☑ Convex ☐ None Slope%.: 4
Subregion (LRR): Middle Atlantic Lat: 42.682978	Long: -71.280882 Datum: NAD83
Soil Map Unit Name: Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? 🗹 No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling poi	nt locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area within a Wetland? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No	William a violatia.
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
☐ Saturation (A3) ☐ Marl Deposits (B15)	□ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Liv	ving Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled S	_
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ☑ No
Saturation Present?	L les E No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	nspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Quercus palustris	10 NO FACW
Acer saccharum Quercus alba	10 NO FACU 30 YES FACU
Pinus strobus	5 NO FACU
Total Cov	ver: 55



1 TOVIGENCE, TRI 02304				the second second
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Quercus alba Pinus strobus Acer saccharum Acer rubrum		5 25 5 5	NO YES NO NO	FACU FACU FACU FAC
	Total Cover:	40		'
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Parathelypteris simulata		3	NO	FACW
Erythronium albidum		3	NO	FACU
	Total Cover:	6		
Woody Vine Stratum				
Plot Size: 30			ı	I
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	s: <u>13</u>	x 2 = <u>26</u>	
oposico / idioco / ili oticica	FAC Species:	<u>5</u>	x 3 = <u>15</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species		x 4 = <u>332</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	: <u>101 (A)</u>	<u>373 (B)</u>	
		Prevalence Index =	= B/A = <u>3.69</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	Vegetation Preser	nt? ☐ Yes ⊡	₫ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Depth									
Depth									
	ption: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)	
(inches)	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture	Remarks
0-4	7.5YR 4/4	100					SII	LT	
4-13	7.5YR 5/8	100					SII	LT	
¹Type: C=Cor	centration, D=De	epletion	ı, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil In	dicators: (Appli	cable t	o all LRR's, unl	ess oth	nerwise n	oted.)		Indicators for Probler	natic Hydric Soils³:
☐ Histosol (A1)		F	Polvvali	ue Below S	Surface (S	8) (LRR R,		LRR K, L, MLRA 149B)
_	ipedon (A2)			ИLŔA 1			-, (,		ox (A16) (LRR K, L, R)
☐ Black His				Thin Da	ırk Surface	(S9) (LRI	R R, MLRA 149B)	_	or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		_				LRR K, L)	☐ Dark Surface (S7)	
	Layers (A5)			-	Gleyed Ma		, ,	_	Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	d Matrix (f			☐ Thin Dark Surface	, , , , , , , , , , , , , , , , , , , ,
	rk Surface (A12)	•	_	•	Dark Surfa	•			lasses (F12) (LRR K, L, R)
	ucky Mineral (S1)		_		d Dark Su				in Soils (F19) (MLRA 149B)
	leyed Matrix (S4)		_	-	Depression			_	6) (MLRA 144A, 145, 149B)
☐ Sandy R	edox (S5)							Red Parent Materi	al (F21)
☐ Stripped	Matrix (S6)							─ Very Shallow Dark	
☐ Dark Sur	face (S7) (LRR R	, MLRA	A 149B)					Other (Explain in F	Remarks)
3Indicators of	hvdrophytic veae	tation a	and wetland hvdr	oloav n	nust be pre	esent. unle	ess disturbed or prob	olematic.	
13 Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qual	ity: High		Moderate	Low			Isolated Wetland?	? Yes No	Unknown
General Comr	nents:								





NW



WETLAND DETERMINATION FORM - Northce	ntral and Norti	heast Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐ Tr	ransmission Line	Other	
Project/Site: NED Milepost: 0 County:	Middlesex	Date:	05/30/2015
Applicant/Owner: Kinder Morgan State: N	1A Sampling	g Point: DR-D-W00	4-PFO
Investigators: PB Quad Name: Lowell Township:	Dracut	<u>-</u>	_
Logbook No.: 2D Logbook Pg.: 137 Tract: 5501			
Landform (hillslope, terrace, etc.): Depression Local Relief:	Concave	nvex None	Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.682649	Long: -71.28107	'0 I	Datum: NAD83
Soil Map Unit Name: Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes	1	NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain	in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circum	stances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No			
SUMMARY OF FINDINGS - Attach site map showing sampling point I	ocations, transe	ects, important t	features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No			
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Ar within a Wetland?	ea ☑ Yes □	No
Wetland Hydrology Present? ☑ Yes ☐ No	within a wetianu?		
Field Wetland Classification: PFO			
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:	Seco	ondary Indicators (2 o	r more required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)		Drainage Patterns (B	10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines (B16	6)
✓ Saturation (A3)		Dry-Season Water Ta	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8	3)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	Roots (C3)	Saturation Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		Stunted or Stressed F	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	s (C6)	Geomorphic Position	(D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3	5)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		Microtopographic Rel	lief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (DS	5)
Field Observations:			
Surface Water Present? ☐ Yes ☑ No Depth (inches):			
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrol		Vac 🗖 Na
Saturation Present?		V	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspe	ections), if available):		
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Fraxinus pennsylvanica	20	YES	FACW
Acer rubrum Acer saccharum	40 3	YES NO	FAC FACU
Quercus palustris	15	NO	FACW
Total Cover:	78		



Providence, RI 02904				-LCOM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Alnus glutinosa Fraxinus pennsylvanica Quercus bicolor		5 5 15	NO NO YES	FACW FACW FACW
Pinus strobus	Total Cover:	5 30	NO	FACU
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Maianthemum canadense Parthenocissus quinquefolia Thelypteris palustris		1 3 10	NO NO YES	FACU FACU FACW
	Total Cover:	14		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
-		,0 00161	Dominant	maiodioi Olatus
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species	: <u>70</u>	x 2 = <u>140</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>40</u>	x 3 = <u>120</u>	
Percent of Dominant Species	FACU Species	: <u>12</u>	x 4 = <u>48</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:		308 (B)	
		Prevalence Index		
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0	Handran bartis N	/tti B		- N-
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic	egetation Prese	nt? ☑ Yes I	⊔ NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	I			



Matrix Color (moist) 2.5Y 2.5/1								·
Matrix Color (moist)								
Matrix Color (moist)			docum	ent the in	dicator o	r confirm the abser	nce of indicators.))
, ,	0/	Re	dox Fe					
2.5Y 2.5/1	%	Color (moist)	%	Type ¹	Loc²	Text	ture	Remarks
	90	5YR 4/6	10	D	M,PL	SIL	_T	
10YR 4/1	90	5YR 4/6	10	D	М	SIL	_T	
L centration, D=De	L epletion	l n, RM=Reduced	Matrix,	CS=Cov	L ered Sand	or Coated Grains.	² Location: PL=	l =Pore Lining, M=Matrix
								roblematic Hydric Soils³:
		•			•	8) (I RR R		(A10) (LRR K, L, MLRA 149B)
,					- C	0) (=,		e Redox (A16) (LRR K, L, R)
		Пт	hin Da	rk Surface	e (S9) (LRI	R R. MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
						·		e (S7) (LRR K, L, M)
			-	-		(=: :: : : : ; =)	_	elow Surface (S8) (LRR K, L)
	ace (A1	_	•	•	` ,			urface (S9) (LRR K, L)
		_	-		•			nese Masses (F12) (LRR K, L, R)
		_					_	oodplain Soils (F19) (MLRA 149B)
eyed Matrix (S4)		_	-					c (TA6) (MLRA 144A, 145, 149B)
edox (S5)		_		·	. ,			Material (F21)
Matrix (S6)								w Dark Surface (TF12)
ace (S7) (LRR R	, MLRA	A 149B)						ain in Remarks)
		·	ology m	nust be pr	esent unle	ess disturbed or prob		,
Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
ty:	☑ 1	Moderate	Low			Isolated Wetland?	? ☑ Yes 🗖	No 🔲 Unknown
	dicators: (Appli A1) pedon (A2) tic (A3) Sulfide (A4) Layers (A5) Below Dark Surfa k Surface (A12) ucky Mineral (S1) eyed Matrix (S4) edox (S5) Matrix (S6) face (S7) (LRR R hydrophytic vege	dicators: (Applicable to A1) pedon (A2) tic (A3) Sulfide (A4) Layers (A5) Below Dark Surface (A2) ucky Mineral (S1) eyed Matrix (S4) edox (S5) Matrix (S6) face (S7) (LRR R, MLRA hydrophytic vegetation a yer Present?	dicators: (Applicable to all LRR's, unlead) A1)	dicators: (Applicable to all LRR's, unless other A1)	A1)	A1)	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) pedon (A2) tic (A3)	Indicators (Applicable to all LRR's, unless otherwise noted.) A1)





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WE	TLAND	DETE	RMINATIO	ON FORM - N	Northc	entral an	d Northeast Region			
☐ Centerline ☐ Re-Ro	oute 🔲	Access	Road 🗹	Ancillary Facility		Transmission	Line			
Project/Site: NED			Milepost:	0	County:	Middle	esex Date:	05/30/2015		
Applicant/Owner: Kinder Mo	rgan				State:	MA	Sampling Point: DR-D-W0	04-UPL		
Investigators: PB	C	Quad Nam	ne: Lowell		Townshi	p: Dracu	t			
Logbook No.: 2D	Logb	ook Pg.:	138	Tract: 5501						
Landform (hillslope, terrace, e	etc.):	Hilltop	'	Local Re	elief:	Concave	☑ Convex ☐ None	Slope%.: 3		
Subregion (LRR): Middle	e Atlantic		Lat:	42.682538		Long:	-71.280898	Datum: NAD83		
Soil Map Unit Name: Car	nton fine sa	ndy loam,	, 8 to 15 perce	nt slopes, extreme	ly stony		NWI Classification:	Not mapped		
Are climatic / hydrologic cond	litions on the	e site typi	cal for this time	e of year?: ✓	Yes	☐ No (If n	o, explain in Remarks.)			
Are Vegetation	or Hy	drology	significar	ntly disturbed?	√ No	Are "Norm	al" Circumstances present?	✓ Yes 🗖	No	
Are Vegetation	or Hy	drology	naturally	problematic?	√ No					
SUMMARY OF FINDIN	NGS - Att	tach sit	te map sho	wing samplin	g point	locations	s, transects, important	features, etc.		
Hydrophytic Vegetation Prese	ent?	□ Y	∕es 🗹 No							
Hydric Soil Present?		□ Y	∕es 🗹 No			Is the San within a V	npled Area Vetland? □ Yes ☑	No		
Wetland Hydrology Present?		□ Y	∕es 🗹 No							
Field Wetland Classification:	UPLA	AND PLO	Т							
Remarks:										
HYDROLOGY										
Wetland Hydrology Indicato	ors:						Secondary Indicators (2 o	or more required)		
Primary Indicators (minimum	of one requ	uired; che	ck all that appl	y)			☐ Surface Soil Cracks	(B6)		
☐ Surface Water (A1)			☐ Water	-Stained Leaves (E	39)		□ Drainage Patterns (E	310)		
☐ High Water Table (A2)			Aquati	ic Fauna (B13)						
☐ Saturation (A3)			☐ Marl □	Deposits (B15)			□ Dry-Season Water T	able (C2)		
☐ Water Marks (B1)			☐ Hydro	gen Sulfide Odor (C1)		Crayfish Burrows (C	8)		
☐ Sediment Deposits (B2)			Oxidiz	ed Rhizospheres a	along Livir	ng Roots (C3)	Saturation Visible or	Aerial imagery (C	9)	
☐ Drift Deposits (B3)			☐ Prese	nce of Reduced Iro	n (C4)		☐ Stunted or Stressed	Stressed Plants (D1)		
☐ Algal Mat or Crust (B4)			Recen	t Iron Reduction in	Tilled So	<u> </u>				
☐ Iron Deposits (B5)			☐ Thin M	Muck Surface (C7)		Shallow Aquitard (D3)				
☐ Inundation Visible on Ae	erial Imagery	y (B7)	☐ Other	(Explain in Remar	ks)	Microtopographic Relief (D4)				
☐ Sparsely Vegetated Con	ncave Surfa	ce (B8)					FAC-Neutral Test (D	5)		
Field Observations:										
Surface Water Present?	☐ Yes	☑ No	Depth (incl	nes):						
Water Table Present?	☐ Yes	√ No	Depth (incl	nes):		Wetland Hydrology Present?				
Saturation Present? (includes capillary fringe)	☐ Yes	☑ No	Depth (incl	nes):				Yes ☑ No		
Remarks (Describe Recorded	Data (strea	am gage,	monitoring wel	l, aerial photos, pri	evious ins	pections), if a	available):			



Providence, RI 02904				2.2
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Acer saccharum Fraxinus pennsylvanica		5 5	NO NO	FACU FACW
Pinus strobus		20	YES	FACU
Acer rubrum Quercus rubra		5 15	NO YES	FAC FACU
240,000,100,10	Total Cover:	50	1 .20	11.00
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer spicatum		5	YES	FACU
Carya ovata Pinus strobus		10 10	YES YES	FACU FACU
	Total Cover:	25	1	1
1.1.0				
Herb Stratum Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Gaultheria procumbens		3 Cover	NO	FACU
Erythronium albidum		3	NO	FACU
Maianthemum canadense Parathelypteris simulata		3 15	NO YES	FACU FACW
arano, prono omana	Total Cover:	24	5	
Voody Vine Stratum				
Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
	Total Cover:		1	1
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>o</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species:		x 2 = <u>40</u>	
Species Across All Strata: 6 (B)	FAC Species:	<u> </u>	x 3 = 15	
Percent of Dominant Species	FACU Species:		x 4 = 296	
That Are OBL, FACW, or FAC: 17 (A/B)	UPL Species:	<u> </u>	x 5 = 0	
	Column Totals:	99 (A)	351 (B)	
			· 	
Huderahadis Versteller Indicator	<u> </u>	Prevalence Index	= B/A = <u>3.55</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? 🗌 Yes 🗄	☑ No
data in Remarks or on a separate sheet)				
				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	•			
кетагкs:				



T TOVIGETICE, I	(1 02004											
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the in	dicator o	confirm the abs	ence o	f indicators.)		
Depth	Matrix		Red	dox Fe	atures		_					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	exture			Rem	narks
0-6	7.5YR 4/4	100						SILT				
6-12	7.5YR 5/8	100						SILT				
0-12	7.5113/6	100)IL I				
		L I				L				<u> </u>		
¹Type: C=Cond	centration, D=De	epletion	i, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains	i. ²	Location: PL	=Pore Linino	پ, M=Ma ـــــــــــــــــــــــــــــــــــ	atrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)		Ind	licators for P	roblematic	Hydric :	Soils³:
Histosol (A	A1)					Surface (S	8) (LRR R,		2 cm Muck	(A10) (LRR	K, L, ML	.RA 149B)
☐ Histic Epip	oedon (A2)		IV.	ILRA 1	149B)				Coast Prairi	e Redox (A1	16) (LRR	(K, L, R)
■ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)		5 cm Mucky	Peat or Pea	at (S3) (I	LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	LRR K, L)		Dark Surfac	e (S7) (LRR	K, L, M)
☐ Stratified I	Layers (A5)		· <u>—</u>	-	Gleyed Ma				Polyvalue B	elow Surfac	e (S8) (L	_RR K. L)
	Below Dark Surfa	ace (A1		-	ed Matrix (I				Thin Dark S			·
	k Surface (A12)	(* *)	_		Dark Surfa	•					-	(LRR K, L, R)
_	ıcky Mineral (S1)		_			ice (i o) irface (F7)			=			(LRR R, L, R) (MLRA 149B)
			_					_		·	, ,	,
	eyed Matrix (S4)		□ F	euox	Depressio	ns (Fo)			•			A, 145, 149B)
☐ Sandy Re									Red Parent		-	
☐ Stripped N	Matrix (S6)								Very Shallo	w Dark Surfa	ace (TF1	2)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	ain in Rema	rks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pr	oblema	atic.			
Restrictive Lay	er Present?	√ \	∕es □ No		Inknown							
ROCK								Hyd	ric Soil Prese	ent?	Yes	☑ No
12								,		_		
Remarks:												
Nemarks.												
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	y: High		Moderate	Low			Isolated Wetlan	d?	☐ Yes ☐	No 🔲	Unkno	own
0												
General Comm	ients:											





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WETLAND DETERMINATION FORM - Nor	thcentral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 0 Cou	unty: Middlesex Date: 05/30/2015
Applicant/Owner: Kinder Morgan Stat	te: MA Sampling Point: DR-D-W005-PFO
Investigators: PB Quad Name: Lowell Tow	wnship: Dracut
Logbook No.: 2D Logbook Pg.: 140 Tract: 5501	
Landform (hillslope, terrace, etc.): Depression Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.682675	Long: -71.280688 Datum: NAD83
Soil Map Unit Name: Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	es No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No Are "Normal" Circumstances present? ☑ Yes ☐ No
	No
SUMMARY OF FINDINGS - Attach site map showing sampling p	oint locations, transects, important features, etc.
Hydrophytic Vegetation Present?	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area ☑ Yes ☐ No within a Wetland?
Wetland Hydrology Present? ✓ Yes ☐ No	within a wettand?
Field Wetland Classification: PFO	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	ed Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	us inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Quercus bicolor	20 YES FACW
Acer rubrum Fraxinus pennsylvanica Total 0	40
Total C	55.5



Providence, RI 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum		15	NO	FAC
Pinus strobus Vaccinium corymbosum		3 10	YES YES	FACU FACW
•	Total Cover:	28	1	1
Llark Chrahina				
Herb Stratum				
Plot Size: 5		l	1	1
Scientific Name		% Cover	Dominant	Indicator Status
Osmundastrum cinnamomeum Osmunda regalis		20 15	YES YES	FACW OBL
Parthenocissus quinquefolia		3	NO	FACU
	Total Cover:	38		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 6 (A)	OBL Species:	<u>15</u>	x 1 = <u>15</u>	
Total Number of Dominant	FACW Species		x 2 = <u>130</u>	
Species Across All Strata: 7 (B)	FAC Species:	<u>55</u>	x 3 = 165	
Percent of Dominant Species	FACU Species		x 4 = 24	
That Are OBL, FACW, or FAC: 86 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals		334 (B)	
		Prevalence Index	* *	
		Frevalence index	= B/A = <u>2.31</u>	
Hydrophytic Vegetation Indicators:				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	Vegetation Prese	nt? ☑ Yes [□ No
data in Remarks of on a separate sheety				
-				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
present, unless disturbed of problematic.				
Remarks:				



SOIL									
Profile Descri	ption: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	confirm the absen	ce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				6 .
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-14	10YR 2/2	90	5YR 4/6	10	D	М	SIL	Т	
14-18	10YR 3/2	90	5YR 4/6	10	D	М	SIL	Т	
¹Tvpe: C=Con	centration. D=De	epletion	. RM=Reduced	Matrix.	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
	dicators: (Appli	•	<u> </u>						oblematic Hydric Soils³:
☐ Histosol (8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	pedon (A2)			/ILŘA 1		•			Redox (A16) (LRR K, L, R)
☐ Black His	tic (A3)		П Т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydroger	Sulfide (A4)			.oamy l	Mucky Mir	neral (F1)	LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	 11)	Deplete	d Matrix (F3)		☐ Thin Dark Su	ırface (S9) (LRR K, L)
☐ Thick Da	rk Surface (A12)				Dark Surfa			☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy M	ucky Mineral (S1)			Deplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	podplain Soils (F19) (MLRA 149B)
☐ Sandy G	eyed Matrix (S4)		F	Redox I	Depressio	ns (F8)		☐ Mesic Spodio	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy R	edox (S5)								Material (F21)
☐ Stripped	Matrix (S6)							☐ Very Shallow	Dark Surface (TF12)
☐ Dark Sur	face (S7) (LRR R	, MLR	A 149B)					☐ Other (Expla	in in Remarks)
3Indicators of	hydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	lematic.	
Remarks:								Hydric Soil Prese	nt? ☑ Yes □ No
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qual	ty: High	☑ 1	Moderate	Low			Isolated Wetland?	☑ Yes □	No Unknown
General Comr	nents:								





F



WETLAND DETERMINATION FORM - Northcentral and Northeast Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐ Transmission Line ☐ Other	
Project/Site: NED Milepost: 0 County: Middlesex Date: 04/21/2015	_
Applicant/Owner: Kinder Morgan State: MA Sampling Point: DR-G-W001-PFO	_
Investigators: NF CM Quad Name: Lowell Township: Dracut	_
Logbook No.: 2015-1 Logbook Pg.: 86 Tract: 4907	_
Landform (hillslope, terrace, etc.): Slope - toe Local Relief: Concave Convex None Slope%.: 1	_
Subregion (LRR): Middle Atlantic Lat: 42.681289 Long: -71.282682 Datum: NAD83	_
Soil Map Unit Name: Canton fine sandy loam, 8 to 15 percent slopes, extremely stony NWI Classification: Not mapped	_
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.)	_
Are Vegetation ☐ Soil 🗹 or Hydrology ☐ significantly disturbed? ☐ No Are "Normal" Circumstances present? 🗹 Yes ☐ No	O
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.	
Hydrophytic Vegetation Present? ☑ Yes ☐ No	_
Hydric Soil Present?	
Wetland Hydrology Present?	
Field Wetland Classification: PFO	_
Remarks: USE DR-G-W005-UPL AS REPRESENTATIVE UPLAND PLOT	_
HYDROLOGY	_
Wetland Hydrology Indicators: Secondary Indicators (2 or more required)	_
Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6)	
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9) ☐ Drainage Patterns (B10)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13) ☐ Moss Trim Lines (B16)	
✓ Saturation (A3)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Saturation Visible on Aerial imagery (C9)	
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) ☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Shallow Aquitard (D3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Microtopographic Relief (D4)	
□ Sparsely Vegetated Concave Surface (B8) □ FAC-Neutral Test (D5)	
Field Observations:	—
Surface Water Present? ✓ Yes No Depth (inches): 3	
Water Table Present? ☐ Yes ☑ No Depth (inches): Wetland Hydrology Present?	
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 ☑ Yes ☐ No	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):	



Providence, RI 02904				
VEGETATION				
Free Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus pennsylvanica Ulmus americana		15 25	YES YES	FACW FACW
Betula populifolia		10	NO	FAC
Acer rubrum Pinus strobus		10 10	NO NO	FAC FACU
	Total Cover:	70	1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus pennsylvanica		15	YES	FACW
Ulmus americana	 Total Cover:	15 30	YES	FACW
	Total Cover:	30		
Herb Stratum				
Plot Size: 5	1		1	1
Scientific Name		% Cover	Dominant	Indicator Status
Quercus rubra Fraxinus pennsylvanica		10 10	YES YES	FACU FACW
Onoclea sensibilis		20	YES	FACW
	Total Cover:	40		
Voody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 6 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 7 (B)	FACW Species	: <u>100</u>	x 2 = <u>200</u>	
oposico / totoco / till ottata.	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 86 (A/B)	FACU Species:	<u>20</u>	x 4 = <u>80</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>140 (A)</u>	<u>340 (B)</u>	
	-	Prevalence Index	z = B/A = 2.43	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	ent? ☑ Yes [□ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, R	1 02904								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the ir	ndicator o	r confirm the al	bsence of indicators.	
Depth	Matrix				atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texture	Remarks
			` ′						
0-12	2.5Y 4/2	85	2.5Y 6/6	15	CS	M	FINE S	SANDY LOAM	
12-18	2.5Y 5/2	85	2.5Y 6/6	15	cs	М	FINE S	SANDY LOAM	
¹Type: C=Cond	entration D=De	enletion	n, RM=Reduced	Matrix	CS=Cov	ered Sand	L Lor Coated Grai	ns ² l ocation: Pl	=Pore Lining, M=Matrix
			·				Tor Course Crain		
_		cable t	o all LRR's, unle			•			roblematic Hydric Soils ³ :
☐ Histosol (A	A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	edon (A2)				102)			Coast Prairi	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149I	B) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified L	ayers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
☐ Depleted i	Below Dark Surfa	ace (A1	I1) 🔽 🖸	eplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
	Surface (A12)		_	-	` Dark Surfa	·			nese Masses (F12) (LRR K, L, R)
	cky Mineral (S1)		_			urface (F7)		_	oodplain Soils (F19) (MLRA 149B)
				-				_	. , , , , , , , ,
	eyed Matrix (S4)		☐ F	(eaox i	Depressio	ns (F8)		_ :	c (TA6) (MLRA 144A, 145, 149B)
✓ Sandy Re								☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallow	w Dark Surface (TF12)
□ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
3Indicators of h	ydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or	problematic.	
Restrictive Lay	or Procent?		Yes √ No		Inknown				
								Hydric Soil Prese	ent? ☑ Yes ☐ No
Remarks:							·		
Description of I	Jahitat Charasta	riation	Agustia Diversity		naral Cam				
Description of i	habitat Characte	ristics,	Aquatic Diversity	or Ge	nerai Con	iments:			
									_
Wetland Qualit	y: 🔲 High		Moderate 🗹	Low			Isolated Wetla	and? ☑ Yes 🗆	No Unknown
General Comm	ents:								
WEILAND DIS	TURBED BY AL	JJACE	NT DEBRIS PILE	:5					





NORTH



WETLAND DETERMINATION FORM - Northce	ntral and Nortl	neast Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐ Tr	ransmission Line	Other	
Project/Site: NED Milepost: 518.6 County:	Middlesex	Date:	11/17/2014
Applicant/Owner: Kinder Morgan State: N	MA Sampling	g Point: DR-A-W00	2-PFO
Investigators: RSE Quad Name: Lowell Township:	Dracut		 -
Logbook No.: TEAM Logbook Pg.: 48 Tract: 5331			
Landform (hillslope, terrace, etc.): DEPRESSION Local Relief: ☑	Concave	nvex	Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.678697	Long: -71.28425	0	Datum: NAD83
Soil Map Unit Name: Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes	-	NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain	in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	- Are "Normal" Circum	stances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No		·	
SUMMARY OF FINDINGS - Attach site map showing sampling point I	locations, transe	ects, important	features, etc.
Hydrophytic Vegetation Present?			
HVaric Soil Present?	Is the Sampled Ar within a Wetland?	I/I VAC II	No
Wetland Hydrology Present? ☑ Yes ☐ No	within a wettand:		
Field Wetland Classification: PFO			
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:	Seco	ondary Indicators (2 c	r more required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		Drainage Patterns (B	10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines (B1	6)
✓ Saturation (A3)		Dry-Season Water Ta	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8	3)
Sediment Deposits (B2) Oxidized Rhizospheres along Living	Roots (C3)	Saturation Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	s (C6)	Geomorphic Position	(D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	\checkmark	Microtopographic Re	lief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D	5)
Field Observations:			
Surface Water Present? ☐ Yes 🔽 No Depth (inches):			
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrol	ogy Present?	
Saturation Present? Yes No Depth (inches): 10 (includes capillary fringe)	•		Yes No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspe	ections) if available):		
Remarks (Describe Recorded Data (Stream gage, monitoring well, aerial priotos, previous inspe	ections), ii avaliable).		
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Quercus bicolor	10	YES	FACW
Betula populifolia Quercus rubra	12 15	YES YES	FAC FACU
Total Cover:	37	'	

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Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0	35 YES FACW Total Cover: 35	Piot Size: 15 Scientific Name	Piot Size: 15 Scientific Name	Providence, Ri 02904			1	
Scientific Name % Cover Dominant Vaccinium corymbosum 35 YES Total Cover: 35 YES Herb Stratum Plot Size: 5 Scientific Name % Cover Dominant Carex stricta 25 YES YES Woody Vine Stratum Plot Size: 30 Scientific Name % Cover Dominant Scientific Name % Cover Dominant Total Cover: Worksheet: Worksheet: Worksheet: Multiply by: Dominance Test Worksheet: Total % Cover of: Multiply by: Multiply by: OBL Species: 25 x 1 = 25 x 2 = 90 Species Across All Strata: 5 (B) FACW Species: 45 x 2 = 90 Species Across All Strata: 5 (B) FACW Species: 15 x 4 = 60 UPL Species: 10 x 4 = 60 UPL Species: 97 (A) 211 (B) Prevalence Index = B/a = 2.18 2.18 11 (B) Prevalence Index = B/a = 2.18 2.18 Yes Yes	35 YES FACW Total Cover: 35	Scientific Name % Cover Dominant Indicator State Vaccinium corymbosum 35 YES FACW Total Cover: 35 Herb Stratum Plot Size: 5 Scientific Name % Cover Dominant Indicator Stat Woody Vine Stratum Plot Size: 30 Scientific Name % Cover Dominant Indicator Stat Dominance Test Worksheet: Number of Dominant Species Total Cover: Multiply by: Total Number of Dominant Species 5 (B) FACW Species: 25 x 1 = 25 Total Number of Dominant Species FACW Species: 25 x 1 = 25 x 2 = 90 Species Across All Strata: 5 (B) FACW Species: 12 x 3 = 36 FACW Species: 12 x 3 = 36 FACW Species: 12 x 3 = 36 PERCENTION OF FAC: 80 (A/E) UPL Species: 0 x 5 = 0 0 UPL Species: 0 x 5 = 0 0 11 (B) PERCENTION OF FAC: N	Scientific Name	Sapling/Shrub Stratum				
Vaccinium corymbosum 35	35 YES FACW Total Cover: 35	Total Cover: 35	Total Cover: 35	Plot Size: 15				
Herb Stratum		Heith Stratum	Pict Stratum	Scientific Name		% Cover	Dominant	Indicator Status
Herb Stratum	% Cover Dominant Indicator State	Piot Size: 5 Scientific Name	Providence Indicator In	Vaccinium corymbosum		35	YES	FACW
Plot Size: 5 Scientific Name % Cover Dominant	Total Cover: 25 YES OBL	Plot Size: 5 Scientific Name	Plot Size: 5 Scientific Name		Total Cover:	35		•
Plot Size: 5 Scientific Name % Cover Dominant 25 YES	Total Cover: 25 YES OBL	Plot Size: 5 Scientific Name	Plot Size: 5 Scientific Name	Herb Stratum				
Scientific Name Carex stricta Total Cover: 25 Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 25 x1 = 25 FACW Species: 25 x1 = 25 FACW Species: 45 x2 = 90 FAC Species: 12 x3 = 36 FACU Species: 12 x3 = 36 FACU Species: 15 x4 = 60 UPL Species: 0 x5 = 0 Column Totals: 97 (A) 211 (B Prevalence Index = B/A = 2.18 Phydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes	Total Cover: 25 YES OBL	Scientific Name % Cover Dominant Indicator State	Scientific Name % Cover Dominant Indicator Statut Woody Vine Stratum Flot Size: 30 Scientific Name % Cover Dominant Indicator Statu Dominance Test Worksheet: Number of Dominant Species Total Cover: Total Number of Dominant Species Across All Strata: 5 (B) FACW Species: 25 x1 = 25 x1 = 25 25 x1 = 25 <					
Carex stricta 25 YES Woody Vine Stratum Plot Size: 30 Scientific Name % Cover Dominant Total Cover: Prevalence Index Worksheet: Number of Dominant Species Total Number of Dominant Species: 25 x 1 = 25 Total Number of Dominant Species Across All Strata: 5 (B) FACW Species: 45 x 2 = 90 FAC Species: 12 x 3 = 36 FACU Species: 12 x 3 = 36 FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 211 (B Prevalence Index = B/A = 2.18 Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators: 2 - Dominance Test is > 50% Prevalence Index is ≤ 3.0 J - Morphological Adaptations! (Provide supporting Hydrophytic Vegetation Present? Yes	Total Cover: 25 YES OBL	Total Cover: 25 YES OBL	Total Cover: 25 YES OBL			% Cover	Dominant	Indicator Status
Total Cover: 25	Total Cover: 25	Total Cover: 25	Total Cover: 25					-
Woody Vine Stratum Total Size: 30 Scientific Name % Cover Dominant Total Cover: Prevalence Index Worksheet: Number of Dominant Species 4 (A) Prevalence Index Worksheet: Multiply by: Mult		## Plot Size: 30 Scientific Name	Piot Size: 30 Scientific Name % Cover Dominant Indicator Status	Ga. 57. 58.754	 Total Cover:		5	022
Plot Size: 30 Scientific Name Mathematical Covers	Total Cover: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 25	Plot Size: 30 Scientific Name	Piot Size: 30 Scientific Name	Woody Vine Stratum				
Scientific Name	Total Cover: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 25	Scientific Name Total Cover: Total Cover	Scientific Name Total Cover: Total Cover: Dominant Indicator Status	-				
Total Cover: Dominance Test Worksheet: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 25 x 1 = 25 Column Totals: 97 (A) Prevalence Index Species: 12 x 3 = 36 Column Totals: 97 (A) Prevalence Index = B/A = 2.18 Prevalence Index = B/A = 2.18 Prevalence Index = Solution Prevalence Index = Solution Prevalence Index is ≤ 3.0 Provide supporting Prevalence Index Prevalence I	Total Cover: Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 25	Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) Total Number of Dominant Species: 25 x1 = 25 Total Number of Dominant Species: 25 x1 = 25 Total Number of Dominant Species: 45 x2 = 90 FACW Species: 12 x3 = 36 Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) Whydrophytic Vegetation Indicators: □ 1 - Rapid Test for Hydrophytic Vegetation □ 2 - Dominance Test is > 50% □ 3 - Prevalence Index is ≤ 3.0 □ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Problematic Hydrophytic Vegetation¹ (Explain) □ Problematic Hydrophytic Vegetation¹ (Explain) □ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total Cover: Dominance Test Worksheet: Number of Dominant Species Total % Cover of: Multiply by: OBL Species: 25			% Cover	Dominant	Indicator Status
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) Total % Cover of: Multiply by: Total Number of Dominant Species Across All Strata: 5 (B) FACW Species: 25 x 1 = 25 Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) FACU Species: 12 x 3 = 36 Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes	Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species: 25 x 1 = 25 FACW Species: 45 x 2 = 90 FAC Species: 12 x 3 = 36 FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Total % Cover of: Multiply by: OBL Species: 25 x 1 = 25 FACW Species: 45 x 2 = 90 FAC Species: 12 x 3 = 36 FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Total % Cover of: Multiply by: OBL Species: 25 x 1 = 25 FACW Species: 45 x 2 = 90 FACU Species: 12 x 3 = 36 FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Total % Cover of: Multiply by: OBL Species: 25 x 1 = 25 FACW Species: 12 x 3 = 36 FACU Species: 12 x 3 = 36 FACU Species: 12 x 3 = 36 FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Total % Cover of: Multiply by: OBL Species: 25 x 1 = 25 FACW Species: 45 x 2 = 90 FACU Species: 12 x 3 = 36 FACU Species: 12 x 3 = 36 FACU Species: 12 x 3 = 36 FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Total % Cover of: Multiply by: Total % Cove	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) Total % Cover of: Multiply by: OBL Species: 25 x1 = 25 FACW Species: 45 x2 = 90 FACW Species: 45 x2 = 90 FAC Species: 12 x3 = 36 FACU Species: 12 x4 = 60 UPL Species: 15 x4 = 60 UPL Species: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators:	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: A (A) 4 (A) Total % Cover of: OBL Species: 25			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Number of Dominant Species That Are OBL, FACW, or FAC: $ 4 \text{ (A)} $ Total % Cover of: $ 0BL Species: 25 $	Total % Cover of: Multiply by: OBL Species: 25	Total % Cover of: Multiply by: Total % Cover of: Multiply by: OBL Species: 25 x1 = 25 Total Number of Dominant Species Across All Strata: FACW Species: 45 x2 = 90 FAC Species: 12 x3 = 36 Percent of Dominant Species That Are OBL, FACW, or FAC: OBL Species: 45 x2 = 90 FAC Species: 12 x3 = 36 FACU Species: 15 x4 = 60 UPL Species: 0 x5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 1-Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) OBL Species: 25		Total Cover:		I	
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) Total % Cover of: $OBL \text{ Species:} 25 $	Total % Cover of: Multiply by: OBL Species: 25	Total % Cover of:	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) OBL Species: 25	Dominance Test Workshoot		lav Warkshaat		
That Are OBL, FACW, or FAC: $\frac{4}{A}$ OBL Species: $\frac{25}{25}$	OBL Species: 25	That Are OBL, FACW, or FAC: 4 (A) OBL Species: 25 x1 = 25 Total Number of Dominant Species Across All Strata: 5 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) Prevalence Index = 8/A = 60 UPL Species: 0 x5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	That Are OBL, FACW, or FAC: 4 (A) OBL Species: 25				Multiply by	
Total Number of Dominant Species Across All Strata: 5 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) FACW Species: 45 x 2 = 90 FAC Species: 12 x 3 = 36 FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 0 Total Representation Indicators: The Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations (Provide supporting Hydrophytic Vegetation Present? Yes	FACW Species: 45	Total Number of Dominant Species Across All Strata: FACW Species: 45	Total Number of Dominant Species Across All Strata: FACW Species: 45	That Are OBL, FACW, or FAC: 4 (A)				
Species Across All Strata: 5 (B) FAC Species: 12 x 3 = 36 FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators: □ 1 - Rapid Test for Hydrophytic Vegetation ☑ 2 - Dominance Test is > 50% ☑ 3 - Prevalence Index is ≤ 3.0 ☐ 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ☑ Yes	FAC Species: 12 x 3 = 36 FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 2111 (B) Prevalence Index = B/A = 2.18 on Indicators: Hydrophytic Vegetation st is > 50% lex is ≤ 3.0 Adaptations¹ (Provide supporting or on a separate sheet) Hydrophytic Vegetation¹ (Explain) if and wetland hydrology must be	Species Across All Strata: 5 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) FAC Species: 12 x 3 = 36 FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes No No Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: **Bo (A/B)** **FAC Species: 12	Total Number of Dominant				
Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) FACU Species: 15	FACU Species: 15	Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes No No Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B) FACU Species: 15 x 4 = 60 UPL Species: 0 x 5 = 0 Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes No No Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
That Are OBL, FACW, or FAC: ### UPL Species: ### Question Indicators: ### UPL Species: ### Oclumn Totals: ### OPT (A) ### Prevalence Index = B/A = 2.18 ### Prevalence Index = B/A = 2.18 #### UPL Species: ### Question Totals: ### OPT (A) ### Prevalence Index = B/A = 2.18 #### UPL Species: ### Question Totals: ### OPT (A) ### Prevalence Index = B/A = 2.18 #### UPL Species: ### Question Totals: ### OPT (A) ### Prevalence Index = B/A = 2.18 #### UPL Species: ### Question Totals: ### OPT (A) ### Prevalence Index = B/A = 2.18 ### UPL Species: ### Question Totals: ### OPT (A) ### Prevalence Index = B/A = 2.18 ### UPL Species: ### Question Totals: ###	UPL Species: Q x 5 = Q Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 on Indicators: Hydrophytic Vegetation st is > 50% lex is ≤ 3.0 Adaptations¹ (Provide supporting or on a separate sheet) Hydrophytic Vegetation¹ (Explain) ii and wetland hydrology must be	That Are OBL, FACW, or FAC: UPL Species: Q x 5 = Q Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18	That Are OBL, FACW, or FAC: ### UPL Species: Q	Percent of Dominant Species				
Column Totals: 97 (A) 211 (B Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators: □ 1 - Rapid Test for Hydrophytic Vegetation □ 2 - Dominance Test is > 50% □ 3 - Prevalence Index is ≤ 3.0 □ 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present?	Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 on Indicators: Hydrophytic Vegetation st is > 50% lex is ≤ 3.0 Adaptations¹ (Provide supporting or on a separate sheet) Hydrophytic Vegetation¹ (Explain) ii and wetland hydrology must be	Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators:	Column Totals: 97 (A) 211 (B) Prevalence Index = B/A = 2.18 Hydrophytic Vegetation Indicators: □ 1 - Rapid Test for Hydrophytic Vegetation □ 2 - Dominance Test is > 50% □ 3 - Prevalence Index is ≤ 3.0 □ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Yes □ No ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				_	
Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is > 50% ☐ 3 - Prevalence Index is ≤ 3.0 ☐ 4 - Morphological Adaptations¹ (Provide supporting Prevalence Index = B/A = 2.18 1 - Rapid Test for Hydrophytic Vegetation 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes	Prevalence Index = B/A = 2.18 on Indicators: Hydrophytic Vegetation st is > 50% lex is ≤ 3.0 Adaptations¹ (Provide supporting or on a separate sheet) Phydrophytic Vegetation Present? ✓ Yes □ No ophytic Vegetation¹ (Explain) ii and wetland hydrology must be	Hydrophytic Vegetation Indicators:	Hydrophytic Vegetation Indicators:		1			
Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☑ 2 - Dominance Test is > 50% ☑ 3 - Prevalence Index is ≤ 3.0 ☐ 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ☑ Yes	Hydrophytic Vegetation st is > 50% lex is ≤ 3.0 Adaptations¹ (Provide supporting or on a separate sheet) Hydrophytic Vegetation¹ (Explain) ii and wetland hydrology must be	Hydrophytic Vegetation Indicators:	Hydrophytic Vegetation Indicators:					
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 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes 	st is > 50% lex is ≤ 3.0 Adaptations¹ (Provide supporting or on a separate sheet) Adaptation¹ (Explain) ii and wetland hydrology must be	 ✓ 2 - Dominance Test is > 50% ✓ 3 - Prevalence Index is ≤ 3.0 ✓ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ✓ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 	 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 					
3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes	lex is ≤ 3.0 Adaptations¹ (Provide supporting or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes □ No Ophytic Vegetation¹ (Explain) il and wetland hydrology must be	3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes □ No Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes □ No Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
☐ 4 - Morphological Adaptations¹ (Provide supporting Hydrophytic Vegetation Present? ✓ Yes	Adaptations¹ (Provide supporting or on a separate sheet) Hydrophytic Vegetation Present? ✓ Yes □ No ophytic Vegetation¹ (Explain) il and wetland hydrology must be	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes No No Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes No Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	✓ 2 - Dominance Test is > 50%				
	or on a separate sheet) ophytic Vegetation¹ (Explain) il and wetland hydrology must be	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	3 - Prevalence Index is ≤ 3.0				
add in Normano of on a departure choosy	ophytic Vegetation¹ (Explain) il and wetland hydrology must be	Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	ent? ☑ Yes [] No
	il and wetland hydrology must be	¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	data in Normania of on a soparate checky				
☐ Problematic Hydrophytic Vegetation¹ (Explain)	il and wetland hydrology must be	present, unless disturbed or problematic.	present, unless disturbed or problematic.	☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	or problemane.			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
		Remarks:	Remarks:	· · · · · · · · · · · · · · · · · · ·				
Remarks:				Remarks:				



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SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to o	locum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		Tex	turo	Remarks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	16%	ture	Remarks
0-4	10YR 2/1	100					ORG/	ANIC	
4-8	10YR 5/2	96	10YR 4/6	4	С	М	FINE SAN	DY LOAM	
8-14	10YR 6/2	92	10YR 6/4	8	С	М	LOAMY FI	NE SAND	
011	10111 0/2	02	10111 0/1	Ü			20/11/11	112 0/1112	
1T 0.0			DM D 1 11				0 / 10 :	21 DI	<u></u>
		<u> </u>					or Coated Grains.		=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
Histosol (A	A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		IV	ILIXA I	490)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ⊤	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1		-	d Matrix (I			☐ Thin Dark Su	urface (S9) (LRR K, L)
	k Surface (A12)		_	•	` Dark Surfa	•		_	nese Masses (F12) (LRR K, L, R)
_	icky Mineral (S1)		_			ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)		_	•	Depressio	, ,			
			□ R	euox i	Depressio	115 (F0)		_	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re								_	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallov	w Dark Surface (TF12)
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ ∪	nknown				
_			_					Hydric Soil Prese	ent? ☑ Yes ☐ No
								,	🖸 163 🗀 110
Domorko									
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High	√ 1	Moderate	Low			Isolated Wetland?	Yes 🗹	No 🔲 Unknown
General Comm	ents:								





SW



WETLAND DETERMINATION FORM - Northc	entral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐	Transmission Line
Project/Site: NED Milepost: 468.9 County:	Middlesex Date: 11/17/2014
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: DR-A-W002-UPL
Investigators: RSE Quad Name: Lowell Townshi	o: Dracut
Logbook No.: TEAM Logbook Pg.: 48 Tract: 5331	
Landform (hillslope, terrace, etc.): HILLSIDE Local Relief:	Concave ☑ Convex ☐ None Slope%.: 20
Subregion (LRR): Middle Atlantic Lat: 42.678759	Long: -71.284080 Datum: NAD83
Soil Map Unit Name: Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	· – –
	Jacobiana duamanda immantand faatuura aka
BUMMARY OF FINDINGS - Attach site map showing sampling point Hydrophytic Vegetation Present? Yes V No	locations, transects, important features, etc.
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area
Wetland Hydrology Present?	within a Wetland?
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livir	g Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Sc	ils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous ins	pections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Pinus strobus Quercus alba	30 YES FACU 40 YES FACU
Quercus rubra	25 YES FACU
Total Cove	: 95

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



1 Tovidence, IXI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Frangula alnus		15	YES	FAC
	Total Cover:	15		
Herb Stratum				
Plot Size: 5				
Scientific Name	I	% Cover	Dominant	Indicator Status
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
Scientific Name		78 COVEI	Dominant	mulcator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>25</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species		x 2 = <u>0</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>15</u>	x 3 = <u>45</u>	
Percent of Dominant Species	FACU Species:		x 4 = 380	
That Are OBL, FACW, or FAC: 25 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:		425 (B)	
		Prevalence Index =		
		rievalence index =	= B/A = <u>3.13</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Presen	it? ☐ Yes ☑	∐ No
add in telliane of on a coparate choosy				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
Tomano.				



	(1 0200+								The second second
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to o	locum	ent the in	ndicator o	r confirm the ab	osence of indicators.))
Depth	Matrix		Red	dox Fe	atures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Texture	Remarks
0-2	10YR 3/2	100					FINE S	SANDY LOAM	
2-4	10YR 4/6	100					FINE S	SANDY LOAM	
							2		
4.4.4	40VD 5/0	400					FINE O	CANDY LOAM	
4-14	10YR 5/8	100					FINE 5	SANDY LOAM	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated Grain	ns. ² Location: PL:	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	to all LRR's, unle	ss otl	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (/	A1)		□Р	olyvalı	ue Below :	Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILŔA 1		•			e Redox (A16) (LRR K, L, R)
☐ Black Hist			Пт	hin Da	rk Surface	- (S9) (I R	R R, MLRA 149E	_	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_			. , .	(LRR K, L)	· — ·	e (S7) (LRR K, L, M)
				-	-		(LIXIX IX, L)	_	
	Layers (A5)	(^4	_	-	Gleyed Ma				elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1			d Matrix (I	•		_	urface (S9) (LRR K, L)
_	k Surface (A12)		_		Dark Surfa			=	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Fl	loodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox l	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)								Material (F21)
☐ Stripped I	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
3Indicators of h	nvdrophytic veae	tation a	and wetland hydro	oloav n	nust be pr	esent. unle	ess disturbed or	problematic.	
Restrictive Lay					Inknown			<u>'</u>	
Restrictive Lay	er Fresent?	ш '	ies 🔽 No		IIKIIOWII				
								Hydric Soil Prese	ent? ☐ Yes ☑ No
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	v: 🗖 High		Moderate	Low			Isolated Wetla	and? □ Yes □	No ☐ Unknown
Wolland Qualit	.y. 🔲 1g	ш.	viodorato 🔟				loolated Welle		
General Comm	ents:								





NE



WETLAND DETERMINATION FORM - Northce	entral and No	rtheast Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐ ☐	Transmission Line	Other	
Project/Site: NED Milepost: 174.2 County:	Middlesex	Date:	11/14/2014
Applicant/Owner: Kinder Morgan State:	MA Samp	ling Point: DR-A-W00)1-PFO
Investigators: PML Quad Name: Lowell Township			
Logbook No.: BOOK 1 Logbook Pg.: Tract: 5331			
Landform (hillslope, terrace, etc.): DRAINAGEWAY Local Relief:	Concave 0	Convex 🗹 None	Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.681189	Long: -71.285	5136	Datum: NAD83
Soil Map Unit Name: Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stony		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, expla	ain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circ	umstances present?	☑ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No			
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations tran	sects important	features etc
Hydrophytic Vegetation Present? ✓ Yes ☐ No	iooutiono, trui	iocoto, important	
	Is the Sampled	Area ✓ Yes □	No
Hydric Soil Present? ✓ Yes ☐ No Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetlan	d? ✓ Yes 🗆	No
Field Wetland Classification: PFO			
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:	<u>S</u>	econdary Indicators (2 o	r more required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks ((B6)
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)	v	Drainage Patterns (B	10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines (B1	6)
✓ Saturation (A3) ☐ Marl Deposits (B15)		Dry-Season Water Ta	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8	3)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livin	g Roots (C3)	Saturation Visible on	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soi	ils (C6)	Geomorphic Position	(D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Shallow Aquitard (D3	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			
☐ Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D	5)
Field Observations:			
Surface Water Present?			
Water Table Present? ✓ Yes ☐ No Depth (inches): 10	Wetland Hyd	rology Present?	
Saturation Present?			Yes No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inst	pections) if available	e):	
Tomano (2008).20 Tourista 2014 (01001) gago, montoning 1161, abina proces, provides 1167	poolionoj, ii avaliasi.		
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Pinus strobus	30	YES	FACU
Ulmus rubra Acer rubrum	15 55	NO YES	FAC FAC
Quercus alba	10	NO NO	FACU
Total Cover	: 110		



T TOVIGCTICG, TRI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Berberis thunbergii Frangula alnus Euonymus alatus		5 20 5	NO YES NO	FACU FAC UPL
<i>Laonymae</i> aidide	Total Cover:	30	1.0	0. 2
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Osmundastrum cinnamomeum		40	YES	FACW
	Total Cover:	40	1	ı
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species:	<u>40</u>	x 2 = <u>80</u>	
Species Across All Strata: 4 (B)	FAC Species:	90	x 3 = <u>270</u>	
Percent of Dominant Species	FACU Species:	<u>45</u>	x 4 = 180	
That Are OBL, FACW, or FAC: 75 (A/B)	UPL Species:	<u>5</u>	x 5 = <u>25</u>	
	Column Totals:	180 (A)	555 (B)	
	_	Prevalence Index		
Hudranhutia Vagatatian Indicatora	•	Tovalorioo iriaox	- <u>5,7</u> (- <u>0.00</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Presei	nt? ☑ Yes ☐] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



T TOVIGETICE, I	1 02304									
SOIL										
Profile Descrip	tion: (Describe	the de	epth needed to c	ocum	ent the in	dicator o	r confirm the abs	sence of indicators.))	
Depth	Matrix		Red	lox Fe	atures					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	T	exture	F	Remarks
0.0			Color (molol)		. , , , ,		FINE O	NIDVI OAM	LUOTO	IO EDIDEDON
0-6	10YR 2/1	100					FINE SA	ANDY LOAM	HISTR	IC EPIPEDON
6-14	10YR 2/1	100					FINE SA	ANDY LOAM		SAPRIC
14-20	2.5Y 4/1	100					LOAN	MY SAND	6" OF ALLUVIA	AL MATERIAL UNDER
14-20	2.51 4/1	100					LOAI	WI SAND		GANIC SOIL
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced I	√atrix,	CS=Cov	ered Sand	or Coated Grains	s. ² Location: PL=	=Pore Lining, M=	=Matrix
Hydric Soil Ind	licators: (Appli	cable t	to all LRR's, unle	ss otl	nerwise n	oted.)		Indicators for P	roblematic Hydr	ric Soils³:
☐ Histosol (A	41)		□Р	olvvali	ıe Below :	Surface (S	8) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L,	MI RA 149R)
_ `	•			LRA 1		Surrace (C	o) (ERRETE,			
	pedon (A2)							_	e Redox (A16) (L	
■ Black Hist	ic (A3)		П 1	nin Da	irk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3	3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L	, M)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8	3) (LRR K, L)
□ Depleted I	Below Dark Surfa	ace (A1	11) 🔲 D	eplete	d Matrix (I	F3)		☐ Thin Dark S	urface (S9) (LRR	: K, L)
☐ Thick Darl	k Surface (A12)		П п	edox I	Dark Surfa	ce (F6)		☐ Iron-Mangar	nese Masses (F1	2) (LRR K, L, R)
_	ıcky Mineral (S1)					ırface (F7)		_	•	(19) (MLRA 149B)
								<u> </u>		· · ·
	eyed Matrix (S4)		□ R	edox I	Depressio	ns (F8)			c (TA6) (MLRA 1	144A, 145, 149B)
☐ Sandy Re	dox (S5)							□ Red Parent	Material (F21)	
☐ Stripped N	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	4 149B)					☐ Other (Expla	ain in Remarks)	
_			and wetland hydro	logy n	ouet ho pr	ocont unk	see disturbed or n		,	
						coorn, urne	Jos disturbed or p	Tobicinatio.		
Restrictive Lay	er Present?		Yes ☑ No │	JU	Inknown					
								Hydric Soil Prese	ent? 🗹 Yes	s □ No
Remarks:										
. tomanio										
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:				
MATCHES MAI	PPED HABITAT									
Wetland Qualit	v: 🔽 High		Moderate	_ow			Isolated Wetlar	nd? □ Yes ☑	No 🔲 Un	ıknown
	, 🗀 3	_								
General Comm	ents:									





WEST



WETLAND DETERMINATION FORM - North	central and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line ☐ Other
Project/Site: NED Milepost: 174.2 County Applicant/Owner: Kinder Morgan State:	MA Sampling Point: DR-A-W001-UPL
Investigators: PML Quad Name: Lowell Towns	
Logbook No.: BOOK 1 Logbook Pg.: 25 Tract: 5331	
Landform (hillslope, terrace, etc.): DRAINAGEWAY Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.681144	Long: -71.285037 Datum: NAD83
Soil Map Unit Name: Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stor	ny NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling poi	
Hydrophytic Vegetation Present? ☐ Yes ☑ No	, , , , , , , , , , , , , , , , , , , ,
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No	within a wetland?
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Li	ving Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutral Test (D5)
Full Oliver of the	
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches): Water Table Present? ☐ Yes ☑ No Depth (inches):	Watland Hudralogy Propent?
	Wetland Hydrology Present? ☐ Yes ☑ No
(includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous i	nspections), if available):



Providence, RI 02904				
VEGETATION				
Free Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Quercus alba		10	NO	FACU
Pinus strobus Quercus rubra		30 20	YES YES	FACU FACU
Acer rubrum	_	40	YES	FAC
	Total Cover:	100		
Sapling/Shrub Stratum				
Plot Size: 15	1			l
Scientific Name		% Cover	Dominant	Indicator Status
Euonymus alatus Pinus strobus		20 5	YES YES	UPL FACU
	Total Cover:	25		I
Herb Stratum				
Plot Size: 5				
Scientific Name	1	% Cover	Dominant	Indicator Status
Franqula alnus		% Cover 10	YES	FAC
rrangula ainus Dendrolycopodium obscurum		3	NO NO	FACU
	Total Cover:	13	·	
Voody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 6 (B)	FAC Species:	<u>50</u>	x 3 = <u>150</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)	FACU Species:	<u>68</u>	x 4 = <u>272</u>	
That Are Obl., FACW, or FAC.	UPL Species:	<u>20</u>	x 5 = <u>100</u>	
	Column Totals:	138 (A)	<u>522 (B)</u>	
	F	Prevalence Index	= B/A = 3.78	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	ent? 🔲 Yes 🖸	7 No.
data in Remarks or on a separate sheet)	Trydrophlytic v	egetation rese	int: 🔲 les b	<u>d</u> NO
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				



	(1 0200+								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to o	locum	ent the in	ndicator o	r confirm the abso	ence of indicators.)	1
Depth (inches)	Matrix		Red	dox Fe	atures		То	xture	Remarks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	16	xture	Remarks
0-8	10YR 2/1	100					FINE SAI	NDY LOAM	
8-12	10YR 3/4	100					FINE SAI	NDY LOAM	
12-20	10YR 4/4	100					FINE SAI	NDY LOAM	
12 20	1011(1/1	100					1 1142 074	127 237 1111	
1T 0.0		1						21 DI	<u></u>
		<u> </u>					or Coated Grains.		=Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	to all LRR's, unle	ss otl	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils ³ :
☐ Histosol (A	A1)			olyval ILRA 1		Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		IV	ILINA	1490)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ⊤	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	_	-	d Matrix (I			☐ Thin Dark Su	urface (S9) (LRR K, L)
	k Surface (A12)		_		` Dark Surfa	•		_	nese Masses (F12) (LRR K, L, R)
_	ıcky Mineral (S1)		_			ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)	'				` '			
			□ R	euox	Depressio	115 (F0)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re								_	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
□ Dark Surfa	ace (S7) (LRR R	, MLRA	4 149B)					Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	oblematic.	
Restrictive Lay	er Present?		Yes √ No		Inknown				
_			_					Hydric Soil Prese	ent? ☐ Yes ☑ No
								,	<u> </u>
Domorko									
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland	d? 🔲 Yes 🔲	No Unknown
General Comm	ents:								





EAST



WE	TLAND) DET	ERN	IINATIO	ON F	ORM - I	Northc	ent	ral an	d No	ortheas	st Regi	on		
☐ Centerline ☐ Re-R	oute [] Acce	ss Roa	ıd 🗹	Ancilla	ry Facility		Tran	nsmission	Line		ther			
Project/Site: NED			ı	Milepost:	14322	2.0	County:		Middle	esex		Da	ate:	04/21/201	5
Applicant/Owner: Kinder Mo	rgan		·				State:	MA		Samp	oling Poi	nt: DR-G	-W00	2-PFO	
Investigators: NF CM		Quad N	ame:	Lowell			Townshi	p:	Dracu	t					
Logbook No.: 2015-1	Log	book Pg	ı.: 92		Tract	t: 4907									
Landform (hillslope, terrace,	etc.):	Slope	- mid			Local R	elief:	7 (Concave		Convex	☐ No	ne S	Slope%.:	2
Subregion (LRR): Middl	e Atlantic			Lat:	42.67	79520		L	_ong:	-71.28	1958		[Datum: NAI	D83
Soil Map Unit Name: Sci	tuate fine :	sandy lo	am, 3 t	to 8 percei	nt slope	s, extreme	ly stony				NWI (Classification	on:	Not ma	apped
Are climatic / hydrologic cond	litions on th	ne site t	pical f	or this time	e of yea	ır?: ▽	7 Yes		No (If n	o, expl	lain in Re	marks.)			
Are Vegetation Soil	or H	ydrology	/ 🗆	significar	ntly dist	urbed?	√ No	Α	re "Norm	al" Circ	cumstanc	es present	t?	√ Yes	☐ No
Are Vegetation Soil	or H	ydrology	/ 🗆	naturally	problen	matic?	√ No								
SUMMARY OF FINDI	NGS - A	ttach	site n	nap sho	wing	samplir	ng point	t lo	cations	s, tra	nsects	import	ant f	features	, etc.
Hydrophytic Vegetation Prese	ent?	\checkmark	Yes	☐ No											
Hydric Soil Present?		$\overline{\checkmark}$	Yes	☐ No				IS Wi	the Sar thin a V	npied Vetlar	i Area nd?	✓ Yes		No	
Wetland Hydrology Present?			Yes	☐ No											
Field Wetland Classification:	PFC)													
Remarks: USE DR-A	\-W001-UF	PL AS R	EPRES	SENTATIV	E UPLA	AND PLOT	-								
HYDROLOGY															
Wetland Hydrology Indicate	ors:									5	Secondar	/ Indicators	s (2 o	r more requ	uired <u>)</u>
Primary Indicators (minimum	of one rec	uired; c	heck a	ll that appl	y)						Surfa	ce Soil Cra	acks ((B6)	
☐ Surface Water (A1)				☐ Water	-Staine	d Leaves (B9)				Drain	age Patter	rns (B	10)	
✓ High Water Table (A2)				☐ Aquat	ic Faun	a (B13)					Moss	Trim Lines	s (B16	6)	
✓ Saturation (A3)				☐ Marl □	eposits	s (B15)					Dry-S	eason Wa	ter Ta	able (C2)	
☐ Water Marks (B1)				☐ Hydro	gen Sul	lfide Odor ((C1)				Crayf	ish Burrow	vs (C8	3)	
☐ Sediment Deposits (B2)				Oxidiz	ed Rhiz	zospheres	along Livir	ng R	oots (C3)	, [Satur	ation Visib	le on	Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of F	Reduced Ir	on (C4)				Stunt	ed or Stres	ssed F	Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	t Iron R	Reduction in	n Tilled So	oils (C	26)	5		norphic Po		, ,	
☐ Iron Deposits (B5)				Thin N	luck Su	ırface (C7)						ow Aquitar	,	•	
☐ Inundation Visible on A	erial Image	ry (B7)		Other	(Explaii	n in Remar	rks)					topograph			
☐ Sparsely Vegetated Cor	ncave Surf	ace (B8))								FAC-	Neutral Te	est (D5	5)	
Field Observations:															
Surface Water Present?	Yes	√ 1	l oV	Depth (incl	nes):										
Water Table Present?	✓ Yes			Depth (incl	,	0			Wetlar	nd Hyd	drology P	resent?	N	Yes □	No
Saturation Present? (includes capillary fringe)	✓ Yes	י ם	No [Depth (incl	nes):	0								ies 🗀	140
Remarks (Describe Recorded	l Data (stre	am gag	e, mon	itoring wel	l, aerial	l photos, pr	revious ins	pect	tions), if a	availab	le):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% C	over		Dominant		Indicato	or Status
Acer rubrum Fraxinus pennsylvanica						_			50 20	0		YES YES			AC CW
						T	otal Cove	r:	7	U					



Providence, Rt 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Frangula alnus Vaccinium corymbosum Fraxinus pennsylvanica		15 5 10	YES NO YES	FAC FACW FACW
	Total Cover:	30	'	1
Herb Stratum				
Plot Size: 5				
Scientific Name	1	% Cover	Dominant	Indicator Status
Symplocarpus foetidus		5	YES	OBL
Onoclea sensibilis		15	YES	FACW
	Total Cover:	20		
Woody Vine Stratum				
Plot Size: 30				1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 6 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 6 (A)	OBL Species:	<u>5</u>	x 1 = <u>5</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species:	: <u>50</u>	x 2 = <u>100</u>	
oposico / icrosco / iii ottata.	FAC Species:	<u>65</u>	x 3 = <u>195</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	120 (A)	300 (B)	
	F	Prevalence Index	= B/A = 2.50	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	<u> </u>			

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



1 TOVIGETICE, I	1 02304								1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the ir	ndicator o	confirm the	absence of indicato	ors.)
Depth (inches)	Matrix		Red	dox Fe	atures			Toyturo	Domostro
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texture	Remarks
0-10	10YR 2/1	95	5YR 4/6	5	С	М	;	SILT LOAM	
¹Type: C=Cond	centration, D=De	 epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Gra	ains. ² Location:	PL=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)		Indicators fo	or Problematic Hydric Soils³:
□ Black Hist □ Hydrogen □ Stratified □ □ Depleted □ Thick Darl □ Sandy Mt □ Sandy Gle □ Sandy Re □ Stripped ↑ □ Dark Surf	bedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surfactor (A12) icky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	, MLRA	N	hin Da oamy oamy deplete dedox I deplete dedox I	i 49B) Ark Surface Mucky Mir Gleyed Ma d Matrix (i Dark Surfa d Dark Su Depressio	e (S9) (LRI neral (F1) (atrix (F2) F3) ace (F6) urface (F7) ons (F8)		Coast Pi S cm Mu Dark Sui Polyvalu Inon-Mar Piedmor Mesic Sp Red Par Very Sha	rairie Redox (A16) (LRR K, L, R) rairie Redox (A16) (LRR K, L, R) ricky Peat or Peat (S3) (LRR K, L, R) riace (S7) (LRR K, L, M) re Below Surface (S8) (LRR K, L) rk Surface (S9) (LRR K, L) riganese Masses (F12) (LRR K, L, R) rit Floodplain Soils (F19) (MLRA 149B) rodic (TA6) (MLRA 144A, 145, 149B) rent Material (F21) allow Dark Surface (TF12) xplain in Remarks) resent? Yes No
10 Remarks:							'		
Description of Wetland Qualit General Comm	y: 🔲 High		Aquatic Diversity Moderate	or Ge	neral Con	nments:	Isolated We	tland?	☑ No ☐ Unknown





EAST



NORTH



WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 365.9	County: Middlesex Date: 04/21/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: DR-G-W002-PSS
Investigators: NF CM Quad Name: Lowell	Township: Dracut
Logbook No.: 2015-1 Logbook Pg.: 90 Tract: 4907	
Landform (hillslope, terrace, etc.): Slope - toe Local F	Relief: ☑ Concave ☐ Convex ☐ None Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.678700	Long: -71.282349 Datum: NAD83
Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☑ Soil ☐ or Hydrology ☐ significantly disturbed?	□ No Are "Normal" Circumstances present? ☑ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No	
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area
Wetland Hydrology Present?	
Field Wetland Classification: PSS	
Remarks: USE DR-A-W001-UPL AS REPRESENTATIVE UPLAND PLO	ī
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves	(B9) Drainage Patterns (B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced I	ron (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	rks) Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ☐ Yes ☑ No Depth (inches):	
Water Table Present?	Wetland Hydrology Present?
Saturation Present?	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	revious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
	Total Cover:



Providence, Ri 02904			1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rhamnus alnifolia		40	YES	OBL
	Total Cover:	40		
Herb Stratum				
Plot Size: 5				
Scientific Name	1	% Cover	Dominant	Indicator Status
Onoclea sensibilis		15	YES	FACW
Solidago gigantea		35	YES	FACW
Symplocarpus foetidus Spiraea tomentosa		5 15	NO YES	OBL FACW
	Total Cover:	70	1	1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		I	I
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 4 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>45</u>	x 1 = <u>45</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>65</u>	x 2 = <u>130</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>0</u>	x 4 = <u>0</u>	
That Are OBE, I AGW, OFF AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>110 (A)</u>	<u>175 (B)</u>	
	ı	Prevalence Index :	= B/A = <u>1.59</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydronhytic V	egetation Preser	nt? ☑ Yes [] No
data in Remarks or on a separate sheet)	Tryurophytic v	egetation reser	ıı: 🚺 165 L	J 140
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
remars.				



SOIL												
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm t	he absen	ce of indicators.)			
Depth	Matrix		Red	dox Fe	atures			Tt.			Damada	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Textu	ле		Remarks	
0-8	2.5Y 3/1	90	10YR 4/6	10	С	М		SILT LO	MAC			
8-18	10YR 4/1	95	10YR 4/6	5	С	М	F	INE SAND	Y LOAM			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining	, M=Matrix	
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pi	roblematic I	Hydric Soils ³ :	:
Histosol (/	A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR h	K, L, MLRA 14	9B)
☐ Histic Epip	pedon (A2)				,				☐ Coast Prairie	e Redox (A1	6) (LRR K, L,	R)
☐ Black Hist			П	hin Da	rk Surface	e (S9) (LR	R R, MLRA	(149B)	5 cm Mucky	Peat or Pea	t (S3) (LRR K	, L, R)
	Sulfide (A4)		_	-	=		(LRR K, L)		☐ Dark Surface		· ·	
_	Layers (A5)		_	oamy	Gleyed Ma	atrix (F2)			☐ Polyvalue Be	elow Surface	e (S8) (LRR K,	, L)
_ :	Below Dark Surfa	ace (A1	· —	•	d Matrix (•			Thin Dark Su	. , ,		
	k Surface (A12)		_		Dark Surfa				_		(F12) (LRR K	
	icky Mineral (S1)		_	-		urface (F7)			_	•	ls (F19) (MLR.	,
	eyed Matrix (S4)		☐ F	Redox I	Depressio	ns (F8)					RA 144A, 145	, 149B)
☐ Sandy Re	, ,								Red Parent		•	
_ ``	Matrix (S6)								☐ Very Shallov		,	
_	ace (S7) (LRR R		•						Other (Expla	iin in Remar	ks)	
³ Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	ed or probl	lematic.			
Restrictive Lay	er Present?	<u> </u>	∕es 🗹 No	<u> </u>	Inknown			ı	Hydric Soil Prese	ent? 🔽	Yes □ N	No
Remarks:												
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
•			. ,									
Wetland Qualit	y: High	I	Moderate	Low			Isolated	Wetland?	☐ Yes 🗹	No 🔲	Unknown	
General Comm	ents:											





NORTH



WETLAND DETERMINATION FORM - N	orthcentral and Northeast Region	
Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility Project/Site: NED	☐ Transmission Line ☐ Other County: Middlesex Date: 06/04	/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: DR-D-W001-PSS	
Investigators: TT JW Quad Name: Lowell	Fownship: Dracut	
Logbook No.: 2015-1 Logbook Pg.: 22 Tract: 4902		
Landform (hillslope, terrace, etc.): Flat Local Re	ef: Concave Convex Mone Slope%	ъ.: 1
Subregion (LRR): Middle Atlantic Lat: 42.679336	Long: -71.278992 Datum:	NAD83
Soil Map Unit Name: Canton fine sandy loam, 3 to 8 percent slopes, extremely	stony NWI Classification: No	t mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)	
	No Are "Normal" Circumstances present?	Yes 🔲 No
SUMMARY OF FINDINGS - Attach site map showing samplin	ן point locations, transects, important featu	res, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No		
Hydric Soil Present? ✓ Yes ☐ No	Is the Sampled Area within a Wetland? ☑ Yes ☐ No	
Wetland Hydrology Present? ✓ Yes □ No	within a wettand?	
Field Wetland Classification: PSS		
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indicators (2 or more	required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (E	Drainage Patterns (B10)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)	
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C	2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (1) Crayfish Burrows (C8)	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	ong Living Roots (C3) Saturation Visible on Aerial	imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	(C4) Stunted or Stressed Plants	(D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Filled Soils (C6) Geomorphic Position (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	☐ FAC-Neutral Test (D5)	
Field Observations:		
Surface Water Present?	Westernal Headards are Pressure?	
Water Table Present? ☐ Yes ☑ No Depth (inches): Saturation Present? ☑ Yes ☐ No Depth (inches): 6	Wetland Hydrology Present? ✓ Yes	□ No
Saturation Present?	-	_
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pre	rious inspections), if available):	
PLOT LOCATION IN OPEN MEADOW SCRUB SHRUB WETLAND UNDER POWE	RLINE EASEMENT. ALL DOMINANT VEG ARE HYDRIC.	
VEGETATION		
Tree Stratum		
Plot Size: 30		
Scientific Name	% Cover Dominant Inc	licator Status
To	al Cover:	



Providence, RI 02904			1	ALCOM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Alnus incana Vaccinium corymbosum Rhamnus alnifolia		30 10 30	YES NO YES	FACW FACW OBL
Triainius annona	Total Cover:	70	123	OBL
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Solidago rugosa		80	YES	FAC
Comptonia peregrina Spiraea alba		20 2	NO NO	UPL FACW
	Total Cover:	102	1	'
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>30</u>	x 1 = <u>30</u>	
Total Number of Dominant	FACW Species	s: <u>42</u>	x 2 = <u>84</u>	
Species Across All Strata: 3 (B)	FAC Species:	<u>80</u>	x 3 = <u>240</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species	: <u>0</u>	x 4 = <u>0</u>	
That Ale ODE, I AGW, OF AG.	UPL Species:	<u>20</u>	x 5 = <u>100</u>	
	Column Totals:	172 (A)	<u>454 (B)</u>	
		Prevalence Index	$= B/A = \underline{2.64}$	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	egetation Prese	nt? ☑ Yes [□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
Nemano.				



SOIL												
Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	Matrix		Redox Features									
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	lex	tture	Remarks			
0-5	10YR 2/2	100					FINE SAN	IDY LOAM				
5-14	2.5Y 5/2	80	7.5YR 4/6	20	С	М	FINE SAN	IDY LOAM				
¹Type: C=Cond	centration, D=De	pletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix			
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :												
☐ Histosol (A	\1)	Redox Features Redox Features Texture Remarks										
☐ Histic Epip	Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R								e Redox (A16) (LRR K, L, R)			
☐ Black Histic (A3) ☐			□⊤	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)			
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)			
☐ Stratified L	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)			
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L)									urface (S9) (LRR K, L)			
☐ Thick Dark	Surface (A12)		☐ R	ledox [Dark Surfa	ice (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)			
☐ Sandy Mu	cky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)			
☐ Sandy Gle	eyed Matrix (S4)		☐ F	Redox [Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)			
☐ Sandy Re	dox (S5)							□ Red Parent I	Material (F21)			
☐ Stripped N	Matrix (S6)							☐ Very Shallov	v Dark Surface (TF12)			
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	in in Remarks)			
³ Indicators of h	ydrophytic vege	tation a	and wetland hydro	ology m	nust be pr	esent, unle	ess disturbed or pro	blematic.				
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No			
MODELING IS	DIFFUSE											
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	ments:						
W 11 10 15		┌ .						. .	N 			
Wetland Qualit		<u>√</u> '	vioderate	Low			Isolated Wetland	? ∐ Yes ☑	NO UNKNOWN			
General Comm	ents:											





WEST



Centerline											
Applicant/Owner: Kinder Morgan State: MA Sampling Point: DR-D-W001-PFO											
Investigators: TT JW											
Logbook No.: 2015-1											
Landform (hillslope, terrace, etc.): Slope - mid											
Subregion (LRR): Middle Atlantic Lat: 42.680697 Long: -71.279232 Datum: NAD83 Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes NWI Classification: Not mapped Are climatic / hydrologic conditions on the site typical for this time of year?: Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? No Are "Normal" Circumstances present? Yes No Are Vegetation Soil or Hydrology naturally problematic? No Are "Normal" Circumstances present? Yes No SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Field Wetland Classification: PFO Remarks: HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Surface Soil Cracks (B6) Drainage Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Marl Deposits (B15) Marl Deposits (B15) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1)											
Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes											
Are climatic / hydrologic conditions on the site typical for this time of year?:											
Are Vegetation											
Are Vegetation											
Are Vegetation											
Hydrophytic Vegetation Present?											
Hydrophytic Vegetation Present?											
Hydric Soil Present? Wetland Hydrology Present? Wetland Classification: PFO Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water Marks (B1) Water Marks (B1) Wetland Hydrology Indicators Secondary Indicators (2 or more required) Yes No Yes No No Wetland? Yes No No Water Sampled Area within a Wetland? Yes No No No Indicators (2 or more required) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation (Xishle on Agric impages (CO)											
Wetland Hydrology Present? Yes											
Field Wetland Classification: PFO Remarks: HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Saturation Visible on Assid Imagent (C9)											
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Hydrogen Sulfide Odor (C1) Secondary Indicators (2 or more required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8)											
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) □ Surface Soil Cracks (B6) □ Surface Water (A1) □ High Water Table (A2) □ Aquatic Fauna (B13) □ Saturation (A3) □ Marl Deposits (B15) □ Dry-Season Water Table (C2) □ Water Marks (B1) □ Dry-Season Water Table (C2) □ Crayfish Burrows (C8)											
Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (minimum of one required; check all that apply) □ Surface Soil Cracks (B6) □ Surface Water (A1) □ Water-Stained Leaves (B9) □ Drainage Patterns (B10) ☑ High Water Table (A2) □ Aquatic Fauna (B13) □ Moss Trim Lines (B16) ☑ Saturation (A3) □ Marl Deposits (B15) □ Dry-Season Water Table (C2) □ Water Marks (B1) □ Hydrogen Sulfide Odor (C1) □ Crayfish Burrows (C8)											
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Marl Deposits (B15) Water Marks (B1) Water Marks (B1) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8)											
Surface Water (A1)											
✓ High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) ✓ Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) ✓ Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)											
✓ Saturation (A3) ☐ Marl Deposits (B15) ☐ Dry-Season Water Table (C2) ☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Crayfish Burrows (C8)											
Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Saturation Visible on Assist images (C0)											
Seturation Visible on Assistance (C1)											
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Saturation Visible on Aerial imagery (C9)											
Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Saturation Visible on Aerial imagery											
□ Drift Deposits (B3) □ Presence of Reduced Iron (C4) □ Stunted or Stressed Plants (D1)											
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Geomorphic Position (D2)											
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Shallow Aquitard (D3)											
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Microtopographic Relief (D4)											
□ Sparsely Vegetated Concave Surface (B8) □ FAC-Neutral Test (D5)											
Field Observations:											
Surface Water Present? ☐ Yes ☑ No Depth (inches):											
Water Table Present? ✓ Yes ☐ No Depth (inches): 6 Wetland Hydrology Present?											
Saturation Present?											
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):											
VEGETATION											
Tree Stratum											
Plot Size: 30											
Scientific Name % Cover Dominant Indicator Status											
Acer rubrum 70 YES FAC Pinus strobus 15 NO FACU Quercus velutina 10 NO UPL											
Total Cover: 95											



Providence, RI 02904				~_CU//I				
Sapling/Shrub Stratum								
Plot Size: 15								
Scientific Name		% Cover	Dominant	Indicator Status				
Fraxinus pennsylvanica		5	NO	FACW				
Pinus strobus Vaccinium corymbosum		7 20	NO YES	FACU FACW				
Rhamnus alnifolia		20	YES	OBL				
	Total Cover:	52						
Herb Stratum								
Plot Size: 5								
Scientific Name		% Cover	Dominant	Indicator Status				
Dendrolycopodium obscurum		3	NO	FACU				
Maianthemum canadense		4	NO	FACU				
Osmundastrum cinnamomeum	T 0	40	YES	FACW				
	Total Cover:	47						
Woody Vine Stratum								
Plot Size: 30			1	1				
Scientific Name		% Cover	Dominant	Indicator Status				
	Total Cover:							
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:						
Number of Dominant Species	Total % Cover	of:	Multiply by:					
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>20</u>	x 1 = <u>20</u>					
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	:: <u>65</u>	x 2 = <u>130</u>					
Species Across All Strata: 4 (B)	FAC Species:	<u>70</u>	x 3 = <u>210</u>					
Percent of Dominant Species That Are OBL FACW or FAC: 100 (A/B)	FACU Species	<u>29</u>	x 4 = <u>116</u>					
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>10</u>	x 5 = <u>50</u>					
	Column Totals:	194 (A)	<u>526 (B)</u>					
		Prevalence Index	= B/A = <u>2.71</u>					
Hydrophytic Vegetation Indicators:								
1 - Rapid Test for Hydrophytic Vegetation								
☑ 2 - Dominance Test is > 50%								
3 - Prevalence Index is ≤ 3.0								
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	Hydrophytic Vegetation Present? ☑ Yes ☐ No						
data in Homanic of the a coparate officery								
_ 5								
Problematic Hydrophytic Vegetation¹ (Explain)								
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.								
present, unless disturbed of problematic.								
Remarks:								



SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	dicator o	r confirm the abse	nce of indicators.)	
Depth	Matrix			dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Tex	ture	Remarks
0-6	10YR 2/1	100					VERY FINE S	SANDY LOAM	
6-14	10YR 4/2	95	10YR 4/6	5	С	М	VERY FINE S	SANDY LOAM	
Type: C=Cond	l centration. D=D∈	epletion	L	Matrix.	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·		o all LRR's, unle						oblematic Hydric Soils³:
Histosol (A			·			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILRA 1		ouridoo (O	o) (E/(// / /,	_	Redox (A16) (LRR K, L, R)
☐ Black Hist			П	hin Da	rk Surface	(S9) (LRI	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)		_	-	Gleyed Ma		(LIKICIK, L)		elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1	_	-	d Matrix (I			_ ′	urface (S9) (LRR K, L)
_ '	k Surface (A12)	200 (711		•	Dark Surfa	•			ese Masses (F12) (LRR K, L, R)
_	ucky Mineral (S1)		_			rface (F7)			podplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)		_	•	Depressio				c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	• • • • • •				- op. 000.0	(. 0)			Material (F21)
	Matrix (S6)							_	Dark Surface (TF12)
	ace (S7) (LRR R	MIRA	\ 149R)					_ ′	in in Remarks)
_			·				ess disturbed or pro		iii iii rtomano)
	MODELING								
VERY WEAK I		ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
VERY WEAK I		ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
VERY WEAK N	Habitat Characte	_	_	or Ge	neral Com	nments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I Wetland Qualit	Habitat Characte		_		neral Com	nments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I Wetland Qualit	Habitat Characte		_		neral Com	nments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I	Habitat Characte		_		neral Com	nments:	Isolated Wetland	? ☐ Yes ☑	No Unknown
VERY WEAK N Description of I	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No
VERY WEAK N Description of I	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? ☐ Yes ☑	No Unknown
VERY WEAK N Description of I	Habitat Characte		_		neral Com	nments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No
VERY WEAK N Description of I	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No
VERY WEAK N Description of I	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I Wetland Qualit	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I Wetland Qualit	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I Wetland Qualit	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No Unknown
Remarks: VERY WEAK I Description of I Wetland Qualit General Comm	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I Wetland Qualit	Habitat Characte		_		neral Com	nments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I Wetland Qualit	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No Unknown
VERY WEAK N Description of I Wetland Qualit	Habitat Characte		_		neral Com	ments:	Isolated Wetland	? □ Yes ☑	No Unknown





SOUTH



WETLAND DETERMINATION FORM - Nor	thcentral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 1535.4 Cou	inty: Middlesex Date: 06/04/2015
Applicant/Owner: Kinder Morgan Stat	e: MA Sampling Point: DR-D-W001-UPL
Investigators: TT JW Quad Name: Lowell Tow	rnship: Dracut
Logbook No.: 2015-1 Logbook Pg.: 25 Tract: 5358	
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	☐ Concave ☐ Convex ☑ None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.680976	Long: -71.278749 Datum: NAD83
Soil Map Unit Name: Swansea muck, 0 to 1 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	es No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No Are "Normal" Circumstances present? ☑ Yes ☐ No
	No
SUMMARY OF FINDINGS - Attach site map showing sampling p	oint locations, transects, important features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	_
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No within a Wetland?
Wetland Hydrology Present? ☐ Yes ☑ No	within a wetiand?
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
	Drainage Patterns (B10)
Surface Water (A1) Water-Stained Leaves (B9)	Moss Trim Lines (B16)
High Water Table (A2) Aquatic Fauna (B13) And Deposits (B45)	Dry-Season Water Table (C2)
☐ Saturation (A3) ☐ Marl Deposits (B15) ☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
	Caturation Visible on Aerial imagery (CO)
	Committee of the Commit
	Coompanie Position (P2)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille ☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
. , ,	- ` ` `
Field Observations:	
Surface Water Present? Yes V No Depth (inches):	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ☑ No
Saturation Present? Yes V No Depth (inches): (includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	is inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Pinus strobus Quercus velutina Acer rubrum	10 NO FACU 20 YES UPL 60 YES FAC
Total C	



Providence, Ri 02904								
Sapling/Shrub Stratum								
Plot Size: 15								
Scientific Name		% Cover	Dominant	Indicator Status				
Rhamnus alnifolia		5	YES	OBL				
	Total Cover:	5	1					
Herb Stratum								
Plot Size: 5	1		1	1				
Scientific Name		% Cover	Dominant	Indicator Status				
Dennstaedtia punctilobula Vaccinium corymbosum		30	YES YES	UPL FACW				
Vaccinium angustifolium		15 5	NO	FACU				
	Total Cover:	50	1	•				
Woody Vine Stratum								
Plot Size: 30								
Scientific Name	1	% Cover	Dominant	Indicator Status				
Colonial Paris		,0 OOVEI	Dominant	maioator Status				
	Total Cover:							
	T							
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:						
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of	f:	Multiply by:					
That Ale OBL, I ACW, OI I AC.	OBL Species:	<u>5</u>	x 1 = <u>5</u>					
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	<u>15</u>	x 2 = <u>30</u>					
Species Acioss Ali Strata.	FAC Species:	<u>60</u>	x 3 = <u>180</u>					
Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)	FACU Species:	<u>15</u>	x 4 = <u>60</u>					
That Ale OBL, I ACW, OI I AC.	UPL Species:	<u>50</u>	x 5 = <u>250</u>					
	Column Totals:	<u>145 (A)</u>	525 (B)					
	P	Prevalence Index	= B/A = 3.62					
Hydrophytic Vegetation Indicators:								
1 - Rapid Test for Hydrophytic Vegetation								
☑ 2 - Dominance Test is > 50%								
3 - Prevalence Index is ≤ 3.0	Hydrophytic Vegetation Present? ✓ Yes ☐ No							
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 								
data in Nomano di dil a doparato dilodiy								
☐ Problematic Hydrophytic Vegetation¹ (Explain)								
¹Indicators of hydric soil and wetland hydrology must be								
present, unless disturbed or problematic.								
Remarks:								



T TOVIGETICE, I	1 02304								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the in	ndicator o	confirm the abse	ence of indicators.)	
Depth	Matrix		Re	dox Fe	atures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Tex	cture	Remarks
0-5	10YR 2/1	100					FINE SAN	IDY LOAM	
5-16	2.5Y 5/4	100					FINE SAN	IDY LOAM	
0 10	2.01 0/4	100					THE OAK	VD 1 EO/ (IV)	
1T 0. 0. 0		-1-4:	DM Dadward	\ 4 = 4 = ¹ = 1	00.0		0	21ti DI	Describing M Matrix
, , , , , , , , , , , , , , , , , , ,		•	<u>'</u>		<u> </u>		or Coated Grains.		=Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess otl	herwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)			olyval 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		IV.	ILKA	1496)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		П	hin Da	ark Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	=	-	ed Matrix (I				urface (S9) (LRR K, L)
	k Surface (A12)	,	_		Dark Surfa			_	nese Masses (F12) (LRR K, L, R)
_	ıcky Mineral (S1)		_			ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)			•	Depressio	` ,		_	. , , , , , ,
			ш .	CUUX	Depressio	113 (1 0)		_	ic (TA6) (MLRA 144A, 145, 149B)
_								_	Material (F21)
	Matrix (S6)							= '	w Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	(149B)					☐ Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ss disturbed or pro	blematic.	
Remarks:								Hydric Soil Prese	ent? ☐ Yes ☑ No
rtomanto.									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland	?	No Unknown
General Comm	ents:								





NORTH



WETLAND DETERMINATION FORM - Northcen	ntral and Nor	theast Region					
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐ Tra	ansmission Line	☐ Other					
Project/Site: NED Milepost: 1857.2 County:	Middlesex	Date:	06/04/2015				
Applicant/Owner: Kinder Morgan State: MA	A Sampl	ing Point: DR-D-W00	06-PFO				
Investigators: TT JW Quad Name: Lowell Township:	Dracut	3					
Logbook No.: 2015-1 Logbook Pg.: 26 Tract: 5358							
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave C	Convex 🗹 None	Slope%.: 4				
Subregion (LRR): Middle Atlantic Lat: 42.681586	Long: -71.277	867	Datum: NAD83				
Soil Map Unit Name: Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stony		NWI Classification:	Not mapped				
Are climatic / hydrologic conditions on the site typical for this time of year?: ✓ Yes □	No (If no, expla	in in Remarks.)					
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circu	ımstances present?	✓ Yes ☐ No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No							
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? ✓ Yes ☐ No							
Hydric Soil Present?	s the Sampled		No				
Wetland Hydrology Present? ✓ Yes ☐ No	vithin a Wetland	d? E 163 L	140				
Field Wetland Classification: PFO							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:	Se	econdary Indicators (2 o	r more required)				
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks (B6)				
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		Drainage Patterns (B	10)				
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines (B1	6)				
✓ Saturation (A3) ☐ Marl Deposits (B15)		Dry-Season Water Ta	able (C2)				
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8	3)				
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living F	Roots (C3)	Saturation Visible on	Aerial imagery (C9)				
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		Stunted or Stressed	Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils	(C6)	Geomorphic Position	(D2)				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		Microtopographic Re	lief (D4)				
☐ Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D	5)				
Field Observations.							
Field Observations:							
Surface Water Present? ☐ Yes ☑ No Depth (inches):	Wetler d Hedr	alami Brasant?					
Water Table Present? ✓ Yes ☐ No Depth (inches): 12 Saturation Present? ✓ Yes ☐ No Depth (inches): 0	wetiand Hydr	ology Present? ✓	Yes □ No				
Saturation Present? ✓ Yes ☐ No Depth (inches): 0 (includes capillary fringe)							
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspec	ctions), if available	·):					
VEGETATION							
VEGETATION							
Tree Stratum Plot Size: 30							
Plot Size: 30 Scientific Name	% Cover	Dominant	Indicator Status				
Quercus velutina	% Cover	YES	UPL				
Acer rubrum	80	YES	FAC				
Total Cover:	100						



Providence, Ri 02904			- 17				
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Vaccinium corymbosum Pinus strobus		10 4	YES NO	FACW FACU			
Tinus su obus	Total Cover:	14	NO	17.00			
Herb Stratum							
Plot Size: 5	1		l -	l			
Scientific Name		% Cover	Dominant	Indicator Status			
Dennstaedtia puntilobula Osmundastrum cinnamomeum		25 50	YES YES	FACW FACW			
	Total Cover:	75	1	'			
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:					
Number of Dominant Species	Total % Cover of	of:	Multiply by:				
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	<u>85</u>	x 2 = <u>170</u>				
Species Across All Strata: 5 (B)	FAC Species:	<u>80</u>	x 3 = <u>240</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)	FACU Species:	<u>4</u>	x 4 = <u>16</u>				
That the obe, then, or the	UPL Species:	<u>20</u>	x 5 = <u>100</u>				
	Column Totals:	189 (A)	<u>526 (B)</u>				
	F	Prevalence Index =	$= B/A = \underline{2.78}$				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
☑ 2 - Dominance Test is > 50%							
☑ 3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☑ Yes ☐ No						
data in Remarks or on a separate sheet)							
Problematic Hydrophytic Vegetation¹ (Explain)							
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
present, unless disturbed or problematic.							
Remarks:							



SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Re	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-6	10YR 2/1	100					FINE SANI	DY LOAM	
6-14	5YR 3/2	90	7.5YR 4/6	10	С	М	LOA	AM	
**	· · · · · · · · · · · · · · · · · · ·	•	·				or Coated Grains.		Pore Lining, M=Matrix
-		cable t	o all LRR's, unle			-			oblematic Hydric Soils ³ :
Histosol (A1)			olyvalı ILRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
= '	pedon (A2)				,				e Redox (A16) (LRR K, L, R)
☐ Black Hist			П 1	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			-	-		(LRR K, L)	_	e (S7) (LRR K, L, M)
_	Layers (A5)			-	Gleyed Ma			☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1			d Matrix (I				urface (S9) (LRR K, L)
	k Surface (A12)		_		Dark Surfa				ese Masses (F12) (LRR K, L, R)
=	ucky Mineral (S1)		_	-		ırface (F7)			oodplain Soils (F19) (MLRA 149B)
: _	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)		_	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re									Material (F21)
	Matrix (S6)							_ '	v Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	in in Remarks)
3Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	elematic.	
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No
Description of Wetland Quali	Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: ☐ High ☑ Moderate ☐ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown								
General Comm									





SE



WETLAND DETERMINATION FORM - N	Northcen	ntral and No	ortheast Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	☐ Tra	ansmission Line	Other	
Project/Site: NED Milepost: 13687.4	County:	Middlesex	Date:	04/22/2015
Applicant/Owner: Kinder Morgan	State: M	A Samp	oling Point: DR-G-W0	05-PFO
Investigators: NF CM Quad Name: Lowell	Township:	Dracut		
Logbook No.: 2015-1 Logbook Pg.: 105 Tract: 4907	<u> </u>			
Landform (hillslope, terrace, etc.): Slope - toe Local Re	elief: 🗹	Concave	Convex None	Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.681179		Long: -71.28	1005	Datum: NAD83
Soil Map Unit Name: Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slo	pes		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	1 Yes □	No (If no, exp	lain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	☑ No	- Are "Normal" Circ	cumstances present?	✓ Yes □ No
	☑ No		·	
Are vegetation Soil of Flydrology hattirally problematics	V NO			
SUMMARY OF FINDINGS - Attach site map showing sampling	ng point lo	ocations, tra	nsects, important	features, etc.
Hydrophytic Vegetation Present?				
Hydric Soil Present? ☑ Yes ☐ No	Is w	s the Sampled vithin a Wetlar	lArea nd? ☑ Yes □	No
Wetland Hydrology Present? ☑ Yes ☐ No	•	vitiliii a vvetiai	IG:	
Field Wetland Classification: PFO				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		<u> </u>	Secondary Indicators (2 of	or more required)
Primary Indicators (minimum of one required; check all that apply)			☐ Surface Soil Cracks	(B6)
☑ Surface Water (A1) ☐ Water-Stained Leaves (F	B9)	[☐ Drainage Patterns (E	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines (B1	6)
✓ Saturation (A3)		[☐ Dry-Season Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor ((C1)	[☐ Crayfish Burrows (C	8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	along Living f	Roots (C3)	Saturation Visible or	Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	on (C4)	Γ	☐ Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	n Tilled Soils	(C6)	Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		Γ	Shallow Aquitard (D:	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remar	ks)	Γ	☐ Microtopographic Re	elief (D4)
Sparsely Vegetated Concave Surface (B8)		Γ	FAC-Neutral Test (D	95)
Field Observations:				
Surface Water Present?				
Water Table Present? ☐ Yes ☑ No Depth (inches):		Wetland Hyd	drology Present?	Vac □ No
Saturation Present?			V	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	evious inspe	ctions), if availab	le):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus		10	YES	FACU
Acer rubrum 	otal Cover:	35 45	YES	FAC



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Vaccinium corymbosum		15	YES	FACW
	Total Cover:	15		
Herb Stratum				
Plot Size: 5				
Scientific Name	ĺ	% Cover	Dominant	Indicator Status
Onoclea sensibilis		5	YES	FACW
Onociea sensibilis	Total Cover:	5	11.5	I ACW
Washi Vina Chrahim	Total Cover.	<u> </u>		
Woody Vine Stratum Plot Size: 30				
	1	0/ 0		l
Scientific Name		% Cover	Dominant	Indicator Status
	T / 10			
	Total Cover:			
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of		Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species:	<u>20</u>	x 2 = <u>40</u>	
	FAC Species:	<u>35</u>	x 3 = <u>105</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)	FACU Species:	<u>10</u>	x 4 = <u>40</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>65 (A)</u>	<u>185 (B)</u>	
	F	Prevalence Index =	= B/A = <u>2.85</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☑ Yes □	7 No.
data in Remarks or on a separate sheet)	nyaropnyaro t	ogotation i rocci	🗹 les L	1 140
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Pomorko:				
Remarks:				



SOIL																		
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the ir	ndicator o	r confirm	the absen	nce of	indicato	ors.)						
Depth (inches)	Matrix			Re	dox Fe	atures			T								wl.c	
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Text	ure						ema	ikS	
0-10	10YR 3/1	95	7.5YR	4/6	5	С	М		SILT L	OAM								
¹Type: C=Cond	centration, D=De	epletion	n, RM=Re	duced	Matrix,	CS=Cov	ered Sand	or Coated	d Grains.	2	ocation:	PL=F	Pore I	Lining	, M=l	Matr	ix	
Hydric Soil Inc	licators: (Applic	cable	to all LRR'	s, unl	ess otl	nerwise n	oted.)			Indi	cators fo	or Pro	blen	natic	Hydri	c Sc	ils³:	
Black Hist Hydrogen Stratified I Depleted Thick Dari Sandy Mt Sandy Gle Sandy Re Stripped I Dark Surf	bedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surfactor (A12) icky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R.	, MLR/	A 149B) and wetland	d hydr	MLŔA 1 Thin Da Loamy Loamy Deplete Redox I Deplete Redox I	49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I) Dark Surfa d Dark Su Depressio	F3) ace (F6) urface (F7) ons (F8)	R R, MLRA	A 149B) ed or prob		2 cm Mu Coast P 5 cm Mu Dark Su Polyvalu Thin Dar Iron-Mar Piedmor Mesic S Red Par Very Sh: Other (E	rairie ucky F rface ue Bel rk Sur ngane nt Floo podic eent M allow	Reddo (S7) (S7) (S7) (S7) (S7) (S7) (S7) (S7)	ox (A1 or Pea (LRR (LRR (S9) (assessin Soi) (ML Surfa Remar	6) (LF (S3) K, L, E (S8) (LRR (F12) (F12) (F14) (F14) (T14) (T14) (T15)	RR K) (LR M)) (LR K, L) (LF E) (LF	R K, R K, R K, 145	R) L, L, R) L) C, L, R) A 149B)
Remarks:	Habitat Characte	ristics,	Aquatic D	iversity	y or Ge	neral Con	nments:											
Wetland Qualit	y: High	$\overline{\checkmark}$	Moderate		Low			Isolated	Wetland?	· □] Yes	V	No		Unk	know	'n	
General Comm	ents:																	





NORTH



WETLAND DETERMINATION FORM - Nor	thcen	tral and No	ortheast Region			
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	☐ Tra	nsmission Line	Other			
Project/Site: NED Milepost: 13736.3 Cou	unty:	Middlesex	Date:	04/22/2015		
Applicant/Owner: Kinder Morgan Stat	te: MA	A Sam	pling Point: DR-G-W0	005-UPL		
Investigators: NF CM Quad Name: Lowell Tow	vnship:	Dracut				
Logbook No.: 2015-1 Logbook Pg.: 106 Tract: 4907						
Landform (hillslope, terrace, etc.): Hilltop Local Relief:		Concave 🗹	Convex None	Slope%.: 3		
Subregion (LRR): Middle Atlantic Lat: 42.681204		Long: -71.28	31339	Datum: NAD83		
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8 percent slopes, extremely sto	ony		NWI Classification:	Not mapped		
Are climatic / hydrologic conditions on the site typical for this time of year?:	es 🗖	No (If no, exp	lain in Remarks.)			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No A	Are "Normal" Cir	cumstances present?	✓ Yes ☐ No		
	No					
SUMMARY OF FINDINGS - Attach site map showing sampling p	oint lo	ocations, tra	nsects, important	features, etc.		
Hydrophytic Vegetation Present? ☐ Yes ☑ No			-			
Hydric Soil Present? ✓ Yes ☐ No	Is	s the Sampled ithin a Wetla	l Area □ Yes ☑	∐ No		
Wetland Hydrology Present? ☐ Yes ☑ No	W	itnin a wetiai	nd? — 199 —			
Field Wetland Classification: UPLAND PLOT						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators (2	or more required)		
			☐ Surface Soil Cracks			
Primary Indicators (minimum of one required; check all that apply)			☐ Drainage Patterns (
Unitate visite (A1) Water-district Leaves (B3)						
High Water Table (A2) Aquatic Fauna (B13) And Deposits (B45)			☐ Dry-Season Water ⁻	•		
☐ Saturation (A3) ☐ Marl Deposits (B15) ☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			☐ Crayfish Burrows (C			
	a Livina E			n Aerial imagery (C9)		
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along ☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	_	(00)	Stunted or Stressed			
Algal Mat or Crust (B4) Recent Iron Reduction in Tille	,	Coomambia Basisian (D2)				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	30 00110 ([☐ Shallow Aquitard (D	3)		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		I		elief (D4)		
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D5)		
Field Observations:						
Surface Water Present? Yes No Depth (inches):		147.41	Il			
Water Table Present? ☐ Yes ☑ No Depth (inches):		wetland Hyd	drology Present? □	Yes ☑ No		
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)			_			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	us inspec	ctions), if availab	ole):			
VEGETATION						
Tree Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
Pinus strobus Acer rubrum		25 25	YES YES	FACU FAC		
Total (Cover:	50 50	163	1 AC		
Total (



Pinus strobus Total Cover: 15 Herb Stratum Plot Size: 5 Scientific Name	Pious Size: 15 Scientific Name	Providence, Ri 02904							
Scientific Name	Scientific Name Scientifi	Sapling/Shrub Stratum							
Pinus strabus	15	Plot Size: 15							
Herb Stratum	Piet Stratum	Scientific Name		% Cover	Dominant	Indicator Status			
Pilot Size: 5 Scientific Name	Piot Size: 5 Scientific Name	Pinus strobus		15	YES	FACU			
Plot Size: 5 Scientific Name	Piot Size: 5 Scientific Name		Total Cover:	15		•			
Scientific Name	Scientific Name	Herb Stratum							
Scientific Name	Scientific Name	Plot Size: 5							
Total Cover: 10 Total Cov	Total Cover: 10 Total Cov			% Cover	Dominant	Indicator Status			
Total Cover: 10	Total Cover: 10								
Plot Size: 30 Scientific Name % Cover Dominant Indicator State	Piot Size: 30 Scientific Name % Cover Dominant Indicator Status	7. 7. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4.	Total Cover:						
Plot Size: 30 Scientific Name	Piot Size: 30 Scientific Name % Cover Dominant Indicator Status	Woody Vine Stratum							
Total Cover: Dominance Test Worksheet: Prevalence Index Worksheet:	Total Cover: Dominance Test Worksheet: Number of Dominant Species Total % Cover of: Multiply by: OBL Species: 0								
Total Cover: Dominance Test Worksheet: Prevalence Index Worksheet:	Total Cover: Dominance Test Worksheet: Number of Dominant Species Total % Cover of: Multiply by: OBL Species: 0	Scientific Name		% Cover	Dominant	Indicator Status			
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total % Cover of: Multiply by: Total Number of Dominant Species Across All Strata: 4 (B) FACW Species: 0 x 2 = 0 FAC Species: 25 x 3 = 75 FAC Uspecies: 50 x 4 = 200 UPL Species: 0 x 5 = 0 Column Totals: 75 (A) 275 (B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes No Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) 1 (A) Total % Cover of: OBL Species: 0 x1 = 0 OBL Species: 0 x2 = 0 0 x 1 = 0 FACW Species: 1								
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Total % Cover of: 0	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		Total Cover:		I	I			
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Total % Cover of: 0	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Dominance Test Worksheet:	Prevalence Inc	lex Worksheet					
That Are OBL, FACW, or FAC: 1(A) OBL Species: 0 x1 = 0 FACW Species: 0 x2 = 0 FAC Species: 25 x3 = 75 FACU Species: 50 x4 = 200 UPL Species: 0 x5 = 0 Column Totals: 75 (A) 275 (B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Indicators indicators of hydric soil and wetland hydrology must be	That Are OBL, FACW, or FAC: 1(A) OBL Species: 0 x1 = 0 FACW Species: 0 x2 = 0 FACW Species: 25 x3 = 75 Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Number of Dominant Species			Multiply by				
Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) FAC Species: 25	Total Number of Dominant Species Across All Strata: 4 (B) FACW Species: 0 x2 = 0 FAC Species: 25 x3 = 75 FACU Species: 50 x4 = 200 UPL Species: 0 x5 = 0 Column Totals: 75 (A) 275 (B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation¹ (Explain) Hydrophytic Vegetation Present? Yes No	That Are OBL, FACW, or FAC: 1 (A)							
Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) FAC Species: 50	Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index = B/A = 200 UPL Species: 0 x 4 = 200 UPL Species: 0 x 5 = 0 Column Totals: 75 (A) 275 (B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total Number of Dominant	1						
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) FACU Species: 50 x 4 = 200 UPL Species: 0 x 5 = 0 Column Totals: 75 (A) 275 (B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes No No Indicators of hydric soil and wetland hydrology must be	Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B) FACU Species: 0								
That Are OBL, FACW, or FAC: UPL Species: 0	That Are OBL, FACW, or FAC: UPL Species: Q x 5 = Q Column Totals: 75 (A) 275 (B) Prevalence Index = B/A = 3.67		1						
Column Totals: 75 (A) 275 (B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators:	Column Totals: 75 (A) 275 (B) Prevalence Index = B/A = 3.67 Hydrophytic Vegetation Indicators: □ 1 - Rapid Test for Hydrophytic Vegetation □ 2 - Dominance Test is > 50% □ 3 - Prevalence Index is ≤ 3.0 □ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Yes ☑ No ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	That Are OBL, FACW, or FAC: 25 (A/B)	1						
Hydrophytic Vegetation Indicators:	Hydrophytic Vegetation Indicators:								
Hydrophytic Vegetation Indicators:	Hydrophytic Vegetation Indicators:								
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes ✓ No Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be	 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes ✓ No 	H. Level, G. Wessterfer, L. Perter	'	Tevalence index	<u> </u>				
□ 2 - Dominance Test is > 50% □ 3 - Prevalence Index is ≤ 3.0 □ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) □ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be	2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?								
3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?	3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?								
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes V No Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Yes No Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.								
data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					_			
☐ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be	Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Vegetation Present? ☐ Yes ☑ No						
¹Indicators of hydric soil and wetland hydrology must be	¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.								
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	present, unless disturbed or problematic.	☐ Problematic Hydrophytic Vegetation¹ (Explain)							
		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
	Remarks:								
Remarks:		Remarks:							



SOIL																
Profile Descrip	tion: (Describe	the d	epth need	ed to d	docum	ent the in	ndicator o	r confirm	he absen	ce of	indicators)				
Depth (inches)	Matrix			Red	dox Fe	atures			Textu	ırc				D.	mark	c
(IIICHES)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Texic	ure					IIIaik	5
0-18	10YR 4/1	100							SILT LO	OAM						
¹Type: C=Cond	entration, D=De	pletion	n, RM=Red	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2	ocation: PL	.=Pore	 Lining	, M=N		
Hydric Soil Ind	icators: (Applic	cable 1	to all LRR'	s, unle	ess oth	nerwise n	oted.)			Indi	cators for F	roblen	natic I	Hydric	Soil	s³:
☐ Histosol (A	A1)			_	,		Surface (S	8) (LRR R			2 cm Muck	(A10) (LRR F	(, L, Μ	LRA	149B)
☐ Histic Epip	edon (A2)			N	1LRA 1	49B)					Coast Prair	ie Redo)х (A1	6) (LR	RK,	L, R)
■ Black Hist	ic (A3)			□ т	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)		5 cm Muck	Peat o	or Pea	t (S3)	(LRR	. K, L, R)
☐ Hydrogen	Sulfide (A4)				oamy I	Mucky Mir	neral (F1)	(LRR K, L)			Dark Surface	ce (S7)	(LRR	K, L, 1	J)	
☐ Stratified I	ayers (A5)				oamy (Gleyed Ma	atrix (F2)				Polyvalue E	Below S	urface	(S8)	(LRR	K, L)
☐ Depleted I	Below Dark Surfa	ace (A	11)		eplete	d Matrix (I	F3)				Thin Dark S	Surface	(S9) (LRR K	(, L)	
☐ Thick Dark	Surface (A12)			☐ R	ledox [Dark Surfa	ace (F6)				Iron-Manga	nese M	lasses	(F12)	(LRF	₹ K, L, R)
☐ Sandy Mu	cky Mineral (S1)				eplete	d Dark Su	ırface (F7)				Piedmont F	loodpla	in Soi	ls (F19)) (ML	_RA 149B)
	eyed Matrix (S4)				Redox [Depressio	ns (F8)				Mesic Spoo	lic (TA6) (MLI	RA 14	4A, 1	45, 149B)
☐ Sandy Re											Red Parent					
☐ Stripped N	` '										Very Shallo				12)	
_	ace (S7) (LRR R		•								Other (Expl	ain in R	temarl	ks)		
³ Indicators of h	ydrophytic veget	tation a	and wetland	d hydro	ology n	nust be pr	esent, unle	ess disturb	ed or probl	lemat	ic.					
Restrictive Lay	er Present?		Yes √	No	□ ∪	nknown			I	Hydri	c Soil Pres	ent?	Ø	Yes		No
Remarks:																
Description of I	Habitat Characte	ristics,	Aquatic Di	iversity	or Ge	neral Com	nments:									
Wetland Qualit	y: 🔲 High	п	Moderate	П	Low			laalatad	Wetland?	_] Yes [1 No		Unkr	20110	
		ш '	viouerate	Ц	LOW			isolateu	welland:		163] 140		OTIKI		
General Comm	ents:															





NORTH



WETLAND DETERMINATION FORM - No	rthcent	tral and No	ortheast Region	
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility	☐ Tran	nsmission Line	Other	
Project/Site: NED Milepost: 14004.8 Co	ounty:	Middlesex	Date:	04/22/2015
Applicant/Owner: Kinder Morgan Sta	ate: MA	Sam	pling Point: DR-G-W0	06-PFO
Investigators: NF CM Quad Name: Lowell To	wnship:	Dracut		
Logbook No.: 2015-1 Logbook Pg.: 109 Tract: 4907				
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	f: 🔲 (Concave 🗹	Convex None	Slope%.: 1
Subregion (LRR): Middle Atlantic Lat: 42.680431	L	_ong: -71.28	31614	Datum: NAD83
Soil Map Unit Name: Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes	;		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes 🗖	No (If no, exp	lain in Remarks.)	
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No A	re "Normal" Cir	cumstances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ✓	No		·	
			_	
SUMMARY OF FINDINGS - Attach site map showing sampling p	point lo	cations, tra	nsects, important	features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	le	the Sampled	l Δroa	
Hydric Soil Present? ☑ Yes ☐ No	wi	ithin a Wetla	nd? ✓ Yes □] No
Wetland Hydrology Present?				
Field Wetland Classification: PFO				
Remarks: USE DR-G-W005-UPL AS REPRESENTATIVE UPLAND PLOT				
HYDROLOGY				
Wetland Hydrology Indicators:		<u> </u>	Secondary Indicators (2	or more required)
Primary Indicators (minimum of one required; check all that apply)		[☐ Surface Soil Cracks	(B6)
☑ Surface Water (A1) ☐ Water-Stained Leaves (B9)		[□ Drainage Patterns (I	310)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		[Moss Trim Lines (B1	16)
☐ Saturation (A3) ☐ Marl Deposits (B15)		[☐ Dry-Season Water T	able (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		[Crayfish Burrows (C	8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	ng Living R	oots (C3)	Saturation Visible or	n Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C	C4)	I	Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Till	led Soils (C6) [✓ Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		[☐ Shallow Aquitard (D	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		[elief (D4)
Sparsely Vegetated Concave Surface (B8)		I	FAC-Neutral Test (D	05)
Field Observations:				
Surface Water Present? ✓ Yes No Depth (inches): 3				
Water Table Present? ☐ Yes ☑ No Depth (inches):		Wetland Hyd	drology Present?	
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)			\square	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previo	ous inspect	tions), if availab	ole):	
VEGETATION				
Tree Stratum				
Plot Size: 30	1		1	1
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Fraxinus pennsylvanica		20 10	YES YES	FAC FACW
	Cover:	30	1	1



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fraxinus pennsylvanica		10	YES	FACW
Pinus strobus	Total Cover:	10 20	YES	FACU
	Total Cover.	20		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Onoclea sensibilis		15 5	YES NO	FACW OBL
Carex stricta Vaccinium corymbosum		10	YES	FACW
	Total Cover:	30		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		'	'
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>5</u>	x 1 = <u>5</u>	
Total Number of Dominant	FACW Species:	<u>45</u>	x 2 = <u>90</u>	
Species Across All Strata: 6 (B)	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)	FACU Species:	<u>10</u>	x 4 = <u>40</u>	
That Are OBL, FACW, or FAC: 83 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	80 (A)	<u>195 (B)</u>	
	F	Prevalence Index =	= B/A = <u>2.44</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
	Hydronbytic V	agetation Presen	.+2 □ Voc □	7 No
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	nyurophytic v	egetation Presen	it? ☑ Yes [□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
Nemaro.				



ption: (Describe	the d	epth needed to	docum	ent the ir	dicator o	r confirm the abser	nce of indicators.)	
Matrix		Re	dox Fe	atures				6
Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ure	Remarks
7.5YR 3/2	95	10YR 4/6	5	С	М	SILT L	OAM	
7.5YR 6/1	95	10YR 4/6	5	С	М	SILT L	OAM	
centration, D=De	epletion	I n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
dicators: (Appli	cable 1	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pi	oblematic Hydric Soils³:
						8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
pedon (A2)			ILRA 1	49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
tic (A3)		□ ⊺	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
Below Dark Surfa	ace (A	I1) 🗹 🗆	eplete	d Matrix (F3)		☐ Thin Dark St	urface (S9) (LRR K, L)
k Surface (A12)		□ R	Redox [Dark Surfa	ce (F6)		☐ Iron-Mangar	iese Masses (F12) (LRR K, L, R)
ucky Mineral (S1))		eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
edox (S5)							☐ Red Parent	Material (F21)
Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
face (S7) (LRR R	, MLR	A 149B)					Other (Expla	in in Remarks)
hydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	olematic.	
							Hydric Soil Prese	nt? ☑ Yes □ No
Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
ty: High	7 1	Moderate	Low			Isolated Wetland?	✓ Yes 🗖	No Unknown
nents:								
	Matrix Color (moist) 7.5YR 3/2 7.5YR 6/1 7.5YR 6/1 7.5YR 6/1 Coentration, D=Dedicators: (Applia (A1)) Expedicators: (Applia (A2)) Expedicators: (A3) Expedicators: (A2) Expedicators: (A3) Expedicators: (A4) Expedicators: (A4) Expedicators: (A2) Expedicators: (A4) Expedicators: (A4) Expedicators: (A4) Expedicators: (A5) Expedicators: (A	Matrix Color (moist)	Matrix Recorded Color (moist) 7.5YR 3/2 95 10YR 4/6 7.5YR 6/1 95 10YR 4/6 7.5YR 6/1 95 10YR 4/6 10YR 4/6	Matrix Redox Fe Color (moist) % Color (moist) % 7.5YR 3/2 95 10YR 4/6 5 7.5YR 6/1 95 10YR 4/6 5 Coentration, D=Depletion, RM=Reduced Matrix, dicators: (Applicable to all LRR's, unless other (A1) Polyvalum (MLRA 1) Spedon (A2) Stic (A3) Thin Date (A3) Loamy (MLRA 1) Eavers (A5) Loamy (MLRA 1) Below Dark Surface (A11) Deplete (A12) Redox (A13) Surface (A12) Redox (A14) Surface (A12) Redox (A15) Surface (S7) (LRR R, MLRA 149B) Surface (S7) (LRR R, M	Matrix Redox Features Color (moist) % Color (moist) % Type¹ 7.5YR 3/2 95 10YR 4/6 5 C 7.5YR 6/1 95 10YR 4/6 5 C Centration, D=Depletion, RM=Reduced Matrix, CS=Cover dicators: (Applicable to all LRR's, unless otherwise in the color of	Matrix Redox Features Color (moist) % Color (moist) % Type¹ Loc² 7.5YR 3/2 95 10YR 4/6 5 C M 7.5YR 6/1 95 10YR 4/6 5 C M centration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand dicators: (Applicable to all LRR's, unless otherwise noted.) A1) Polyvalue Below Surface (SMLRA 149B) A2) Thin Dark Surface (S9) (LR of Matrix (F2)) Below Dark Surface (A11) Depleted Matrix (F2) Below Dark Surface (A11) Pelpleted Matrix (F3) Redox Dark Surface (F6) ucky Mineral (S1) Depleted Dark Surface (F7) leyed Matrix (S4) Redox Depressions (F8) edox (S5) Matrix (S6) face (S7) (LRR R, MLRA 149B) hydrophytic vegetation and wetland hydrology must be present, unleading the present? Habitat Characteristics, Aquatic Diversity or General Comments: ity: High Moderate Low	Matrix Redox Features Color (moist) % Color (moist) % Type¹ Loc² 7.5YR 3/2 95 10YR 4/6 5 C M SILT L 7.5YR 6/1 95 10YR 4/6 5 C M SILT L Centration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. Cicators: (Applicable to all LRR's, unless otherwise noted.) A1)	Color (moist)





WEST



WETLAND DETERMINATION FORM - Northce	entral and No	ortheast Regio	n
☐ Centerline ☐ Re-Route ☐ Access Road ☑ Ancillary Facility ☐ T	Transmission Line	☐ Other	
Project/Site: NED Milepost: 14041.4 County:	Middlesex	Date	e: 04/22/2015
	MA Sam		W004-PFO
Investigators: NF CM Quad Name: Lowell Township		F 9	
Logbook No.: 2015-1 Logbook Pg.: 101 Tract: 4907			
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave	Convex None	e Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.679914	Long: -71.28	30960	Datum: NAD83
Soil Map Unit Name: Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes		NWI Classification	: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, exp	lain in Remarks.)	
Are Vegetation Soil or Hydrology significantly disturbed? No	Are "Normal" Cir	cumstances present?	✓ Yes □ No
Are Vegetation Soil or Hydrology naturally problematic? No			
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations tra	neacte importa	nt features etc
Hydrophytic Vegetation Present? ✓ Yes ☐ No	iocations, tra	msects, importa	Tit reatures, etc.
	Is the Sampled	d Area	□ No
Hydric Soil Present? ✓ Yes ☐ No	within a Wetla		□ No
Wetland Hydrology Present? Yes No Field Wetland Classification: PFO			
Remarks:			
remans.			
HYDROLOGY			
Wetland Hydrology Indicators:	:	Secondary Indicators	(2 or more required)
Primary Indicators (minimum of one required; check all that apply)	ļ	☐ Surface Soil Crac	ks (B6)
✓ Surface Water (A1) ☐ Water-Stained Leaves (B9)	ļ	□ Drainage Patterns	s (B10)
High Water Table (A2) Aquatic Fauna (B13)	I	Moss Trim Lines ((B16)
✓ Saturation (A3)	1	□ Dry-Season Wate	r Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	1	Crayfish Burrows	(C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	a Roots (C3)	☐ Saturation Visible	on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		Stunted or Stress	ed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soil	Is (C6)	Geomorphic Posit	tion (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	` ′	☐ Shallow Aquitard	(D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	I		Relief (D4)
□ Sparsely Vegetated Concave Surface (B8)	I	FAC-Neutral Test	(D5)
Field Observations:			
Surface Water Present? Yes No Depth (inches): 3			
Water Table Present?	Wetland Hy	drology Present? រុ	☑ Yes 🔲 No
Saturation Present?		-	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	pections), if availab	ole):	
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Acer rubrum	25	YES	FAC
Pinus strobus	25	YES	FACU
Total Cover:	: 50		



Providence, Ri 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Vaccinium corymbosum		15	YES	FACW
	Total Cover:	15	1	
Lland Charakters				
Herb Stratum				
Plot Size: 5	ĺ		1	l
Scientific Name		% Cover	Dominant	Indicator Status
Vaccinium corymbosum		15	YES	FACW
	Total Cover:	15		
Woody Vine Stratum				
Plot Size: 30			1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species:	30	x 2 = <u>60</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>25</u>	x 3 = <u>75</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)	FACU Species:	<u>25</u>	x 4 = <u>100</u>	
That Are OBL, FACW, or FAC: 75 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	80 (A)	235 (B)	
	F	Prevalence Index :	= B/A = <u>2.94</u>	
Hydrophytic Vegetation Indicators:				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☑ Yes 🗆] No
·				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



Topth Matrix Redox Features Texture Remarks O-10	TOVIGOTICO, I	(1 02304								
Depth	SOIL									
Color (moist) % Color (moist) % Type! Loc2 Texture Remarks Color (moist) % Color (moist) % Type! Loc2 Color (moist) % Type! Loca Color (Moist) (All (Rick Loca Color (rofile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	nce of indicators.)	
O-10	Depth	Matrix		Re	dox Fe	atures			-	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. CS=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. CS=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. CS=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. CS=Coated Cased (A16) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (CS=Coated Grains. CS=Coated Cased G	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ture	Remarks
ydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)	0-10	10YR 4/1	95	10YR 4/6	5	С	М	SILT L	OAM	
ydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)										
Histosol (A1)	Гуре: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	, CS=Cov	/ered Sand	I or Coated Grains.	²Location: PL=	Pore Lining, M=Matrix
Histic Epipedon (A2)	lydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess otl	herwise n	noted.)		Indicators for Pi	roblematic Hydric Soils ³ :
Histic Epipedon (A2) Histic Epipedon (A2)	Histosol (/	A1)			Polyval	ue Below	Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black Histic (A3)		pedon (A2)			/ILRA 1	149B)	•		☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
Stratified Layers (A5)	_			П 1	hin Da	ark Surfac	e (S9) (LR	R R, MLRA 149B)		
Depleted Below Dark Surface (A11)	_ ☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mi	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
Thick Dark Surface (A12)	Stratified I	Layers (A5)			oamy	Gleyed M	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
Sandy Mucky Mineral (S1)	Depleted	Below Dark Surfa	ace (A1	I1) 🗹 🖸	Deplete	ed Matrix ((F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
Sandy Gleyed Matrix (S4)	Thick Dar	k Surface (A12)		□ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
Sandy Redox (S5)	☐ Sandy Mu	ucky Mineral (S1)			Deplete	ed Dark Su	urface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
Stripped Matrix (S6)	☐ Sandy Gle	eyed Matrix (S4)		☐ F	Redox	Depressio	ons (F8)			c (TA6) (MLRA 144A, 145, 149B)
Dark Surface (S7) (LRR R, MLRA 149B)	□ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
And Comments: Comments Comme	☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
RAGI	Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
RAGI AN 0 0 Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Vetland Quality:	Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	resent, unle	ess disturbed or prob	olematic.	
PAN 0 Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Vetland Quality:	estrictive Lay	er Present?	<u> </u>	Yes ☐ No		Jnknown				
Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Vetland Quality:									Hydric Soil Prese	ent? ☑ Yes 🗆 No
Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Vetland Quality:										
Description of Habitat Characteristics, Aquatic Diversity or General Comments: Vetland Quality:										
	·			_		neral Con	nments:	Isolated Wetland?	? ☑ Yes □	No □ Unknown
eneral Comments:	vollaria Qualit	.y. 🔲 1g	•	viouoidio 🔟	2011			iooiatoa Wottaria		THE CHIMICINII





ΝE



WE-	ΓLAND	DE1	ΓERN	IINATI	ON FORM -	Northce	entral	and No	ortheast	Region		
☐ Centerline ☐ Re-Ro	ute _	Acce	ss Roa	nd 🗹	Ancillary Facility	у 🗖 Т	ransmiss	sion Line	☐ Oth	er		
Project/Site: NED				Milepost:	14089.1	County:	Mi	ddlesex		Date:	04/22/201	5
Applicant/Owner: Kinder Mor	gan		'			State: I	MA	Sam	pling Point	DR-G-W	004-UPL	
Investigators: NF CM	(Quad N	lame:	Lowell		Township	: Dra	acut				
Logbook No.: 2015-1	Logi	ook Po	g.: 102		Tract: 4907							
Landform (hillslope, terrace, et	c.):	Slope	- mid		Local I	Relief:	Conca	ave 🗹	Convex	☐ None	Slope%.:	5
Subregion (LRR): Middle	Atlantic			Lat	42.680037		Long:	-71.28	81449		Datum: NAI	D83
Soil Map Unit Name: Cha	Iton-Holli	s-Rock	outcro	complex	, 3 to 8 percent s	slopes			NWI Cla	assification:	Not ma	apped
Are climatic / hydrologic condit	ions on th	e site t	ypical f	or this tim	e of year?:	✓ Yes	□ No ((If no, exp	lain in Rema	arks.)		
Are Vegetation Soil	or Hy	drolog	у 🗖	significa	ntly disturbed?	☑ No	Are "No	ormal" Cir	rcumstances	present?	✓ Yes	☐ No
Are Vegetation Soil	or Hy	drolog	у 🗖	naturally	problematic?	☑ No						
SUMMARY OF FINDIN	GS - At	tach	site n	nap sho	owing sampl	ing point	locatio	ons, tra	ınsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Preser	ıt?		Yes	☑ No)		1-41-4	01-				
Hydric Soil Present?		\checkmark	Yes	☐ No)		within	Sampled a Wetla	nd?] Yes ⊡	∑ No	
Wetland Hydrology Present?			Yes	☑ No)							
Field Wetland Classification:	UPL	AND PI	LOT									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicator	s:								Secondary I	ndicators (2	or more requ	uired <u>)</u>
Primary Indicators (minimum o	one req	uired; c	heck a	ll that app	l <u>y)</u>				☐ Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)			[☐ Water	r-Stained Leaves	(B9)			☐ Drainag	je Patterns ((B10)	
☐ High Water Table (A2)			[☐ Aquat	tic Fauna (B13)				☐ Moss T	rim Lines (B	16)	
☐ Saturation (A3)			[Marl [Deposits (B15)			I	☐ Dry-Sea	ason Water	Table (C2)	
			[☐ Hydro	gen Sulfide Odor	r (C1)		I	☐ Crayfisl	n Burrows (C	C8)	
☐ Sediment Deposits (B2)			[Oxidiz	zed Rhizospheres	s along Living	g Roots ((C3)	☐ Saturat	ion Visible o	n Aerial imag	jery (C9)
☐ Drift Deposits (B3)			[Prese	ence of Reduced	Iron (C4)			☐ Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)			[Recei	nt Iron Reduction	in Tilled Soil	s (C6)			rphic Positio	, ,	
☐ Iron Deposits (B5)			[Thin I	Muck Surface (C7	7)			_	Aquitard (D	•	
☐ Inundation Visible on Aer	al Imagei	y (B7)	[Other	(Explain in Rema	arks)				pographic R		
☐ Sparsely Vegetated Cond	ave Surfa	ace (B8)						☐ FAC-Ne	eutral Test (I	D5)	
Field Observations:												
	Yes	_		Depth (inc	•							
	Yes	_		Depth (inc	•		We	tland Hy	drology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	✓	No I	Depth (inc	hes):						103 🖭	110
Remarks (Describe Recorded	Data (stre	am gag	je, mon	itoring we	ll, aerial photos, μ	previous insp	ections),	, if availab	ole):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							9	6 Cover	Do	minant	Indicate	or Status
Quercus rubra Pinus strobus						Total Com		25 25		YES YES		CN CN
						Total Cover:		50				



T TOVIGETICE, TRI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Pinus strobus Carya ovata		10 10	YES YES	FACU FACU
ounju ovalu	Total Cover:	20	120	17.00
11.1.0				
Herb Stratum				
Plot Size: 5	1	0/ 0	1 5	l
Scientific Name		% Cover	Dominant	Indicator Status
	 Total Cover:			
Woody Vine Stratum	Total Cover.			
Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
Scientific Name		76 COVEI	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 0 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species:	: <u>0</u>	x 2 = <u>0</u>	
oposios risioso i in Gilatai	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>70</u>	x 4 = <u>280</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>70 (A)</u>	280 (B)	
	F	Prevalence Index	$= B/A = \underline{4.00}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	☑ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



i ioviderice, i	(1 02304								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	nent the ir	ndicator o	r confirm the abser	nce of indicators.)	
Depth (inches)	Matrix		Re	edox Fe	atures		т	uro.	Damarka
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-10	10YR 6/2	100					SILT L	OAM	
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced	Matrix	, CS=Cov	ered Sand	or Coated Grains.	² Location: PL=l	Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, uni	ess ot	herwise n	oted.)		Indicators for Pro	oblematic Hydric Soils³:
☐ Histosol (A	A1)			Polyval	ue Below	Surface (S	8) (LRR R,	2 cm Muck (A	10) (LRR K, L, MLRA 149B)
☐ Histic Epi	pedon (A2)		l	MLRA ′	149B)			☐ Coast Prairie	Redox (A16) (LRR K, L, R)
■ Black Hist	tic (A3)			Thin Da	ark Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky F	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			Loamy	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	(S7) (LRR K, L, M)
Stratified	Layers (A5)			Loamy	Gleyed Ma	atrix (F2)		☐ Polyvalue Be	low Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	1) 🔽	Deplete	ed Matrix (F3)		☐ Thin Dark Su	rface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)			Redox	Dark Surfa	ace (F6)		☐ Iron-Mangane	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1))		Deplete	ed Dark Su	urface (F7)		☐ Piedmont Flo	odplain Soils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)			Redox	Depressio	ns (F8)		☐ Mesic Spodic	(TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent M	laterial (F21)
☐ Stripped I	Matrix (S6)							□ Very Shallow	Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Explai	n in Remarks)
3Indicators of I	nydrophytic vege	tation a	and wetland hydi	rology r	nust be pr	esent, unle	ess disturbed or prob	olematic.	
Restrictive Lay	er Present?	V	∕es □ No		Jnknown				
FRAGI								Hydric Soil Preser	nt? ☑ Yes ☐ No
PAN								•	
10							l l		
Remarks:									
Description of	Habitat Characte	eristics,	Aquatic Diversit	y or Ge	eneral Con	nments:			
Wetland Qualit	ty: 🔲 High		Moderate	Low			Isolated Wetland?	Yes 🗆	No Unknown
General Comm	onte:								
General Comin	ienis.								





EAST



WETLAND DETERMINATION FORM - Nort	thcentral	and Nor	theast Region	
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmis	ssion Line	☐ Other	
Project/Site: NED Milepost: 71855.7 Cou	inty: B	Berkshire	Date:	06/03/2015
Applicant/Owner: Kinder Morgan Stat	e: MA	Samplin	ng Point: HN-M-W0	002-PFO
Investigators: CM Quad Name: Peru Tow	nship: H	linsdale		
Logbook No.: 2 Logbook Pg.: 139 Tract: 20963				
Landform (hillslope, terrace, etc.): Stream fringe Local Relief:	☑ Conc	cave 🔲 Co	onvex None	Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.473107	Long	g: -73.1092	208	Datum: NAD83
Soil Map Unit Name: Pillsbury loam, 0 to 8 percent slopes, extremely stony			NWI Classification:	PEM1E
Are climatic / hydrologic conditions on the site typical for this time of year?:	es 🗖 No	(If no, explain	n in Remarks.)	
	No Are "N	Normal" Circur	mstances present?	✓ Yes □ No
	No		•	
Are vegetation V Soil Or Trydrology I Hattitally problematic:	140			
SUMMARY OF FINDINGS - Attach site map showing sampling po	oint locati	ions, trans	sects, important	features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No				
Hydric Soil Present? ☑ Yes ☐ No	Is the	e Sampled A n a Wetland	^{krea} ☑ Yes □] No
Wetland Hydrology Present?	Within	i a Welland	•	
Field Wetland Classification: PFO				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:		Sec	condary Indicators (2	or more required)
Primary Indicators (minimum of one required; check all that apply)			Surface Soil Cracks	(B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)			Drainage Patterns (I	B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)			Moss Trim Lines (B1	16)
✓ Saturation (A3) ☐ Marl Deposits (B15)			Dry-Season Water T	Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)			Crayfish Burrows (C	(8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along	Living Roots	(C3) □	Saturation Visible or	n Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	4)		Stunted or Stressed	Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	ed Soils (C6)		Geomorphic Position	n (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)			Shallow Aquitard (D	3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			Microtopographic Re	elief (D4)
Sparsely Vegetated Concave Surface (B8)		\square	FAC-Neutral Test (D	95)
Field Observations:				
Surface Water Present?				
Water Table Present? ☑ Yes ☐ No Depth (inches): 2	W	etland Hydro	ology Present?	
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)			\square	Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previou	s inspections	s), if available)	:	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Abies balsamea Tsuga canadensis		40 20	YES YES	FAC FACU
Betula alleghaniensis Total C	Cover.	10 70	NO NO	FAC
Total				



Providence, Ri 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Tsuga canadensis Betula alleghaniensis Abies balsamea		10 10 10	YES YES YES	FACU FAC FAC
Abies balsaillea	Total Cover:	30	123	TAC
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Carex crinita		5	YES	OBL
	Total Cover:	5	I	
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		ı	
Dominance Test Worksheet:	Prevalence Ind			
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover of		Multiply by:	
	OBL Species:	<u>5</u>	x 1 = <u>5</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species:		x 2 = <u>0</u>	
Descent of Deminent Consise	FAC Species:	<u>70</u>	x 3 = <u>210</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)	FACU Species:		x 4 = <u>120</u>	
	UPL Species:	<u>0</u>	x = 0	
	Column Totals:	<u>105 (A)</u>	<u>335 (B)</u>	
	F	Prevalence Index	= B/A = <u>3.19</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Presei	nt? ☑ Yes □] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	TOVIGOTICO, TX	1 02304								
Depth (inches)	SOIL									
Color (moist) % Color (moist) % Type* Loc² O-4 10YR 2/1 100	Profile Descrip	tion: (Describe	the d	epth needed to	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
O-4 10YR 2/1 100	Depth	Matrix		Re	dox Fe	atures				
4-14 GLEY2 5/10G 70 GLEY1 2.5N 30 C M LOAMY FINE SAND Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. *Location: Pt=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ture	Remarks
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.	0-4	10YR 2/1	100					ORGA	ANIC	
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.										
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains.	4-14	GLEY2 5/10G	70	GLEY1 2.5N	30	С	М	LOAMY FI	NE SAND	
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)										
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)	Type: C=Conc	entration, D=De	pletion	l n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	l =Pore Lining, M=Matrix
Histosol (A1)	**	· · · · · · · · · · · · · · · · · · ·		·						
Histic Epipedon (A2)		,		•			•	8) (I RR R		-
Black Histic (A3)		·					oundo (o	o) (Ertit 1t,	_	
Hydrogen Sulfide (A4) □ Loamy Mucky Mineral (F1) (LRR K, L) □ Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Polyvalue Below Surface (S8) (LRR K, L) □ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) ☑ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☑ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) **Restrictive Layer Present? □ Yes ☑ No □ Unknown **Hydric Soil Present? ☑ Yes □ No **Remarks: **Description of Habitat Characteristics, Aquatic Diversity or General Comments: **Wetland Quality: ☑ High □ Moderate □ Low Isolated Wetland? □ Yes ☑ No □ Unknown	_ ::			Пт	hin Da	ırk Surface	- (S9) (LRI	R R MIRA 149R)	_	
□ Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Polyvalue Below Surface (S8) (LRR K, L) □ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Park Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ No □ Unknown □ Hydric Soil Present? □ Yes □ No □ Unknown □ Hydric Soil Present? □ Yes □ No □ Unknown □ Hydric Soil Present? □ Yes □ No □ Unknown								•		
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ No □ Unknown □ Hydric Soil Present? □ Yes □ No □ No □ Unknown □ Hydric Soil Present? □ Yes □ No □ Unknown □ Hydric Soil Present? □ Yes □ No □ Unknown □ Hydric Soil Present? □ Yes □ No □ Unknown □ Unknown □ No □ Unknown □					-	-		LIXIX IX, L)		
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Piedmont Floodplain Soils (F19) (MLRA 149B) ☑ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☑ Sandy Redox (S5) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) ☐ Stripped Matrix (S6) ☐ Very Shallow Dark Surface (TF12) ☐ Dark Surface (S7) (LRR R, MLRA 149B) ☐ Other (Explain in Remarks) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? ☐ Yes ☑ No ☐ Unknown Hydric Soil Present? ☑ Yes ☐ No			ace (Δ1	_	-	-				
□ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? □ Yes ☑ No □ Unknown □ Hydric Soil Present? ☑ Yes □ No Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: ☑ High □ Moderate □ Low Isolated Wetland? □ Yes ☑ No □ Unknown			/A)	· —	•	•	•			
Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8) ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (TF12) ☐ Dark Surface (S7) (LRR R, MLRA 149B) ☐ Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. **Restrictive Layer Present? ☐ Yes ☑ No ☐ Unknown Hydric Soil Present? ☑ Yes ☐ No **Remarks: **Description of Habitat Characteristics, Aquatic Diversity or General Comments: **Wetland Quality: ☑ High ☐ Moderate ☐ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown				_						
Sandy Redox (S5)				_	•		` ,			
Stripped Matrix (S6)				ш.	(euox i	Depressio	115 (1 0)		_	
Dark Surface (S7) (LRR R, MLRA 149B)										
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?			MID	\ 440D\					_ ′	, ,
Restrictive Layer Present?	_			•						iin in Remarks)
Wetland Quality: ☑ High ☐ Moderate ☐ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown	Remarks:									
	Description of H	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
General Comments:	Wetland Quality	/: ☑ High	_ r	Moderate	Low			Isolated Wetland?	?	No Unknown
	Seneral Comme	ents:								

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PHOTOS	



WETLAND DETERMINATION FORM - No	orthcentral and Northeast Region						
	☐ Transmission Line ☐ Other						
Project/Site: NED Milepost: 72135.3	County: Berkshire Date: 06/03/2015						
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: HN-M-W002-PEM						
Investigators: CM Quad Name: Peru T	Township: Hinsdale						
Logbook No.: 2 Logbook Pg.: 137 Tract: 20963							
Landform (hillslope, terrace, etc.): Depression Local Relie	ef: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 0						
Subregion (LRR): Middle Atlantic Lat: 42.472444	Long: -73.108547 Datum: NAD83						
Soil Map Unit Name: Pillsbury loam, 0 to 8 percent slopes, extremely stony	NWI Classification: Not mapped						
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)						
Are Vegetation Soil or Hydrology significantly disturbed? □	No Are "Normal" Circumstances present? ☑ Yes ☐ No						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑	•						
SUMMARY OF FINDINGS - Attach site map showing sampling	noint locations transacts important features etc						
Hydrophytic Vegetation Present?							
Hydric Soil Present?	Is the Sampled Area						
Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetland? ☑ Yes ☐ No						
Field Wetland Classification: PEM							
Remarks:							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)						
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)						
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9	Drainage Patterns (B10)						
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)						
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)						
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C	1) Crayfish Burrows (C8)						
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres ald	ong Living Roots (C3) Saturation Visible on Aerial imagery (C9)						
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron	(C4) Stunted or Stressed Plants (D1)						
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in T							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)						
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks	Microtopographic Relief (D4)						
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? ☐ Yes ☑ No Depth (inches):							
Water Table Present? ✓ Yes ☐ No Depth (inches): 0	Wetland Hydrology Present?						
Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe)	✓ Yes □ No						
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):							
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name	% Cover Dominant Indicator Status						
Tot	al Cover:						



Providence, Rt 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Larix laricina Spiraea alba Acer rubrum		10 10 10	YES YES YES	FACW FACW FAC
	Total Cover:	30	I	I
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Eleocharis spp		70	NA	NONE
Osmundastrum cinnamomeum	Total Cover:	20	YES	FACW
Washin Vina Chrahum	Total Cover.	90		
Woody Vine Stratum Plot Size: 30				
Scientific Name	1	% Cover	Dominant	Indicator Status
Scientific Name		/6 COVEI	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover of	of:	Multiply by:	
	OBL Species:	<u>70</u>	x 1 = <u>70</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>40</u>	x 2 = <u>80</u>	
	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = <u>0</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>120 (A)</u>	<u>180 (B)</u>	
	F	Prevalence Index	= B/A = <u>1.50</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☑ Yes [□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				

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SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures		T4		Damada
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-36	10YR 2/1	100					ORGA	ANIC	MUCKY PEAT HISTOSOL
¹Type: C=Con	centration, D=De	pletion	, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated Grains.	²Location: PL=	Pore Lining, M=Matrix
Hydric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
Black Hist Hydrogen Stratified Depleted Thick Dar Sandy Mt Sandy Gl Sandy Gl Stripped I Dark Surf	bedon (A2) cic (A3) Sulfide (A4) Layers (A5) Below Dark Surfa k Surface (A12) ucky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	, MLRA	11)	hin Da oamy oamy deplete dedox I deplete dedox I	ark Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	e (S9) (LR neral (F1) atrix (F2) F3) ace (F6) urface (F7) nrs (F8)	ess disturbed or prob	Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark Su Iron-Mangan Piedmont Fle Mesic Spodie Red Parent I Very Shallow	A10) (LRR K, L, MLRA 149B) Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) (S7) (LRR K, L, M) Pelow Surface (S8) (LRR K, L) For Surface (S9) (LRR K, L) For Surface (S9) (LRR K, L) For Surface (S9) (LRR K, L, R) For Surface (S9) (MLRA 149B) For CTA6) (MLRA 144A, 145, 149B) For Surface (TF12) For Dark Surface (TF12) For Surface (TF12) For Surface (TF12)
HANDL E AUGER LENGTH									
Remarks: Description of Wetland Qualit		_	Aquatic Diversity	or Ge	neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No 🔲 Unknown
General Comm	ents:								





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WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 72223.7	County: Berkshire Date: 06/03/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: HN-M-W002-UPL
Investigators: CM Quad Name: Peru	Township: Hinsdale
Logbook No.: 2/3 Logbook Pg.: 136 Tract: 20963	
Landform (hillslope, terrace, etc.): Depression Local R	elief: ☑ Concave ☐ Convex ☐ None Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.472298	Long: -73.108284 Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	7 Yes ☐ No (If no, explain in Remarks.)
	□ No Are "Normal" Circumstances present? ☑ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	Is the Sampled Area
Hydric Soil Present?	within a Wetland?
Wetland Hydrology Present? Yes V No	
Field Wetland Classification: UPLAND PLOT	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	Coturation Visible on Aerial imagery (CO)
☐ Drift Deposits (B3) ☐ Presence of Reduced In	Chimted or Chronold Dignts (D4)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction is	— 0 — 1: B ::: (D0)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remai	ks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	Westernal Hydrology Pro
Water Table Present? ☐ Yes ☑ No Depth (inches): 0	Wetland Hydrology Present? ☐ Yes ☑ No
Saturation Present? ☐ Yes ☑ No Depth (inches): 0 (includes capillary fringe)	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	revious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
	otal Cover:



0 11 (0) 1 0: (1				
Sapling/Shrub Stratum				
Plot Size: 15	1		ı	ı
Scientific Name		% Cover	Dominant	Indicator Status
Rhododendron roseum		10	YES	FAC
	Total Cover:	10		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Rubus allegheniensis		40	YES	FACU
Dennstaedtia punctilobula		30	YES	UPL
	Total Cover:	70	•	•
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		I	I
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)				
Total Number of Dominant	OBL Species:	<u>0</u>	-	
Species Across All Strata: 3 (B)	FACW Species		x 2 = <u>60</u>	
Percent of Dominant Species	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
That Are OBL, FACW, or FAC: 33 (A/B)	FACU Species:		x 4 = <u>160</u>	
	UPL Species:	<u>30</u>	x 5 = <u>150</u>	
	Column Totals:	<u>110 (A)</u>	<u>400 (B)</u>	
	i	Prevalence Index	$= B/A = \underline{3.64}$	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydronbytic V	egetation Preser	nt? □ Voc □	7 No.
data in Remarks or on a separate sheet)	riyaropiiyac v	egetation Fresei	nt? ☐ Yes ⊡	∆ NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
_ , , , , , ,				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the in	dicator o	confirm t	he absen	ce of indicators.)			
Depth (inches)	Matrix		Red	lox Fe	atures			Textu	Iro		Remarks	•
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texic	ile .		Remarks	•
0-4	10YR 2/1	90	10YR 6/1	10	С	М		SANDY	LOAM			
4-8	7.5YR 4/5	100						SANDY	LOAM			
8-15	7.5YR 4/5	90	7.5YR 5/6	10	С	M		SANDY	LOAM			
¹Type: C=Cond	centration, D=De	pletion	, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining	, M=Matrix	
Hydric Soil Inc	licators: (Applic	cable t	o all LRR's, unle	ss oth	erwise n	oted.)			Indicators for Pr	oblematic	Hydric Soils	5 ³ :
Black Hist Hydrogen Stratified I Depleted I Thick Darl Sandy Mu Sandy Gle Sandy Re Stripped M	bedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surfack Surface (A12) icky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R.	, MLRA	1)	hin Da pamy (pamy (eplete edox [eplete edox [49B) rk Surface Mucky Mir Gleyed Ma d Matrix (F Dark Surfa d Dark Su Depression	e (S9) (LRi neral (F1) (atrix (F2) =3) ace (F6) rface (F7) ns (F8)	8) (LRR R, R R, MLRA LRR K, L)	d or prob	2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodie Red Parent I Very Shallow Other (Explainments.	Redox (A1 Peat or Pea (S7) (LRR elow Surface urface (S9) (ese Masses codplain Soi c (TA6) (ML Material (F2 Dark Surfa in in Remar	6) (LRR K, L at (S3) (LRR K, L, M) e (S8) (LRR LRR K, L) s (F12) (LRR dls (F19) (ML RA 144A, 14 1) ace (TF12) ks)	K, L, R) K, L, R) K, L, R)
Remarks:												
·	y: High		Aquatic Diversity		neral Com	nments:	Isolated \	Wetland?	☐ Yes ☐	No 🔲	Unknown	





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WETLAND DETERMINATION FORM - North	ncer	ntral an	d Nor	theast R	egion		
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	☐ Tra	ansmission	Line	☐ Other			
Project/Site: NED Milepost: 73509.9 Count	ty:	Berksh	nire		Date:	06/04/2015	
Applicant/Owner: Kinder Morgan State:	: M	Α	Sampli	ing Point: F	IN-M-WO	04-PSS	
Investigators: CM Quad Name: Peru Towns	ship:	Hinsda	ale				
Logbook No.: 3 Logbook Pg.: 30 Tract: 20963							
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	$\overline{\mathbf{A}}$	Concave	□ C	onvex 🔲	None	Slope%.:	3
Subregion (LRR): Middle Atlantic Lat: 42.470371		Long:	-73.1044	466		Datum: NAD	83
Soil Map Unit Name: Lyman-Tunbridge association, steep, very stony				NWI Classif	ication:	Not map	ped
Are climatic / hydrologic conditions on the site typical for this time of year?:	· [No (If no	o, explai	in in Remarks	.)		
Are Vegetation 📝 Soil 🗹 or Hydrology 📝 significantly disturbed? 🔲 No	lo	Are "Norma	al" Circu	ımstances pre	sent?	✓ Yes	☐ No
Are Vegetation \square Soil \square or Hydrology \square naturally problematic? \checkmark No	lo						
SUMMARY OF FINDINGS - Attach site map showing sampling poi	int l	ocations	trane	sacts imr	ortant	faaturas	etc
Hydrophytic Vegetation Present? ✓ Yes ☐ No	TITL IN	ocations	, trans	sects, imp	Ortant	reatures,	
	ŀ	s the San	npled A	Area 🖂 ,	Yes □	No	
	٧	vithin a V	Vetland	i? ✓	res ⊔	No	
Wetland Hydrology Present? ✓ Yes ☐ No Field Wetland Classification: PSS							
Remarks:							
remans.							
HYDROLOGY							
Wetland Hydrology Indicators:			Se	condary Indic	ators (2 c	or more requi	red)
Primary Indicators (minimum of one required; check all that apply)				Surface So	il Cracks	(B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)				Drainage P	atterns (E	310)	
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)				Moss Trim	Lines (B1	6)	
✓ Saturation (A3)				Dry-Seasor	n Water T	able (C2)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)				Crayfish Bu	rrows (C	В)	
□ Sediment Deposits (B2) □ Oxidized Rhizospheres along Li	_iving	Roots (C3)		Saturation '	Visible on	Aerial image	ery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4))			Stunted or	Stressed	Plants (D1)	
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled	Soils	(C6)		Geomorphi	c Position	n (D2)	
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)				Shallow Aq	uitard (D3	3)	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)				Microtopog	raphic Re	elief (D4)	
☐ Sparsely Vegetated Concave Surface (B8)				FAC-Neutra	al Test (D	5)	
F-110							
Field Observations:							
Surface Water Present?		W-41	1 1 1	-l D	40		
Water Table Present? ✓ Yes ☐ No Depth (inches): 14 Saturation Present? ✓ Yes ☐ No Depth (inches): 0		wetian	ia Hyarc	ology Presen	_	Yes □	No
Saturation Present? ✓ Yes ☐ No Depth (inches): 0 (includes capillary fringe)					_	_	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous	inspe	ctions), if a	vailable)):			
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name		% Co	over	Domir	ant	Indicator	Status
Acer rubrum		10)	YES	;	FA	С
Total Co	over:	10	0			'	



1 Tovidence, IXI 02004				1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Lindera benzoin Spiraea alba		30 30	YES YES	FACW FACW
Spirada diba	Total Cover:	60	120	17.011
Herb Stratum				
Plot Size: 5	I	24.2	1	1
Scientific Name		% Cover	Dominant	Indicator Status
Onoclea sensibilis Carex crinita		10 10	NO NO	FACW OBL
Solidago rugosa	7.10	40	YES	FAC
	Total Cover:	60		
Woody Vine Stratum				
Plot Size: 30	ı			1
Scientific Name		% Cover	Dominant	Indicator Status
	T			
	Total Cover:			
Dominance Test Worksheet:		lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover		Multiply by:	
	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species		x 2 = <u>140</u>	
Percent of Dominant Species	FAC Species:	<u>50</u>	x 3 = <u>150</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = <u>0</u>	
	UPL Species:	<u>0</u>	x 5 = 0	
	Column Totals:	, ,	<u>300 (B)</u>	
	I	Prevalence Index	= B/A = <u>2.31</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
☑ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☑ Yes [□ No
uata ili Kelilaiks oli oli a separate sheet)				
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, F	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	nce of indicators.)	
Depth	Matrix		-	dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	ture	Remarks
0.7	, ,		` ′				CUTI	OAM	
0-7	10YR 3/2	90	10 YR 4/1	10	С	PL	SILT I	LOAM	
7-16	10YR 5/2	30	10 YR 6/1 10YR 5/6	60 10	D C	M M	SANDY	LOAM	
			101K 5/6	10		IVI			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hvdric Soil Inc	dicators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
Histosol (/	,		·			•	88) (LRR R,		A10) (LRR K, L, MLRA 149B)
=	•			ILRA 1		Odridoc (C	O) (ERREIK,		
= ' '	pedon (A2)			'-:- D-	-l- 0f	- (CO) (LD	D D MI DA 440D)	_	Redox (A16) (LRR K, L, R)
☐ Black Hist							R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)			oamy l	Mucky Mii	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	I1) 🗹 C	eplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		☐ F	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangar	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1)			eplete	d Dark Su	urface (F7)		☐ Piedmont Fl	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallov	v Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	in in Remarks)
_			·	ology n	ouat ha ar	occut unl	ess disturbed or prol		,
Remarks:									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	ty: High	☑ 1	Moderate	Low			Isolated Wetland?	?	No Unknown
General Comm	ents.								







WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 73400.7	County: Berkshire Date: 06/04/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: HN-M-W004-UPL
Investigators: CM Quad Name: Peru	Township: Hinsdale
Logbook No.: 3 Logbook Pg.: 31 Tract: 20963	
Landform (hillslope, terrace, etc.): Slope - mid Local R	elief: ☐ Concave ☑ Convex ☐ None Slope%.: 15
Subregion (LRR): Middle Atlantic Lat: 42.470556	Long: -73.104609 Datum: NAD83
Soil Map Unit Name: Lyman-Tunbridge association, steep, very stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation Soil or Hydrology significantly disturbed?	No Are "Normal" Circumstances present? ✓ Yes ☐ No
	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☐ Yes ☑ No	
Hydric Soil Present? ☐ Yes ☑ No	Is the Sampled Area □ Yes ☑ No within a Wetland?
Wetland Hydrology Present? ☐ Yes ☑ No	
Field Wetland Classification: UPLAND PLOT	
Remarks: VEG DISTURBED POSSIBLE MANAGEMENT PLAN IN EFFEC	OT
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
· -·	Surface Soil Cracks (B6)
Primary Indicators (minimum of one required; check all that apply)	□ Drainage Pattorns (R10)
Surface Water (A1) Water-Stained Leaves (I	Moss Trim Lines (B16)
High Water Table (A2) Aquatic Fauna (B13)	☐ Dry-Season Water Table (C2)
☐ Saturation (A3) ☐ Marl Deposits (B15)	Crowfish Burrows (C9)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (Coturation Visible on Agricul imagery (CO)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	Churched or Chronood Plants (D1)
□ Drift Deposits (B3) □ Presence of Reduced In	D 0 1: P :: (P0)
Algal Mat or Crust (B4) Recent Iron Reduction in	Shallow Aguitard (D3)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	— II B E (/D4)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remar	FAC-Neutral Test (D5)
Sparsely Vegetated Concave Surface (B8)	E I vo-regular rest (DD)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ✓ No
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ Yes ☑ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	evious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Т	otal Cover:



Providence, Ri 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Rubus allegheniensis		40	YES	FACU
	Total Cover:	40	'	
Herb Stratum				
Plot Size: 5				
	1	0/ Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	
Solidago rugosa Carex sp		20 15	YES NA	FAC NONE
Phalaris arundinacea		15	YES	FACW
	Total Cover:	50		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species	Total % Cover of	f:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species:	<u>15</u>	x 2 = <u>30</u>	
Species Across All Strata: 3 (B)	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species	FACU Species:	<u>40</u>	x 4 = <u>160</u>	
That Are OBL, FACW, or FAC: 67 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	75 (A)	250 (B)	
	p	revalence Index :		
Hudrank, tie Venstelien Indicators	<u> </u>	Tovalonioo indox -	- <u>5.00</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				_
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	No
data in Normanio di Gri a deparate dilecty				
				
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
present, unless disturbed of problematic.				
Remarks:				



T TOVIGETICE, I	02304											
SOIL												
Profile Descrip	otion: (Describe	the d	epth needed to o	locum	ent the in	dicator o	r confirm th	ne absen	ce of indicators.)			
Depth (inches)	Matrix		Red	dox Fe	atures			Text	ıro		Po	marks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²		1680	uie		1101	Haiks
0-3	5YR 3/3	100						ORGA	NIC			
3-7	5YR 4/4	90	5YR 5/6	10	С	М		SANDY	LOAM			
7-16	7.5YR 5/6	100						LOAMY	SAND			
¹Type: C=Cond	L centration D=De	enletion	l n, RM=Reduced I	Matrix	CS=Cov	L ered Sand	or Coated	Grains	² Location: PL=	Pore Linin	a M=M	
		<u> </u>	o all LRR's, unle						Indicators for Pr			
		cable t					(A) (I DD D				-	
Histosol (/	•			oiyvait ILRA 1		Suпасе (S	88) (LRR R,		2 cm Muck (•
	pedon (A2)					(00) (10)			Coast Prairie			•
☐ Black Hist	` ,		_			. , .	R R, MLRA	149B)			. ,	(LRR K, L, R)
	Sulfide (A4)			-	-		(LRR K, L)		☐ Dark Surface			
	Layers (A5)		· 	-	Gleyed Ma				Polyvalue Be		. , ,	,
	Below Dark Surfa	ace (A1	_	•	d Matrix (I	,			Thin Dark Su		•	•
_	k Surface (A12)				Dark Surfa				_			(LRR K, L, R)
_	ıcky Mineral (S1)			-		ırface (F7)			☐ Piedmont Flo	oodplain So	oils (F19) (MLRA 149B)
	eyed Matrix (S4)			edox I	Depressio	ns (F8)			☐ Mesic Spodi	c (TA6) (M	_RA 144	4A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F	21)	
☐ Stripped N	Matrix (S6)								□ Very Shallov	v Dark Surf	ace (TF	12)
□ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	.rks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbe	d or prob	lematic.			
Restrictive Lay	er Present?		res ☑ No	□ U	Inknown							
									Hydric Soil Prese	nt?	Yes	✓ No
										_		_
Remarks:												
Description of		! - 4!	Ai Diit	0-								
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	nerai Corr	iments:						
W (I 10 I'							1111	A/ // 10				
wetland Qualit	y: 📙 Hign	ш	Moderate	Low			Isolated \	vetland?	☐ Yes ☐	No L	Unkn	own
General Comm	ents:											





NW



WE	TLAND	DET	ERN	IINAT	ION I	FORM -	Northc	ent	ral an	d No	ortheas	t Regior	1	
☑ Centerline ☐ Re-R	oute _	Acces	ss Roa	ıd 🗀	Ancil	lary Facility		Tran	smission	Line	☐ Ot	her		
Project/Site: NED			I	Milepost	825	72.9	County:		Berksh	nire		Date	: 06/11/201	15
Applicant/Owner: Kinder Mo	organ						State:	MA		Samp	pling Poir	nt: HN-M-W	/010-PSS	
Investigators: CM	(Quad Na	ame:	Peru			Townshi	p:	Hinsda	ale				
Logbook No.: 3	Logi	ook Pg	.: 78		Tra	ct: 20984								
Landform (hillslope, terrace,	etc.):	Slope	- mid	'		Local R	elief:	7 C	oncave		Convex	☐ None	Slope%.:	2
Subregion (LRR): Middl	e Atlantic			La	it: 42.4	472969		L	ong:	-73.07	'3417		Datum: NA	D83
Soil Map Unit Name: Pe	ru-Marlow a	associat	ion, ro	lling, ext	remely	stony					NWI C	lassification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site ty	pical f	or this tir	ne of ye	ear?:	7 Yes		No (If no	o, expl	lain in Ren	narks.)		
Are Vegetation ✓ Soil	or Hy	/drology	,	signific	antly dis	sturbed?	☐ No	Ar	e "Norma	al" Circ	cumstance	s present?	✓ Yes	□ No
Are Vegetation ✓ Soil	or Hy	/drology	,	natural	ly probl	ematic?	_ No							
 			_									_		
SUMMARY OF FINDI	NGS - At	tach	site n	nap sh	owing	g samplir	ng poin	t loc	cations	s, tra	nsects,	importan	nt features	s, etc.
Hydrophytic Vegetation Prese	ent?	$\overline{\checkmark}$	Yes		lo			le i	the San	nnlad	ΙΛroa			
Hydric Soil Present?		V	Yes		lo				thin a W			☑ Yes I	□ No	
Wetland Hydrology Present?		$\overline{\mathbf{V}}$	Yes	<u></u> П	lo									
Field Wetland Classification:	PSS													
Remarks:														
HYDROLOGY														
Wetland Hydrology Indicate	ors:									<u> </u>	Secondary	Indicators (2	2 or more req	uired)
Primary Indicators (minimum	of one req	uired; cl	heck a	ll that ap	ply)						Surfac	e Soil Crack	s (B6)	
☐ Surface Water (A1)				☐ Wat	er-Stain	ed Leaves (B9)				☐ Draina	ige Patterns	(B10)	
✓ High Water Table (A2)				☐ Aqua	atic Fau	ına (B13)					Moss	Trim Lines (E	316)	
✓ Saturation (A3)				☐ Marl	Depos	its (B15)					☐ Dry-Se	eason Water	Table (C2)	
☐ Water Marks (B1)				Hyd	rogen S	Sulfide Odor	(C1)				Crayfis	sh Burrows ((C8)	
☐ Sediment Deposits (B2)				Oxio	lized Rh	nizospheres	along Livir	ng Ro	oots (C3)		☐ Satura	tion Visible	on Aerial ima	gery (C9)
☐ Drift Deposits (B3)			5	⊘ Pres	ence of	f Reduced Ir	on (C4)				Stunte	d or Stresse	ed Plants (D1)	
☐ Algal Mat or Crust (B4)				Rec	ent Iron	Reduction in	n Tilled Sc	ils (C	26)		Geom	orphic Positi	on (D2)	
☐ Iron Deposits (B5)				Thin	Muck S	Surface (C7)	1				Shallo	w Aquitard (D3)	
☐ Inundation Visible on A	erial Imagei	y (B7)		Othe	er (Expl	ain in Remaı	rks)				Microt	opographic I	Relief (D4)	
☐ Sparsely Vegetated Con	ncave Surfa	ace (B8)								5	✓ FAC-N	leutral Test	(D5)	
Field Observations:														
Surface Water Present?	☐ Yes	√ 1	l ol	Depth (in	ches):									
Water Table Present?	✓ Yes		l ol	Depth (in	ches):	2			Wetlan	d Hyd	drology Pr		7 V 🗖	
Saturation Present? (includes capillary fringe)	√ Yes	1	No [Depth (in	ches):	0						<u> •</u>	I Yes □	No
Remarks (Describe Recorded	l Data (stre	am gag	e, mon	itoring w	ell, aeri	ial photos, pi	revious ins	pecti	ions), if a	vailab	le):			
VEGETATION														
Tree Stratum														
Plot Size: 30														
Scientific Name									% Co	over		Oominant	Indicat	or Status
Fraxinus pennsylvanica Tsuga canadensis									20 10			YES YES		ACU ACU
						Т	Total Cove	r:	30	0				



Providence, RI 02904			- 1	ALCOM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum Alnus incana		15 20	YES YES	FAC FACW
Lindera benzoin		25 25	YES	FACW
	Total Cover:	60	•	
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Carex crinita		80	YES	OBL
Osmunda claytoniana Galium asprellum		5 10	NO NO	FAC OBL
Onoclea sensibilis		5	NO	FACW
	Total Cover:	100		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, 01 FAC.	OBL Species:	<u>90</u>	x 1 = <u>90</u>	
Total Number of Dominant Species Across All Strata: 6 (B)	FACW Species	: <u>70</u>	x 2 = <u>140</u>	
CPOSICS FIGURE FILL CHARACT	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)	FACU Species	: <u>10</u>	x 4 = <u>40</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>190 (A)</u>	<u>330 (B)</u>	
		Prevalence Index	= B/A = 1.74	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	egetation Preser	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, F	KI 02904										
SOIL											
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm th	ne absen	ce of indicators.)		
Depth	Matrix				atures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	-	Textu	ure	R	emarks
0-4	, ,		Color (molety	,,,	.,,,,			CANDY	LOAM		
0-4	10YR 4/1	100						SANDY	LOAM		
4-12	2.5Y 3/1	50	2.5Y 6/1 10YR 4/6	45 5	D C	M M		SANDY	LOAM		
			1011(4/0			""					
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Lining, M=	Matrix
Hydric Soil Inc	licators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pi	roblematic Hydr	ic Soils³:
☐ Histosol (A	A1)			olvvali	ue Below	Surface (S	88) (LRR R,		☐ 2 cm Muck (A10) (LRR K, L, I	MLRA 149B)
_ `	pedon (A2)			ILŔA 1		(-	,			e Redox (A16) (L	•
☐ Black Hist			ПТ	hin Da	rk Surface	e (S9) (I R	R R, MLRA	149R)	_	Peat or Peat (S3	·
								1430)		•	
	Sulfide (A4)		_	-	-		(LRR K, L)			e (S7) (LRR K, L,	·
	Layers (A5)		_	-	Gleyed Ma					elow Surface (S8	
	Below Dark Surfa	ace (A1	_	-	d Matrix (•			_	urface (S9) (LRR	•
	k Surface (A12)		_		Dark Surfa				_	ese Masses (F12	
	ucky Mineral (S1))		eplete	d Dark Su	urface (F7))		☐ Piedmont Flo	oodplain Soils (F	19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)				c (TA6) (MLRA 1	44A, 145, 149B)
☐ Sandy Re	edox (S5)								☐ Red Parent	Material (F21)	
☐ Stripped I	Matrix (S6)								□ Very Shallov	v Dark Surface (1	F12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						☐ Other (Expla	in in Remarks)	
3Indicators of I	nvdrophytic veae	tation a	and wetland hydro	ology n	nust be pr	esent. unl	ess disturbe	d or prob	lematic.		
Remarks:											
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:					
Wetland Qualit	ty: 🗹 High		Moderate	Low			Isolated V	Vetland?	☐ Yes 🗹	No 🔲 Uni	known
General Comm	ients:										





SW



WE	TLAND	DET	ERM	INATI	ON FORM -	Northc	entral an	d No	ortheast	Region		
☑ Centerline ☐ Re-R	oute _	Acces	ss Road	d 🗆	Ancillary Facility		Transmissior	n Line	☐ Oth	er		
Project/Site: NED			N	filepost:	82557.2	County:	Berks	hire		Date:	06/11/201	15
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	oling Point	HN-M-W	010-UPL	
Investigators: CM	(Quad Na	ame: F	Peru		Township	p: Hinsd	ale				
Logbook No.: 3	Logb	ook Pg.	: 79		Tract: 20984							
Landform (hillslope, terrace, e	etc.):	Slope -	mid	•	Local F	Relief:	Concave	V	Convex	☐ None	Slope%.:	10
Subregion (LRR): Middl	e Atlantic			Lat	t: 42.473264		Long:	-73.07	3609		Datum: NA	D83
Soil Map Unit Name: Per	ru-Marlow a	associat	ion, roll	ing, extre	emely stony				NWI Cla	assification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	r this tim	ne of year?:	√ Yes	☐ No (If n	no, expl	lain in Rema	arks.)		
Are Vegetation	or Hy	/drology		significa	antly disturbed?	☑ No	Are "Norm	nal" Circ	cumstances	present?	☑ Yes	☐ No
Are Vegetation	or Hy	/drology		naturally	y problematic?	☑ No						
SUMMARY OF FINDIN	NGS - At	tach s	site m	ap sho	owing sampli	ng point	locations	s, tra	nsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☑ No	0							
Hydric Soil Present?			Yes	☑ No	0		Is the Sar	mpied Netlar	nd?] Yes ⊡	∑ No	
Wetland Hydrology Present?			Yes	☑ No	0							
Field Wetland Classification:	UPL	AND PL	ОТ									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	ors:							5	Secondary I	ndicators (2	or more requ	uired)
Primary Indicators (minimum	of one req	uired; cl	neck all	that app	oly)				Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)] Wate	er-Stained Leaves	(B9)			☐ Drainag	je Patterns ((B10)	
☐ High Water Table (A2)] Aqua	itic Fauna (B13)				☐ Moss T	rim Lines (B	16)	
☐ Saturation (A3)				Marl I	Deposits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
□ Water Marks (B1)] Hydro	ogen Sulfide Odor	(C1)			Crayfish	n Burrows (C	C8)	
☐ Sediment Deposits (B2)				Oxidi	zed Rhizospheres	along Livin	ng Roots (C3)) [☐ Saturat	ion Visible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Prese	ence of Reduced I	ron (C4)			Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Rece	ent Iron Reduction	in Tilled So	ils (C6)		Geomo	rphic Positio	on (D2)	
☐ Iron Deposits (B5)				Thin I	Muck Surface (C7)				Aquitard (D	•	
☐ Inundation Visible on A	erial Imager	y (B7)		Other	r (Explain in Rema	arks)				pographic R		
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)							☐ FAC-Ne	eutral Test (I	D5)	
Field Observations:												
Surface Water Present?	☐ Yes	Ø N	lo D	epth (inc	ches):							
Water Table Present?	☐ Yes	_		epth (inc	•		Wetlai	nd Hyd	Irology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ N	lo D	epth (inc	ches):						163 1	140
Remarks (Describe Recorded	Data (streat	am gage	e, moni	toring we	ell, aerial photos, p	revious ins	pections), if a	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Do	minant	Indicat	or Status
Betula alleghaniensis Acer saccharum Fagus grandifolia							2 3 5		,	YES YES YES	F/	AC ACU
						Total Cover	ı	00	ı		1	



Sapling/Shrub Stratum Plot Size: 15 Scientific Name				
Scientific Name				
		% Cover	Dominant	Indicator Status
Tsuga canadensis Acer pensylvanicum Fagus grandifolia Picea rubens		10 15 10 10	YES YES YES YES	FACU FACU FACU FACU
	Total Cover:	45	I	I
Herb Stratum				
Plot Size: 5				
	ı	% Cover	Dominant	Indicator Status
Scientific Name		% Cover 15	YES	Indicator Status FACU
Polygonatum biflorum Polystichum acrostichoides		5	NO	FACU
Parathelypteris novaboracnesis	T-t-I C	10	YES	FAC
	Total Cover:	30		
Woody Vine Stratum				
Plot Size: 30	1		1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover	of:	Multiply by:	
THAT ALE OBE, I ACW, OT I AC.	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 9 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
oposios / toroco / till ottatal	FAC Species:	<u>30</u>	x 3 = <u>90</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 22 (A/B)	FACU Species:	<u>145</u>	x 4 = <u>580</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>175 (A)</u>	<u>670 (B)</u>	
	F	Prevalence Index	= B/A = 3.83	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? 🗌 Yes 🛭	☑ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



2011	02004											
SOIL												
•		the de	·			dicator o	r confirm	he absen	ce of indicators.)			
Depth (inches)	Matrix		Red		atures			Text	ıre		Rer	marks
(11101100)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		10/10				
0-1	5YR 2.5/1	100						ORGA	NIC			
1-10	5YR 5/8	100						LOA	M			
10-18	5YR 4/6	80	7.5YR 3/4	20	С	М		LOAMY	SAND			
¹Tvpe: C=Cond	L centration. D=De	epletion	l n, RM=Reduced I	Matrix.	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	a. M=M:	atrix
		<u> </u>	o all LRR's, unle						Indicators for Pr			
		cabic t					0\				-	
Histosol (/	•			ILRA 1		Surface (S	8) (LRR R		2 cm Muck (
	pedon (A2)		-	L:- D-	-1. O4	- (CO) (I DI	D D MI D/	4.40D)	Coast Prairie			•
☐ Black Hist			_			. , .	R R, MLRA	(149B)			. , .	LRR K, L, R)
	Sulfide (A4)		_	•	•	` '	(LRR K, L)		☐ Dark Surface			
	Layers (A5)	nns (^ *		•	Gleyed Ma	, ,			Polyvalue Be		. , .	•
	Below Dark Surfa	ace (A1	_	-	d Matrix (I	•			Thin Dark Su	, ,		•
_	k Surface (A12)				Dark Surfa				_			(LRR K, L, R)
_	icky Mineral (S1)			-		ırface (F7)			☐ Piedmont Flo	odplain So	ils (F19)) (MLRA 149B)
	eyed Matrix (S4)		☐ R	edox [Depressio	ns (F8)			_			A, 145, 149B)
☐ Sandy Re									☐ Red Parent I		•	
☐ Stripped N	Matrix (S6)								□ Very Shallov	Dark Surf	ace (TF1	12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						Other (Expla	in in Rema	rks)	
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturb	ed or prob	lematic.			
Restrictive Lay	er Present?	1	res ☐ No	□ U	nknown							
ROCK									Hydric Soil Prese	nt?	Yes	☑ No
18												
Remarks:												
Description of	Habitat Characta	riotico	Aguatia Divaraity	or Co	noral Cam	monto						
Description of	nabilal Characle	ristics,	Aquatic Diversity	or Ge	nerai Con	imenis:						
Watland Ovalit	uu 🗖 Iliada	_ ,	Andersta 🗖				laalatad	\MatlandO		No. 🗖	المادة ا	
wetiand Qualit	y: High	Цľ	Moderate	LOW			isolated	Wetland?	☐ Yes ☐	NO L	Unkno	own
General Comm	ents:											





ΝE



WETLAND DETERMINATION FORM - Northce	entral and No	ortheast Regi	on
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ T	Fransmission Line	☐ Other	
Project/Site: NED Milepost: 82513.3 County:	Berkshire	Da	ate: 06/11/2015
Applicant/Owner: Kinder Morgan State:	MA Sam	pling Point: HN-N	I-W011-PFO
Investigators: CM Quad Name: Peru Township	: Hinsdale		
Logbook No.: 3 Logbook Pg.: 82 Tract: 20984			
Landform (hillslope, terrace, etc.): Slope - toe Local Relief: ☑	Concave	Convex No	ne Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.473253	Long: -73.07	73775	Datum: NAD83
Soil Map Unit Name: Peru-Marlow association, rolling, extremely stony		NWI Classification	on: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, exp	lain in Remarks.)	
Are Vegetation Soil or Hydrology significantly disturbed? No	Are "Normal" Cir	cumstances present	? Yes No
Are Vegetation 🗹 Soil 🔲 or Hydrology 🔲 naturally problematic? 🔲 No			
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations tra	insects import	ant features, etc
Hydrophytic Vegetation Present? ✓ Yes ☐ No	1000110110, 110	mocoto, import	
Hydric Soil Present? ✓ Yes ☐ No	Is the Sample		□ No
Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetla	nd? 🖭 100	
Field Wetland Classification: PFO			
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators	s (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cra	acks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	I	✓ Drainage Patter	ns (B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Line	s (B16)
✓ Saturation (A3)		□ Dry-Season Wa	ter Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		☐ Crayfish Burrow	rs (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	g Roots (C3)	Saturation Visib	le on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		Stunted or Stres	ssed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soil	ls (C6)	✓ Geomorphic Po	sition (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		☐ Shallow Aquitar	d (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)			ic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Te	st (D5)
Field Observations			
Field Observations: Surface Water Present? □ Yes ☑ No Depth (inches):			
	Wetlend H.	dralami Dragant?	
Water Table Present?	wettand ny	drology Present?	✓ Yes □ No
Saturation Present?			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	pections), if availab	ole):	
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Betula alleghaniensis	45	YES	FAC
Acer saccharum	30	YES	FACU
Total Cover:	75		



1 Tovidence, IXI 02004				1 10 10 10 10 10 10 10 10 10 10 10 10 10
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer saccharum		10 10	YES YES	FACU FACU
Fagus grandifolia	Total Cover:	20	163	FACU
	10101 00101.			
Herb Stratum				
Plot Size: 5	1		i.	1
Scientific Name		% Cover	Dominant	Indicator Status
Onoclea sensibilis Thlyopteris novaboracensis		15 20	YES YES	FACW FAC
Dryopteris intermedia		5	NO	FAC
Impatiens capensis Veratrum viride		5 15	NO YES	FACW FACW
	Total Cover:	60	ı	1
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	1
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species		x 2 = 70	
Species Across All Strata: 7 (B)	FAC Species:	<u>70</u>	x 3 = 210	
Percent of Dominant Species	FACU Species:		x 4 = 200	
That Are OBL, FACW, or FAC: 57 (A/B)	UPL Species:	<u>o</u>	x 5 = <u>0</u>	
	Column Totals:	155 (A)	480 (B)	
	ſ	Prevalence Index :	= B/A = 3.10	
Hydrophytic Vegetation Indicators:	•	Totalonio maox	<u> </u>	
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0	11 1 2 2 2 2 3		=	-
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydropnytic v	egetation Preser	nt? ☑ Yes [」 No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
remars.				



SOIL												
rofile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	Matrix		Red	dox Fe	atures		-		D			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks			
0-6	2.5Y 3/1	100					FINE SANI	DY LOAM				
6-14	2.5Y 4/1	40	2.5Y 6/1	60	D	М	LOAMY	SAND				
		•	<u> </u>				or Coated Grains.		Pore Lining, M=Matrix			
		cable t	o all LRR's, unle						oblematic Hydric Soils ³ :			
Histosol (/	A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)			
_	pedon (A2)				,				Redox (A16) (LRR K, L, R)			
☐ Black Hist			Τ	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)			
	Sulfide (A4)		_	-	-	neral (F1)	(LRR K, L)	_	e (S7) (LRR K, L, M)			
	_ayers (A5)		_	-	Gleyed Ma			☐ Polyvalue Be	elow Surface (S8) (LRR K, L)			
□ Depleted	Below Dark Surfa	ace (A1	I1) 🗹 C	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)			
☐ Thick Dar	k Surface (A12)		□ R	Redox [Dark Surfa	ace (F6)		✓ Iron-Mangan	ese Masses (F12) (LRR K, L, R)			
☐ Sandy Mu	icky Mineral (S1)			eplete	d Dark Su	urface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)			
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)			
☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)			
☐ Stripped N	Matrix (S6)							□ Very Shallow	Dark Surface (TF12)			
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)			
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	lematic.				
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No			
Description of Wetland Qualit			Aquatic Diversity	or Ge	neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No □ Unknown			
Welland Qualit	y. 🔲 Tilgii		vioderate [V]	LOW			isolated Wetland:		NO GONNOWN			
General Comm	ents:											





Ε



WETLAND DETERMINATION	ON FORM - Nort	hcentral and l	Northeast Region	r
☐ Centerline ☐ Re-Route ☐ Access Road ☑	Ancillary Facility	Transmission Lir	ne	
Project/Site: NED Milepost:	93211.5 Cou	nty: Berkshire	Date:	06/05/2015
Applicant/Owner: Kinder Morgan	State	e: MA Sa	mpling Point: WR-M-W	/002-PEM
Investigators: CM Quad Name: Peru	Tow	nship: Windsor		
Logbook No.: 2 Logbook Pg.: 112	Tract: 1316			
Landform (hillslope, terrace, etc.):	Local Relief:	☐ Concave ☐	☐ Convex ☑ None	Slope%.: 0
Subregion (LRR): Middle Atlantic Lat:	42.481521	Long: -73	.035702	Datum: NAD83
Soil Map Unit Name: Pillsbury loam, 0 to 8 percent slopes, 6	extremely stony		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time	e of year?: 🗹 Ye	s No (If no, e	explain in Remarks.)	
Are Vegetation Soil □ or Hydrology □ significar	ntly disturbed?	lo Are "Normal"	Circumstances present?	✓ Yes □ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally	problematic?	lo		
	_		_	
SUMMARY OF FINDINGS - Attach site map sho	owing sampling po	oint locations, t	ransects, importan	t features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No)	Is the Sampl	led Area	
Hydric Soil Present? ✓ Yes No)	within a Wet	land? ☑ Yes [□ No
Wetland Hydrology Present?)			
Field Wetland Classification: PEM				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (2	or more required)
Primary Indicators (minimum of one required; check all that appl	ly)		☐ Surface Soil Crack	s (B6)
☐ Surface Water (A1) ☐ Water	-Stained Leaves (B9)		□ Drainage Patterns	(B10)
☐ High Water Table (A2) ☐ Aquat	ic Fauna (B13)			316)
✓ Saturation (A3)	Deposits (B15)		□ Dry-Season Water	Table (C2)
☐ Water Marks (B1) ☐ Hydro	gen Sulfide Odor (C1)		☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☑ Oxidiz	zed Rhizospheres along	Living Roots (C3)	☐ Saturation Visible of	on Aerial imagery (C9)
☐ Drift Deposits (B3) ☑ Prese	nce of Reduced Iron (C4)	☐ Stunted or Stresse	d Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recen	nt Iron Reduction in Tille	Soils (C6)	☐ Geomorphic Position	on (D2)
☐ Iron Deposits (B5) ☐ Thin M	Muck Surface (C7)		☐ Shallow Aquitard ([D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other	(Explain in Remarks)			Relief (D4)
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D5)
Field Observations:				
Surface Water Present? ☐ Yes ☑ No Depth (incl	hes):			
Water Table Present? ☑ Yes ☐ No Depth (incl	hes): 5	Wetland I	Hydrology Present?	
Saturation Present?	hes): 1		☑	Yes 🗌 No
Remarks (Describe Recorded Data (stream gage, monitoring well	ll, aerial photos, previous	inspections), if avai	lable):	
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cove	r Dominant	Indicator Status
	Total C	over:		



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Spiraea alba		10	YES	FACW
	Total Cover:	10	•	
Herb Stratum				
Plot Size: 5				
Scientific Name	I	% Cover	Dominant	Indicator Status
Onoclea sensibilis		15	NO	FACW
Phalaris arundinacea		50	YES	FACW
Solidago rugosa Veratrum viride		5 5	NO NO	FAC FACW
Carex crinita		20	YES	OBL
	Total Cover:	95		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>20</u>	x 1 = <u>20</u>	
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	s: <u>80</u>	x 2 = <u>160</u>	
Species Across All Strata: 3 (B)	FAC Species:	<u>5</u>	x 3 = <u>15</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species	: <u>0</u>	x 4 = <u>0</u>	
That Are OBL, I AGW, OF I AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	105 (A)	<u>195 (B)</u>	
		Prevalence Index =	= B/A = <u>1.86</u>	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
☐ 4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	/egetation Preser	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)	.,,		<u></u>	
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



Providence, R	1 02904								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abse	ence of indicators.)	1
Depth	Matrix		-		atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	xture	Remarks
0.14	, ,		, ,				FINE CAN	NDV LOAM	
0-14	10YR 2/1	95	10YR 3/6	5	С	PL	FINE SAI	NDY LOAM	
14-20	2.5Y 3/1	30	2.5Y 6/1 7.5 YR 5/6	60 10	D C	M M	SA	AND	
			7.5 11(5/6	10		"			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	²Location: PL:	=Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)			olyvalı	ue Below	Surface (S	8) (LRR R,	☐ 2 cm Muck ((A10) (LRR K, L, MLRA 149B)
_ `	pedon (A2)			ILŔA 1		(-	-/(/		e Redox (A16) (LRR K, L, R)
☐ Black Hist			П 1	hin Da	rk Surface	e (S9) (I R	R R, MLRA 149B)	=	Peat or Peat (S3) (LRR K, L, R)
							•		
	Sulfide (A4)		_	-	-		(LRR K, L)		e (S7) (LRR K, L, M)
_	_ayers (A5)	/^ -		-	Gleyed Ma				elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A1	_	-	d Matrix (·			urface (S9) (LRR K, L)
	k Surface (A12)		_		Dark Surfa			_	nese Masses (F12) (LRR K, L, R)
	icky Mineral (S1)			eplete	d Dark Su	urface (F7)		☐ Piedmont Fl	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							□ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)
□ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	oblematic.	
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetland	d? ☐ Yes ☑	No Unknown
General Comm	ente:								





ΝE



WE	TLAND	DET	ERM	INATI	ON FORM -	Northce	entral an	d No	ortheast	Region		
☐ Centerline ☐ Re-Re	oute 🔲	Acces	ss Road		Ancillary Facility		Transmission	Line	☐ Oth	er		
Project/Site: NED			N	/lilepost:	93056.7	County:	Berksl	hire		Date:	06/05/201	15
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	oling Point	WR-M-W	/002-UPL	
Investigators: CM	(Quad Na	ame: F	Peru		Township	o: Winds	or				
Logbook No.: 2	Logb	ook Pg.	: 114		Tract: 1316	•						
Landform (hillslope, terrace, e	etc.):	Slope -	mid		Local R	Relief:	Concave		Convex	☐ None	Slope%.:	3
Subregion (LRR): Middle	e Atlantic			Lat	42.481378		Long:	-73.03	6243		Datum: NA	D83
Soil Map Unit Name: Pills	sbury loam	, 0 to 8 _l	percent	t slopes,	extremely stony				NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	itions on th	e site ty	pical fo	r this tim	e of year?:	✓ Yes	☐ No (If n	o, expl	lain in Rema	arks.)		
Are Vegetation 🗹 Soil	or Hy	/drology		significa	ntly disturbed?	☐ No	Are "Norm	al" Circ	cumstances	present?	 ✓ Yes	☐ No
Are Vegetation Soil	or Hy	/drology		naturally	problematic?	☑ No						
SUMMARY OF FINDIN	IGS - At	tach s	site m	ap sho	owing sampli	ng point	locations	s, tra	nsects, i	mportan	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☐ No)							
Hydric Soil Present?			Yes	☑ No)		Is the Sar within a V	mpied Vetlar	nd? □] Yes ⊡	∑ No	
Wetland Hydrology Present?			Yes	☑ No)							
Field Wetland Classification:	UPLA	AND PL	ОТ									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	rs:							5	Secondary I	ndicators (2	or more req	uired)
Primary Indicators (minimum	of one requ	uired; cl	neck all	that app	<u>ly)</u>				Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)] Water	r-Stained Leaves ((B9)			☐ Drainag	e Patterns ((B10)	
☐ High Water Table (A2)] Aquat	tic Fauna (B13)				☐ Moss T	rim Lines (B	16)	
☐ Saturation (A3)] Marl [Deposits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
□ Water Marks (B1)] Hydro	gen Sulfide Odor	(C1)			☐ Crayfish	n Burrows (0	28)	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizospheres	along Livin	g Roots (C3)) [Saturati	on Visible o	n Aerial ima	gery (C9)
☐ Drift Deposits (B3)				Prese	ence of Reduced I	ron (C4)			Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recei	nt Iron Reduction i	in Tilled So	ils (C6)		Geomo	rphic Positio	on (D2)	
☐ Iron Deposits (B5)				Thin I	Muck Surface (C7))				Aquitard (E	•	
☐ Inundation Visible on Ae	rial Imager	y (B7)] Other	(Explain in Rema	ırks)				pographic R		
☐ Sparsely Vegetated Cor	cave Surfa	ice (B8)						<u> </u>	✓ FAC-Ne	eutral Test (l	D5)	
Field Observations:	_	_										
Surface Water Present?	☐ Yes	<u> </u>		epth (inc	•							
Water Table Present?	Yes	_		epth (inc	*		Wetlar	nd Hyd	drology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	Yes	☑ N	lo D	epth (inc	hes):						103 🖸	140
Remarks (Describe Recorded	Data (strea	am gage	e, moni	toring we	ll, aerial photos, p	revious ins	pections), if a	availabl	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% Co	over	Do	minant	Indicat	or Status
Acer saccharum							15	5	,	YES	FA	ACU
					-	Total Cover	: 1	5	'		1	



Providence, Ri 02904			1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Prunus serotina Rubus allegheniensis		5	NO YES	FACU FACU
Rubus allegrierilerisis	Total Cover:	35 40	TES	FACU
	Total Cover.			
Herb Stratum				
Plot Size: 5	1			ı
Scientific Name		% Cover	Dominant	Indicator Status
Osmunda claytoniana Onoclea sensibilis		20 15	YES YES	FAC FACW
Solidago rugosa		25	YES	FAC
	Total Cover:	60		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Т			
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	ex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 3 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>20</u>	x 1 = <u>20</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	<u>15</u>	x 2 = <u>30</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>45</u>	x 3 = <u>135</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)	FACU Species:	<u>55</u>	x 4 = <u>220</u>	
That Ale OBE, I AGW, OI I AG.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	135 (A)	405 (B)	
	F	Prevalence Index =	= B/A = 3.00	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Presen	t? ☑ Yes [□ No
data in Remarks or on a separate sheet)	,		🖸 105 🗜	_ 110
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



SOIL											
Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.)											
Depth (inches)	Matrix		Redox Features				Texture		Remarks		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	1 6.	xture	Remarks		
0-3	2.5Y 2.5/1	90	2.5Y 6/1 7.5YR 5/8	5 5	D C	M M	SILT	LOAM			
3-10	2.5Y 4/2	95	7.5YR 4/6	5	С	М	SILT LOAM				
10-22	10YR 3/2	100					SANDY LOAM				
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. ² Location: PL=Pore Lining, M=Matrix											
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils³:											
Histosol (A1)											
Description of Habitat Characteristics, Aquatic Diversity or General Comments:											
	y:	<u>'</u>	Moderate				Isolated Wetland	l?	No		
General Comm	ello.										





NW



WETLAND DETERMINATION FORM - Northcer	ntral and Northeast Region								
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Tra	ansmission Line								
Project/Site: NED Milepost: 116524.4 County:	Hampshire Date: 06/25/2015								
Applicant/Owner: Kinder Morgan State: M	IA Sampling Point: PL-M-W004-PFO								
Investigators: SE Quad Name: Plainfield Township:	Plainfield								
Logbook No.: 1E Logbook Pg.: Tract: 930									
Landform (hillslope, terrace, etc.): Depression Local Relief:	Concave Convex None Slope%.: 1								
Subregion (LRR): Middle Atlantic Lat: 42.509324	Long: -72.965180 Datum: NAD83								
Soil Map Unit Name: Lyman-Tunbridge association, rolling, extremely stony	NWI Classification: Not mapped								
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)								
	- Are "Normal" Circumstances present? √ Yes □	No							
Are Vegetation □ Soil □ or Hydrology □ naturally problematic? ☑ No	·								
Are vegetation our or rigurology naturally problematic: No									
SUMMARY OF FINDINGS - Attach site map showing sampling point le	ocations, transects, important features, etc.								
Hydrophytic Vegetation Present? ☑ Yes ☐ No									
Hydric Soil Present? ☑ Yes ☐ No	s the Sampled Area within a Wetland? ☑ Yes □ No								
Wetland Hydrology Present? ☑ Yes ☐ No	Within a Welland:								
Field Wetland Classification: PFO									
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)								
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)								
☐ Surface Water (A1) ☑ Water-Stained Leaves (B9)	9) Drainage Patterns (B10)								
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)								
✓ Saturation (A3)	☐ Dry-Season Water Table (C2)								
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	C1) Crayfish Burrows (C8)								
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)								
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	on (C4) Stunted or Stressed Plants (D1)								
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	Tilled Soils (C6) Geomorphic Position (D2)								
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)								
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	✓ Microtopographic Relief (D4)								
☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)									
Field Observations:									
Surface Water Present? ☐ Yes ☑ No Depth (inches):									
Water Table Present? ☑ Yes ☐ No Depth (inches): 1	Wetland Hydrology Present?								
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)	☑ Yes □ No								
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):									
VEGETATION									
Tree Stratum									
Plot Size: 30									
Scientific Name	% Cover Dominant Indicator Statu	IS							
Fraxinus americana	10 NO FACU								
Acer rubrum Tsuga canadensis	15 NO FAC 60 YES FACU								
Betula alleghaniensis	35 YES FAC								
Total Cover:	120								

AECOM 10 Orms Street, Suite 405 Providence, RI 02904



Providence, Ri 02904						
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Herb Stratum						
Plot Size: 5						
Scientific Name		% Cover	Dominant	Indicator Status		
Dryopteris carthusiana		8	YES	FACW		
	Total Cover:	8	,	•		
Woody Vine Stratum						
Plot Size: 30						
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Dominance Test Worksheet:	Prevalence Index Worksheet:					
Number of Dominant Species	Total % Cover	of:	Multiply by:			
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 3 (B)	FACW Species	: <u>8</u>	x 2 = <u>16</u>			
Species Across All Strata: 3 (B)	FAC Species:	<u>50</u>	x 3 = <u>150</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)	FACU Species:	<u>70</u>	x 4 = <u>280</u>			
That the GBL, I how, of the	UPL Species:	<u>0</u>	x 5 = <u>0</u>			
	Column Totals:	<u>128 (A)</u>	446 (B)			
	F	Prevalence Index :	= B/A = 3.48			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
☑ 2 - Dominance Test is > 50%						
3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Vegetation Present? ☑ Yes ☐ No					
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Remarks:						



SOIL									
Profile Descri	otion: (Describe	the d	epth needed to d	docum	ent the in	ndicator o	r confirm the abser	nce of indicators.)	
Depth	Matrix		Red	dox Fe	atures		.		Domestic
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ui <i>e</i>	Remarks
0-10	10YR 2/1	100					ORGA	ANIC	MUCK
10-18	10YR 6/1	97	10YR 5/3	3	С	M	LOAMY FII	NE SAND	
1T 0. 0		-1-4:	DM Dadward	Mandadi .	00.0			21 DI	Dans Lining M. Matrix
	· · · · · · · · · · · · · · · · · · ·	•	•				or Coated Grains.		Pore Lining, M=Matrix
		cable	to all LRR's, unle			-	0) // DD D		roblematic Hydric Soils ³ :
Histosol (,			olyvali ILRA 1		Surrace (S	8) (LRR R,	_	A10) (LRR K, L, MLRA 149B)
								Redox (A16) (LRR K, L, R)	
							•		
	Sulfide (A4)			-	-		(LRR K, L)		e (S7) (LRR K, L, M)
	Layers (A5)	200 (A	_	•	Gleyed Ma	. ,		_ '	elow Surface (S8) (LRR K, L)
	Below Dark Surfa k Surface (A12)	а се (А	_	•	ed Matrix (I	,			urface (S9) (LRR K, L)
	k Surface (A12) ucky Mineral (S1)	,	_		Dark Surfa	ice (F6) irface (F7)			pese Masses (F12) (LRR K, L, R) podplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)	'	_	-	Depressio				
☐ Sandy Re			L 1	redux i	Depressio	115 (1 0)			c (TA6) (MLRA 144A, 145, 149B)
	Matrix (S6)								Material (F21)
	ace (S7) (LRR R	MID	\ 140B)						v Dark Surface (TF12) in in Remarks)
			·	مامسا			ess disturbed or prob		iii iii Keinaiks)
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No
·		_	Aquatic Diversity		neral Com	nments:			=
Wetland Quali	ty:	√	Moderate	Low			Isolated Wetland?	☐ Yes ☑	No Unknown
General Comm	nents:								







WETLAND DETE	RMINATION FORM - Northcentra	al and Northeast Region
✓ Centerline ☐ Re-Route ☐ Access	Road Ancillary Facility Transn	nission Line
Project/Site: NED	Milepost: 116532.9 County:	Hampshire Date: 06/25/2015
Applicant/Owner: Kinder Morgan	State: MA	Sampling Point: PL-M-W004-PEM
Investigators: SE Quad Nam	ne: Plainfield Township:	Plainfield
Logbook No.: 1E Logbook Pg.:	50 Tract: 930	
Landform (hillslope, terrace, etc.): Depressi	on Local Relief: 🗹 Cor	ncave
Subregion (LRR): Middle Atlantic	Lat: 42.509002 Lor	ng: -72.964993 Datum: NAD83
Soil Map Unit Name: Lyman-Tunbridge assoc	ciation, rolling, extremely stony	NWI Classification: PEM1E
Are climatic / hydrologic conditions on the site typic	cal for this time of year?: Yes N	No (If no, explain in Remarks.)
Are Vegetation	□ significantly disturbed? ✓ No Are	"Normal" Circumstances present?
Are Vegetation Soil or Hydrology	□ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach sit	te map showing sampling point loca	tions, transects, important features, etc.
Hydrophytic Vegetation Present?	∕es □ No Is th	ne Sampled Area
Hydric Soil Present?		in a Wetland? ☑ Yes ☐ No
Wetland Hydrology Present?	∕es □ No	
Field Wetland Classification: PEM		
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; che	ck all that apply)	☐ Surface Soil Cracks (B6)
☑ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
✓ High Water Table (A2)	Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
✓ Saturation (A3)	Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	✓ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	Oxidized Rhizospheres along Living Room	ts (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	✓ Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? ✓ Yes No	Depth (inches): <1	
Water Table Present? ✓ Yes No	Depth (inches): 0	Wetland Hydrology Present?
Saturation Present?	Depth (inches): 0	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage,	monitoring well, aerial photos, previous inspection	ns), if available):
VEGETATION		
Tree Stratum		
Plot Size: 30		
Scientific Name		% Cover Dominant Indicator Status
	Total Cover:	



Providence, RI 02904			- 1	
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Spiraea alba		10	YES	FACW
Spiraea tomentosa	T / 10	20	YES	FACW
	Total Cover:	30		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Typha latifolia		8	YES	OBL
Sphagnum sp Scirpus cyperinus		15 35	NA YES	NONE OBL
Carex sp		25	NA	NONE
	Total Cover:	83		
Noody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Rubus hispidus		20	YES	FACW
	Total Cover:	20		
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>43</u>	x 1 = <u>43</u>	
Total Number of Dominant	FACW Species	: <u>50</u>	x 2 = <u>100</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species	FACU Species:	. <u>0</u>	x 4 = <u>0</u>	
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:		143 (B)	
		Prevalence Index		
Lindrank, itis Variation Indicators.		- Tovaloneo maox	<u>1.01</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
☑ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic \	egetation Prese	ent? ☑ Yes [□ No
adia iii Nomano di dii a doparato dilodiy				
Darble metic Hudrophetic Versetation (Fundain)				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
grootin, unloss distribut of problematic.				
Remarks:				



T TOVIGETICE, T	W 02004																	
SOIL																		
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the ir	ndicator o	r confirm	he abser	nce o	findica	tors.)						
Depth (inches)	Matrix			Re	dox Fe	atures			Т	urc						Des	ork-	
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Text	ure					ı	ĸem	narks	
0-36									ORGA	ANIC								
¹Type: C=Cond	centration, D=De	pletio	n, RM=Re	duced	Matrix,	CS=Cov	ered Sand	l or Coated	Grains.	2	ocation	: PL=	Pore	Lining	, М	=Ma	ıtrix	
Hydric Soil Ind	licators: (Applic	cable	to all LRR'	's. unle	ess oth	nerwise n	oted.)			Ind	icators	for Pr	obler	natic	Hvd	ric (Soils	3;
Histosol (A				_			•	8) (LRR R		П	2 cm M				-			
_ `	pedon (A2)				/ILRA 1			-, (=	'		Coast							•
☐ Black Hist	. ,			Пт	hin Da	rk Surface	e (S9) (I R	R R, MLRA	(149B)									K, L, R)
	Sulfide (A4)			_				(LRR K, L)	02)		Dark S	-						, _,,
	_ayers (A5)				-	Gleyed Ma		(=:::::::::::::::::::::::::::::::::::::			Polyva			-				K 1)
_	Below Dark Surfa	ace (A	11)		-	d Matrix (Thin Da							ν, Ε)
_	k Surface (A12)		,		-	Dark Surfa	•										-	K, L, R)
_	cky Mineral (S1)						ırface (F7)					-						RA 149B)
_	eyed Matrix (S4)			_	•	o Dark Sc Depressio	` '						-					•
☐ Sandy Re				<u></u> '	LOUUX I	- opi cool0	113 (1 0)				Red Pa	-				144/	٦, 14	5, 149B)
	Matrix (S6)										Very S				•	(TE4	2)	
	` '	MID	\ 140B)							_	-					, 11 1	۷)	
_	ace (S7) (LRR R		· ·							. 🗆	Other (Exhia	11111111	Ceman	KS)			
Indicators of h	nydrophytic veget	tation a	and wetlan	d hydro	ology m	nust be pr	esent, uni	ess disturb	ed or prob	olema	tic.							
Restrictive Lay	er Present?		Yes 🗹	No	□ U	nknown												
										Hydr	ic Soil I	Prese	nt?	\checkmark	Ye	s		No
Remarks:																		
Description of I	Habitat Characte	ristics.	Aquatic D	iversity	or Ge	neral Con	nments:											
, , , , ,		,	,															
Wetland Qualit	y: 🔲 High	V	Moderate	П	Low			Isolated	Wetland?	, г	ן Yes	· 🗹	No	П	Ur	nkno	wn	
	7. - 9			_						•								
General Comm	ents:																	







WE	TLAND	DET	ERMIN	ATI	ON FORM - I	Northce	entr	al and	Nort	heast	Region		
☑ Centerline ☐ Re-R	oute	Acces	s Road		Ancillary Facility		Trans	mission Li	ne	Othe	r		
Project/Site: NED			Mile	post:	116550.2	County:		Hampshi	re		Date:	06/25/201	5
Applicant/Owner: Kinder Mo	rgan		·			State:	MA	Sa	amplin	ng Point:	PL-M-W	004-UPL	
Investigators: SE		Quad Na	me: Plai	nfield		Township):	Plainfield					_
Logbook No.: 1E	Logb	ook Pg.:	50		Tract: 930								
Landform (hillslope, terrace,	etc.):	Slope -	mid		Local Re	elief:] Cc	oncave [] Co	nvex [✓ None	Slope%.:	3
Subregion (LRR): Middl	e Atlantic			Lat:	42.509458		Lo	ong: -72	2.96514	42		Datum: NA	D83
Soil Map Unit Name: Lyi	nan-Tunbri	dge asso	ciation, re	olling,	extremely stony					NWI Clas	sification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	e site typ	oical for th	nis tim	e of year?:] Yes		No (If no,	explain	in Remar	ks.)		
Are Vegetation Soil	or Hy	/drology	☐ sig	ınificaı	ntly disturbed?	√ No	Are	e "Normal"	Circum	nstances p	oresent?	✓ Yes	☐ No
Are Vegetation	or Hy	/drology	□ na	turally	problematic?	☑ No							
SUMMARY OF FINDI	NGS - At	tach s	ite map	sho	wing samplir	ng point	loca	ations, t	trans	ects, in	nportant	t features	, etc.
Hydrophytic Vegetation Pres	ent?		Yes 🔽] No	1		1- 41	0	11 A .				
Hydric Soil Present?			Yes 🔽] No	1		with	he Samp hin a We	ied Ai tland?	rea ? □	Yes 🔽	∑ No	
Wetland Hydrology Present?			Yes 🔽] No	1								
Field Wetland Classification:	UPL	AND PLO	T										
Remarks:													
HYDROLOGY													
Wetland Hydrology Indicate	ors:								Sec	ondary In	dicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum	of one req	uired; ch	eck all tha	at app	y).					Surface S	Soil Cracks	s (B6)	
☐ Surface Water (A1)				Water	-Stained Leaves (I	B9)				Drainage	Patterns ((B10)	
☐ High Water Table (A2)				Aquat	ic Fauna (B13)					Moss Tri	m Lines (B	16)	
☐ Saturation (A3)				Marl [Deposits (B15)					Dry-Seas	son Water	Table (C2)	
■ Water Marks (B1)				Hydro	gen Sulfide Odor ((C1)				Crayfish	Burrows (0	C8)	
☐ Sediment Deposits (B2)				Oxidiz	ed Rhizospheres	along Livin	g Roo	ots (C3)		Saturatio	n Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of Reduced Iro	on (C4)						d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction in	n Tilled Soi	ils (C6	6)			hic Positio	, ,	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7)						Aquitard (D	•	
☐ Inundation Visible on A	erial Imager	y (B7)		Other	(Explain in Remar	ks)				-	ographic R		
Sparsely Vegetated Con	ncave Surfa	ace (B8)				ı				FAC-Neu	ıtral Test (I	D5)	
Field Observations:	_	_											
Surface Water Present?	Yes	✓ N	-	th (inc	•					_			
Water Table Present?	Yes	✓ N	-	th (inc	•			Wetland	Hydrol	logy Pres		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ N	о Dep	th (inc	nes):						_	.00	
Remarks (Describe Recorded	Data (strea	am gage	, monitori	ng we	ll, aerial photos, pr	evious insp	pectio	ons), if ava	ilable):	:			
VEGETATION													
Tree Stratum													
Plot Size: 30													
Scientific Name							\perp	% Cove	er	Don	ninant	Indicate	or Status
Tsuga canadensis Fagus grandifolia					Т	otal Cover	:	65 25 90			ES ES		VCN VCN



1 TOVIGETICE, IXI 02304				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Fagus grandifolia Viburnum lantanoides		20 8	YES YES	FACU FACU
Vibumum iantanoides	Total Cover:	o 28	TES	FACU
Herb Stratum				
Plot Size: 5	ı		1 5	l
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Woody Vine Stratum	Total Cover.			
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
- Colonial Tallo		70 00001	Dominant	maloator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = 0	
Total Number of Dominant	FACW Species		x 2 = <u>0</u>	
Species Across All Strata: 4 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>118</u>	x 4 = <u>472</u>	
That Ale OBL, FACW, 01 FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>118 (A)</u>	<u>472 (B)</u>	
	ı	Prevalence Index	$= B/A = \underline{4.00}$	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? ☐ Yes ☑	∐ No
data in Remarks or on a separate sheet)				
_				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, R	(1 02904								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	confirm the ab	sence of indicators.)	
Depth	Matrix		•	dox Fe					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	٦	Texture	Remarks
0-3	10YR 2/1	100					Ol	RGANIC	
3-6	5YR 5/2	100					FINE S	SANDY LOAM	
6-16	7.5YR 4/4	100					FINE S	SANDY LOAM	
16-20	10YR 4/4	100					FINE S	SANDY LOAM	
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grain		Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
☐ Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		N	/ILRA 1	(49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□ ¹	hin Da	ırk Surface	e (S9) (LRI	R R, MLRA 149E	B) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified L	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔲 🛭	Deplete	d Matrix (I	F3)		☐ Thin Dark St	urface (S9) (LRR K, L)
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐									ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	icky Mineral (S1)			Deplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)								v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	. MLRA	(149B)						in in Remarks)
_	nydrophytic vege		·	ology n	nust he nr	esent unle	es disturbed or i		,
Restrictive Lay					Inknown			F	
Restrictive Lay	er Fresent?	<u></u>	es v 140	υ °	TIKHOWH			Hydric Soil Prese	ent? ☐ Yes ☑ No
Remarks:							I		
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetla	and? 🔲 Yes 🔲	No Unknown
General Comm	ents:								





NW



WETLAND DETERMINATION FORM - Northcentral and Northeast Region										
Centerline	Transmission Line	☐ Other								
Project/Site: NED Milepost: 116631.5 County:	Hampshire	Date:	06/25/2015							
		ling Point: PL-E-W00	1-PFO							
Investigators: SE Quad Name: Plainfield Township		9								
Logbook No.: 1E Logbook Pg.: 52 Tract: 930										
Landform (hillslope, terrace, etc.): Depression Local Relief:	Concave (Convex 🔽 None	Slope%.:							
Subregion (LRR): Middle Atlantic Lat: 42.509336	Long: -72.964	764	Datum: NAD83							
Soil Map Unit Name: Tunbridge-Lyman association, steep, extremely stony		NWI Classification:	Not mapped							
Are climatic / hydrologic conditions on the site typical for this time of year?:	☐ No (If no, expla	nin in Remarks.)								
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circ	umstances present?	☑ Yes ☐ No							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No										
SLIMMARY OF FINDINGS - Attach site man showing sampling point locations, transacts, important features, etc.										
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.										
Hydrophytic Vegetation Present? ✓ Yes ☐ No	Is the Sampled	Area 🚽 🗸 🗖								
Hydric Soil Present? ✓ Yes ☐ No	within a Wetlan		No							
Wetland Hydrology Present? ✓ Yes ☐ No										
Field Wetland Classification: PFO										
Remarks: USE PL-M-W004_UPL AS REPRESENTATIVE UPLAND PLOT										
HYDROLOGY										
Wetland Hydrology Indicators:	<u>S</u>	econdary Indicators (2 c	or more required)							
Primary Indicators (minimum of one required; check all that apply)		Surface Soil Cracks	(B6)							
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9)		Drainage Patterns (B	310)							
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines (B1	6)							
✓ Saturation (A3) ☐ Marl Deposits (B15)		Dry-Season Water Ta	able (C2)							
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8	3)							
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Livin	a Roots (C3)	Saturation Visible on	Aerial imagery (C9)							
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		Stunted or Stressed	Plants (D1)							
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soi	ils (C6)	Geomorphic Position	(D2)							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	(55) 	Shallow Aquitard (D3	3)							
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		Microtopographic Re	lief (D4)							
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D	5)							
_ , , ,										
Field Observations:										
Surface Water Present?										
Water Table Present?	Wetland Hydr	rology Present? ✓	Yes □ No							
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)		V	ies 🗀 No							
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inst	pections), if available	p):								
VECETATION										
VEGETATION										
Tree Stratum Plot Size: 30										
Scientific Name	% Cover	Dominant	Indicator Status							
Prunus serotina	% Cover 8	NO	FACU							
Fagus grandifolia	35	YES	FACU							
Tsuga canadensis Betula alleghaniensis	10 25	NO YES	FACU FAC							
Total Cover	: ['] 78	, '								



Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Woody Vine Stratum				
Plot Size: 30				1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 1 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>	
	FAC Species:	<u>25</u>	x 3 = <u>75</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species	: <u>53</u>	x 4 = <u>212</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	: <u>78 (A)</u>	<u>287 (B)</u>	
		Prevalence Index	= B/A = <u>3.68</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	egetation Presei	nt? ☑ Yes 🗆] No
data in Normanic of on a departure officery				
Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: VEGETATION IS GROWING IN UPLAND ADJACENT TO A	VERY SMALL POOL			



SOIL											
JOIL											
Profile Descrip	tion: (Describe	the de	epth needed to d	docum	ent the in	dicator o	r confirm the abser	nce of indicators.)			
Depth	Matrix			dox Fe							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture	Remarks		
0-6	10YR 2/1	100					ORG	ANIC			
6-14	10YR 5/1	94	10YR 5/6	6	С	М	FINE SAN	DY LOAM			
Type: C=Conc	centration, D=De	pletion	, RM=Reduced	l Matrix,	CS=Cov	ered Sand	I or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix		
	licators: (Applic	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:		
☐ Histosol (A			•			•	8) (LRR R,		A10) (LRR K, L, MLRA 149B)		
☐ Histic Epip	·			ILRA 1		(-	-, (=,	_	Redox (A16) (LRR K, L, R)		
☐ Black Histi			ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)		
	Sulfide (A4)						(LRR K, L)		(S7) (LRR K, L, M)		
	ayers (A5)		· <u>—</u>	-	Gleyed Ma		(=: :: : : ; =)	_	elow Surface (S8) (LRR K, L)		
_	Below Dark Surfa	ace (A1	_	-	d Matrix (I				irface (S9) (LRR K, L)		
	Surface (A12)		, <u> </u>	•	Dark Surfa	•			ese Masses (F12) (LRR K, L, R)		
	cky Mineral (S1)		_			rface (F7)		_	oodplain Soils (F19) (MLRA 149B)		
	eyed Matrix (S4)		_	-	Depressio			_	c (TA6) (MLRA 144A, 145, 149B)		
Sandy Red			_			- (- /		_	Material (F21)		
Stripped №	Matrix (S6)							_	Dark Surface (TF12)		
	ace (S7) (LRR R	. MLRA	\ 149B)					_ ′	in in Remarks)		
			•	ology n	aust bo pr	noont unk	ess disturbed or prob		,		
			∕es 🗹 No	□ [∪]	nknown			Hydric Soil Prese	nt? ☑ Yes 🗆 No		
Remarks:					TIKITOWIT			Hydric Soil Prese	nt? ☑ Yes ☐ No		
	Habitat Characte		Aquatic Diversity			nments:		Hydric Soil Prese	nt? ☑ Yes ☐ No		
Description of H		ristics,	Aquatic Diversity			nments:					
Description of H		ristics,	Aquatic Diversity			nments:	Isolated Wetland?		nt? ✓ Yes □ No No □ Unknown		
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?				
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?				
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?				
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?				
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?				
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?				
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?				
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?				
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?				
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?				
Description of I	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?				
Description of I	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?				
Description of I	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?				
Remarks: Description of H Wetland Quality General Commi	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland?				
Description of I	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?				
Description of H	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		ments:	Isolated Wetland?				
Description of I	y: 🔲 High	ristics,	Aquatic Diversity	or Ge		nments:	Isolated Wetland				







WE	TLAND	DET	ERM	IINATIO	ON F	ORM -	Northc	ent	ral an	d No	ortheas	t Regi	ion		
☑ Centerline ☐ Re-R	oute	Acces	ss Roa	d 🗖	Ancilla	ary Facility		Tran	smission	Line	□ O:	her			
Project/Site: NED			N	Milepost:	1351	98.6	County:		Hamps	shire		D	ate:	06/26/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA		Sam	pling Poi	nt: PL-E	E-W00	D2-PEM	
Investigators: SE		Quad Na	ame: F	Plainfield			Townshi	ip:	Plainfi	eld					_
Logbook No.: 1E	Logb	ook Pg	.: 56		Trac	ct: 919									
Landform (hillslope, terrace, e	etc.):	Depres	ssion			Local R	Relief:	7 C	Concave		Convex	□ No	one	Slope%.:	1
Subregion (LRR): Middl	e Atlantic			Lat:	42.5	24084		L	.ong:	-72.90)2412			Datum: NAI	083
Soil Map Unit Name: Pill	sbury-Peac	cham-W	onsque	eak associ	ition, u	ındulating, e	extremely	stony	,		NWI C	lassificat	ion:	PEM1E	
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	or this time	e of ye	ar?:	7 Yes		No (If no	o, exp	lain in Rer	narks.)			
Are Vegetation Soil	or Hy	drology	, 	significar	ntly dis	turbed?	☑ No	Aı	re "Norma	al" Cir	cumstance	es presen	nt?	✓ Yes	■ No
Are Vegetation Soil	or Hy	drology	['] □	naturally	proble	ematic?	☑ No								
SUMMARY OF FINDIN	NGS - At	tach s	site m	nap sho	wing	g sampli	ng poin	t loc	cations	s, tra	nsects,	impor	tant	features	, etc.
Hydrophytic Vegetation Prese	ent?	$\overline{\checkmark}$	Yes	☐ No											
Hydric Soil Present?		\checkmark	Yes	☐ No				ls wi	the San thin a V	npled	d Area	√ Yes	s 🗆	l No	
Wetland Hydrology Present?		$\overline{\checkmark}$	Yes	☐ No				WI	umi a v	veliai	iiu :				
Field Wetland Classification:	PEM														
Remarks:															
HYDROLOGY															
Wetland Hydrology Indicato	ors:									<u> </u>	Secondary	Indicato	rs (2 d	or more requ	iired)
Primary Indicators (minimum	of one req	uired; cl	heck al	I that appl	<u>y)</u>					[Surfac	ce Soil Cr	racks	(B6)	
✓ Surface Water (A1)] Water	-Staine	ed Leaves ((B9)			[☐ Draina	age Patte	erns (E	310)	
✓ High Water Table (A2)] Aquati	ic Faur	na (B13)				[Moss	Trim Line	es (B1	6)	
✓ Saturation (A3)				Marl D	eposit	ts (B15)				[☐ Dry-S	eason Wa	ater T	able (C2)	
■ Water Marks (B1)				Hydro	gen Sı	ulfide Odor	(C1)			[☐ Crayfi	sh Burrov	ws (C	8)	
☐ Sediment Deposits (B2)				Oxidiz	ed Rh	izospheres	along Livi	ng Ro	oots (C3)	. [Satura	ation Visil	ble or	n Aerial imag	ery (C9)
☐ Drift Deposits (B3)				Prese	nce of	Reduced II	ron (C4)			[Stunte	ed or Stre	essed	Plants (D1)	
☐ Algal Mat or Crust (B4)				Recen	t Iron	Reduction i	in Tilled So	oils (C	26)	[√ Geom	orphic Po	ositior	n (D2)	
☐ Iron Deposits (B5)				Thin M	/luck S	Surface (C7))			[Shallo	w Aquita	rd (D	3)	
☐ Inundation Visible on A	rial Imager	y (B7)		Other	(Expla	in in Rema	rks)			[☐ Micro	opograph	hic Re	elief (D4)	
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)									₹ FAC-I	Neutral Te	est (D	95)	
Field Observations:															
Surface Water Present?	✓ Yes	□ N	No [Depth (incl	nes):	<1									
Water Table Present?	✓ Yes	□ 1	No [Depth (incl	nes):	0			Wetlan	nd Hyd	drology P	resent?	<u></u>	Vac 🗆	No
Saturation Present? (includes capillary fringe)	✓ Yes	□ ¹	No E	Depth (incl	nes):	0							V	Yes □	NO
Remarks (Describe Recorded	Data (strea	am gage	e, moni	itoring wel	ll, aeria	al photos, p	revious ins	spect	ions), if a	availab	ole):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Co	over		Oominant	:	Indicato	or Status
						-	Total Cove	er:							



				1 6 1 6 1 1 1 1 1
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name	ĺ	% Cover	Dominant	Indicator Status
			NO	OBL
Carex lurida Carex scoparia		10 12	NO NO	FACW
Carex crinita Euthamia graminifolia		60 6	YES NO	OBL FAC
Glyceria striata		35	YES	OBL
Onoclea sensibilis		8	NO	FACW
	Total Cover:	131		
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	<u>105</u>	x 1 = 105	
Total Number of Dominant	FACW Species		x 2 = 40	
Species Across All Strata: 2 (B)	FAC Species:	. <u>20</u> <u>6</u>	$x = \frac{18}{18}$	
Percent of Dominant Species	•			
That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:		x 4 = 0	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>131 (A)</u>	<u>163 (B)</u>	
	I	Prevalence Index =	= B/A = <u>1.24</u>	
Hydrophytic Vegetation Indicators:				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Preser	nt? ☑ Yes [] No
data in Remarks or on a separate sheet)	,	ogotamom recon	🔄 103 🗜	_ 110
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Demorks				
Remarks:				



T TOVIGETICE, I	11 02004									
SOIL										
Profile Descrip	tion: (Describe	the d	epth needed to	docum	ent the in	ndicator o	r confirm the abse	nce of indicators.)		
Depth	Matrix		Red	dox Fe	atures		_			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Tex	tture	Remarks	
0-22	10YR 2/1	100					ORG	ANIC		
22-26	10YR 4/1	97	10YR 4/3	3	С	M	LOAMY F	INE SAND		
22-20	10110 4/1	91	1011(4/3	3		IVI	LOAWITI	INE SAND		
		L								
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	=Pore Lining, M=Matrix	
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:	
☐ Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)	
Histic Epip	pedon (A2)		IV	ILRA 1	149B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)	
■ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)	
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1) ((LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)	
☐ Stratified I	_ayers (A5)		-	-	Gleyed Ma			☐ Polyvalue B	elow Surface (S8) (LRR K, L)	
	Below Dark Surfa	ace (A1		•	d Matrix (I	` ,			urface (S9) (LRR K, L)	
	k Surface (A12)		· —	-	Dark Surfa	-		_	nese Masses (F12) (LRR K, L, R)	
_	icky Mineral (S1)		_			urface (F7)		_	oodplain Soils (F19) (MLRA 149B)	
	eyed Matrix (S4)		_	•	Depressio	, ,				
	. ,		Ц ,	COUX I	nehies910	113 (1 0)			c (TA6) (MLRA 144A, 145, 149B)	
								_	Material (F21)	
	Matrix (S6)							= '	v Dark Surface (TF12)	
□ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks)										
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.		
Remarks:										
Description of Habitat Characteristics, Aquatic Diversity or General Comments:										
Wetland Qualit	y: High	V	Moderate	Low			Isolated Wetland	? ☐ Yes 🗹	No 🔲 Unknown	
General Comm	ents:									





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WETLAND DETERMINATION FORM - North	central and Northeast Region						
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐	Transmission Line						
Project/Site: NED Milepost: 135228.3 County	: Hampshire Date: 06/26/2015						
Applicant/Owner: Kinder Morgan State:	MA Sampling Point: PL-E-W002-PFO						
Investigators: SE Quad Name: Plainfield Towns	nip: Plainfield						
Logbook No.: 1E Logbook Pg.: 58 Tract: 919							
Landform (hillslope, terrace, etc.): Stream fringe Local Relief:	☑ Concave ☐ Convex ☐ None Slope%.: 1						
Subregion (LRR): Middle Atlantic Lat: 42.524535	Long: -72.902413 Datum: NAD83						
Soil Map Unit Name: Pillsbury-Peacham-Wonsqueak assocition, undulating, extremely	stony NWI Classification: Not mapped						
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? 🔽 No	Are "Normal" Circumstances present? ✓ Yes No						
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No							
SUMMARY OF FINDINGS - Attach site map showing sampling point	nt locations, transects, important features, etc.						
Hydrophytic Vegetation Present? ✓ Yes □ No	, , , , , , , , , , , , , , , , , , ,						
Hydric Soil Present? ✓ Yes ☐ No	Is the Sampled Area						
Wetland Hydrology Present?	within a Wetland? ☑ Yes ☐ No						
Field Wetland Classification: PFO							
Remarks:							
Tomano.							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)						
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)						
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)						
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)						
☐ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)						
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)						
Sediment Deposits (B2) Oxidized Rhizospheres along Liv							
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)						
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled S	_						
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)						
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	✓ Microtopographic Relief (D4)						
☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)							
Field Observations:							
Surface Water Present?							
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ✓ Yes □ No						
Saturation Present? Yes V No Depth (inches): (includes capillary fringe)	E les 🗆 No						
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous in	nspections), if available):						
VEGETATION							
Tree Stratum							
Plot Size: 30							
Scientific Name	% Cover Dominant Indicator Status						
Betula alleghaniensis	65 YES FAC						
Acer rubrum Tsuga canadensis	20 NO FAC 55 YES FACU						
Total Cov	er: 140						



Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		ı	I
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
		70 0010.	20	maradia. Granda
	Total Cover:	l	l	I
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:	ı		ı
Dominance Test Worksheet:	Prevalence In	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>	
	FAC Species:	<u>85</u>	x 3 = <u>255</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)	FACU Species	: <u>55</u>	x 4 = <u>220</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals	: <u>140 (A)</u>	<u>475 (B)</u>	
		Prevalence Index	= B/A = <u>3.39</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	Vegetation Preser	nt? ☑ Yes 🛚	□ No
data in Nontaino of on a coparate choosy				
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: SURFACE ROOT SYSTEMS				
Nemarks. Soft ACE ROOT STOTEING				



Profile Description: (Describe the depth needed to document the indicator or confirm the absence of indicators.) Depth
Depth (inches)
Color (moist)
10YR 2/2
2-8
8-14 10YR 5/1 94 10YR 4/4 3 C M SILT LOAM Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. *Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.)
8-14 10YR 5/1 94 10YR 4/4 3 C M SILT LOAM Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. *Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.)
T.5YR 3/3 3 C M
T.5YR 3/3 3 C M
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. *Location: PL=Pore Lining, M=Matrix Histosol (A1)
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Histosol (A1)
Histosol (A1)
Histosol (A1)
Histic Epipedon (A2)
Black Histic (A3)
□ Hydrogen Sulfide (A4) □ Loamy Mucky Mineral (F1) (LRR K, L) □ Dark Surface (S7) (LRR K, L, M) □ Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Polyvalue Below Surface (S8) (LRR K, L) □ Depleted Below Dark Surface (A11) ☑ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Other (Explain in Remarks) □ Other (Explain in Remarks) □ No □ Unknown ROCK □ Very Shallow Dark Surface (TF12) □ No □ Unknown Hydric Vegetation and wetland hydrology must be present, unless disturbed or problematic. **Restrictive Layer Present? ☑ Yes □ No □ Unknown Hydric Soil Present? ☑ Yes □ No □ Unknown Wetland Quality: □ High ☑ Moderate □ Low Isolated Wetland? □ Yes ☑ No □ Unknown □ Unknown
□ Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Polyvalue Below Surface (S8) (LRR K, L) □ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Iron-Manganese Masses (F12) (LRR K, L, R) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Piedmont Floodplain Soils (F19) (MLRA 149B) □ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Sandy Redox (S5) □ Red Parent Material (F21) □ Stripped Matrix (S6) □ Very Shallow Dark Surface (TF12) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Jank Surface (S7) (LRR R, MLRA 149B) □ Jank Surface (S7) (LRR R, MLRA 149B) □ Dark Surface (S7) (LRR R, MLRA 149B) □ Dark Surface (S8) (LRR K, L) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149B) □ Very Shallow Dark Surface (TF12) □ Other (Explain in Remarks) □ Other (Explain in Remarks) □ No □ Unknown □ Hydric Soil Present? □ Yes □ No □ No □ Unknown
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Other (Explain in Remarks) Parentry Soil Present? Yes No Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown
Thick Dark Surface (A12)
Sandy Mucky Mineral (S1)
Sandy Gleyed Matrix (S4)
Sandy Redox (S5)
Stripped Matrix (S6)
Dark Surface (S7) (LRR R, MLRA 149B)
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present?
Restrictive Layer Present?
ROCK 14 Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes Yes No Unknown Unknown
Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown
Remarks: Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality:
Description of Habitat Characteristics, Aquatic Diversity or General Comments: Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown
Wetland Quality: ☐ High ☑ Moderate ☐ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown
Wetland Quality: ☐ High ☑ Moderate ☐ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown
Wetland Quality: ☐ High ☑ Moderate ☐ Low Isolated Wetland? ☐ Yes ☑ No ☐ Unknown
General Comments:





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WETLAND DETERMINATION FORM - Northcentral and Northeast Region								
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Tra	ansmission Line							
Project/Site: NED Milepost: 135327.2 County:	Hampshire Date: 06/26/2015							
Applicant/Owner: Kinder Morgan State: MA	A Sampling Point: PL-E-W002-UPL							
Investigators: SE Quad Name: Plainfield Township:	Plainfield							
Logbook No.: 1E Logbook Pg.: 56 Tract: 919								
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave 🗹 Convex 🔲 None Slope%.: 2							
Subregion (LRR): Middle Atlantic Lat: 42.524557	Long: -72.902045 Datum: NAD83							
Soil Map Unit Name: Pillsbury-Peacham-Wonsqueak assocition, undulating, extremely stor	ny NWI Classification: Not mapped							
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes No							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No								
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present? ☐ Yes ☑ No								
Hydric Soil Present?	s the Sampled Area vithin a Wetland? □ Yes ☑ No							
Wetland Hydrology Present? ☐ Yes ☑ No	vitilii a Wetianu?							
Field Wetland Classification: UPLAND PLOT								
Remarks:								
LIVEROLOGY								
HYDROLOGY	Secondary Indicators (2 or more required)							
Wetland Hydrology Indicators:	_							
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)							
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)							
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)							
☐ Saturation (A3) ☐ Marl Deposits (B15)	Dry-Season Water Table (C2)							
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)							
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living I	Roots (C3) Saturation Visible on Aerial imagery (C9)							
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)							
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	(C6) Geomorphic Position (D2)							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)							
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)								
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)							
Field Observations:								
Surface Water Present? ☐ Yes 🗸 No Depth (inches):								
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?							
Saturation Present?	☐ Yes ☑ No							
(includes capillary fringe)								
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspec	ctions), if available):							
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name	% Cover Dominant Indicator Status							
Tsuga canadensis	80 YES FACU							
Betula alleghaniensis Populus grandidentata	6 NO FAC 25 YES FACU							
Picea glauca	12 NO FACU							
Total Cover:	123							



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Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
- Coleman Name		70 Cover	Dominant	Indicator Status
	Total Cayor:			
W I V O	Total Cover:			
Woody Vine Stratum				
Plot Size: 30	1		1	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Causes			
	Total Cover:			
Dominance Test Worksheet:		dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)	Total % Cover		Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 2 (B)	FACW Species	s: <u>0</u>	x 2 = <u>0</u>	
	FAC Species:	<u>6</u>	x 3 = <u>18</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species	: <u>117</u>	x 4 = <u>468</u>	
114.7.10 022,17.011, 5.17.10.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>123 (A)</u>	486 (B)	
		Prevalence Index :	= B/A = 3.95	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
-				
I —	Hydrophytic \	Vegetation Preser	142	7 No.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	пушторпушс	vegetation Fresei	nt? ☐ Yes ☑	∐ NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



Providence, R	(1 02904									
SOIL										
Profile Descrip	tion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	confirm the	absence of indicators.)		
Depth	Matrix		-		atures			•		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Texture	Remarks	
0-4	7.5YR 3/2	100					(ORGANIC		
4-8	10YR 2/1	100					VERY FI	NE SANDY LOAM		
8-12	10YR 4/4	100					FINE	SANDY LOAM		
12-18	2.5Y 4/4	97	2.5Y 5/6	3	С	M	FINE	SANDY LOAM		
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated Gra	ains. ² Location: PL=	Pore Lining, M=Matrix	
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:	
☐ Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)	
☐ Histic Epip	pedon (A2)		IV	ILRA 1	49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)	
■ Black Hist	ic (A3)		П Т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149	9B) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)	
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1) (LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)	
☐ Stratified L	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)	
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thin Dark Surface (S9) (LRR K, L)										
☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R)										
☐ Sandy Mu	icky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	podplain Soils (F19) (MLRA 149B)	
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)	
☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)	
☐ Stripped N	Matrix (S6)								v Dark Surface (TF12)	
	ace (S7) (LRR R	. MLRA	(149B)						in in Remarks)	
_			•	ology n	nust he nr	esent unle	es disturbed o		,	
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer Present? ☐ Yes ✓ No ☐ Unknown										
Restrictive Lay	er Fresent?	U '	es V 140	⊔ °	TIKHOWH			Hydric Soil Prese	nt? ☐ Yes ☑ No	
Remarks:										
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:				
Wetland Qualit	y: High		Moderate	Low			Isolated Wet	tland?	No 🔲 Unknown	
General Comm	ents:									





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WETLAND DETERMINATION FORM -	Northcentral and Northeast Region							
☐ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other							
Project/Site: NED Milepost: 144493.4	County: Franklin Date: 07/07/2015							
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: AS-M-W002-PSS							
Investigators: CM Quad Name: Ashfield	Township: Ashfield							
Logbook No.: 4M Logbook Pg.: 86 Tract: 11968								
Landform (hillslope, terrace, etc.): Depression Local R	elief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 1							
Subregion (LRR): Middle Atlantic Lat: 42.528626	Long: -72.868481 Datum: NAD83							
Soil Map Unit Name: Peru fine sandy loam, 3 to 8 percent slopes, very stony	NWI Classification: Not mapped							
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	No Are "Normal" Circumstances present? ☑ Yes ☐ No							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	☑ No							
SUMMARY OF FINDINGS - Attach site map showing sampling	ng point locations, transects, important features, etc.							
Hydrophytic Vegetation Present?								
Hydric Soil Present? ☑ Yes ☐ No	Is the Sampled Area							
Wetland Hydrology Present? ☑ Yes ☐ No	William a Wellana.							
Field Wetland Classification: PSS								
Remarks:								
HYDROLOGY								
	Secondary Indicators (2 or more required)							
Wetland Hydrology Indicators:	Surface Soil Cracks (B6)							
Primary Indicators (minimum of one required; check all that apply)	Drainaga Pattarna (B40)							
☐ Surface Water (A1) ☐ Water-Stained Leaves (
High Water Table (A2) Aquatic Fauna (B13)	<u> </u>							
✓ Saturation (A3) ☐ Marl Deposits (B15)	Crowtish Purrous (C9)							
Water Marks (B1) Hydrogen Sulfide Odor	Caturation Visible on Assisting conv. (CO)							
Sediment Deposits (B2) Oxidized Rhizospheres	Churtod or Chronold Plants (D1)							
☐ Drift Deposits (B3) ☐ Presence of Reduced In	Communication (DO)							
Algal Mat or Crust (B4) Recent Iron Reduction i	· ,							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)							
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remains)								
Sparsely Vegetated Concave Surface (B8)								
Field Observations:								
Surface Water Present?								
Water Table Present?	Wetland Hydrology Present?							
Saturation Present? ☑ Yes ☐ No Depth (inches): 0 (includes capillary fringe)	⊻ Yes □ No							
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, p	evious inspections), if available):							
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name	% Cover Dominant Indicator Status							
ī	otal Cover:							



Providence, RI 02904			- 1	-140///
apling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Spiraea alba		40	YES	FACW
Salix interior /iburnum dentatum		10 10	NO NO	FACW FAC
Prunus serotina		10	NO	FACU
	Total Cover:	70		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Solidago rugosa		20	YES	FAC
Carex intumescens Lysimachia terrestris		15 10	YES NO	FACW OBL
Euthamia caroliniana		15	YES	FAC
Onoclea sensibilis		10	NO	FACW
	Total Cover:	70		
Voody Vine Stratum				
Plot Size: 30	1		ı	1
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)	Total % Cover	of:	Multiply by:	
THAT ARE OBL, FACW, OF FAC.	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Fotal Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>75</u>	x 2 = <u>150</u>	
species Acioss Ali Stiata.	FAC Species:	<u>45</u>	x 3 = <u>135</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	: <u>10</u>	x 4 = 40	
THAT ARE OBL, FACW, OF FAC.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	140 (A)	335 (B)	
		Prevalence Index	= B/A = <u>2.39</u>	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0	Handran basi'a N	/		7 No.
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic V	egetation Prese	nt? ☑ Yes [_l No
·				
Problematic Hydrophytic Vegetation¹ (Explain)				
_				
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<u> </u>				
Remarks:				



Depth (inches) 0-1 1-12 Type: C=Concen Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Bela Thick Dark Si	Matrix Color (moist) 10YR 2/1 10YR 4/1 entration, D=Docators: (Appliant)	% (100 35 sepletion, F	Red Color (moist) 10YR 6/1 10YR 5/6	docum dox Fe:	Type ¹	Loc ²	r confirm the absen Text	ure	Remarks
Depth (inches) O-1 1-12 Type: C=Concen Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Bel Thick Dark Si Sandy Mucky Sandy Gleye Sandy Redoo Stripped Mat Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Hat	Matrix Color (moist) 10YR 2/1 10YR 4/1 entration, D=Docators: (Appliant)	% (100 35 sepletion, F	Red Color (moist) 10YR 6/1 10YR 5/6	dox Fe	Type ¹		Text	ure	
Depth (inches) 0-1 1-12 Type: C=Concen Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Bel Thick Dark Si Sandy Mucky Sandy Gleye Sandy Redoo Stripped Mat Dark Surface Indicators of hydi Restrictive Layer Remarks: Description of Hat Wetland Quality:	Matrix Color (moist) 10YR 2/1 10YR 4/1 entration, D=Docators: (Appliant)	% (100 35 sepletion, F	Red Color (moist) 10YR 6/1 10YR 5/6	dox Fe	Type ¹		Text	ure	
0-1 1-12 Type: C=Concen Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Beli Thick Dark Si Sandy Mucky Sandy Gleye Sandy Redoo Stripped Mat Dark Surface Indicators of hydi Restrictive Layer Remarks: Description of Hat Wetland Quality:	10YR 2/1 10YR 4/1 entration, D=Docators: (Applied) 1) edon (A2)	100 35 epletion, F	10YR 6/1 10YR 5/6	60	D	Loc²			Remarks
1-12 Type: C=Concen Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Bela Thick Dark Si Sandy Mucky Sandy Gleye Sandy Redox Dark Surface Indicators of hydi Restrictive Layer Remarks: Description of Hat	10YR 4/1 entration, D=Docators: (Appliance) 1) edon (A2)	35 epletion, F	10YR 5/6				ORGA	ANIC	
**Type: C=Concen Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Bele Thick Dark Si Sandy Mucky Sandy Redox Stripped Mat Dark Surface Indicators of hydi Restrictive Layer Description of Hat Wetland Quality:	entration, D=Do cators: (Appli 1) edon (A2)	epletion, F	10YR 5/6						
Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Bell Thick Dark Si Sandy Mucky Sandy Redoo Stripped Mat Dark Surface Indicators of hydi Restrictive Layer Description of Hat Wetland Quality:	cators: (Appli 1) edon (A2)		RM=Reduced		С	M M	LOAMY	SAND	
Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Beld Thick Dark Si Sandy Mucky Sandy Redoo Stripped Mat Dark Surface Indicators of hydrogen Remarks: Description of Hate Wetland Quality:	1) edon (A2)	cable to a		Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Histic Epiped Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Bel Thick Dark Si Sandy Mucky Sandy Gleye Sandy Redox Dark Surface Indicators of hydr Restrictive Layer Description of Hat Wetland Quality:	edon (A2)		all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pi	roblematic Hydric Soils³:
Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Bel Thick Dark Si Sandy Mucky Sandy Gleye Sandy Redox Stripped Mat Dark Surface Indicators of hydr Restrictive Layer Remarks: Description of Hat			□Р	Polyvalu	ue Below S	Surface (S	8) (LRR R,	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black Histic (Hydrogen Su Hydrogen Su Stratified Lay Depleted Beli Thick Dark Si Sandy Mucky Sandy Redoo Stripped Mat Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Hat Wetland Quality:				/ILŔA 1		,			e Redox (A16) (LRR K, L, R)
Hydrogen Su Stratified Lay Depleted Beli Thick Dark Si Sandy Mucky Sandy Redoo Stripped Mat Dark Surface Indicators of hydr Restrictive Layer Description of Hat Wetland Quality:			Пт	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
Stratified Lay Depleted Beld Thick Dark Sill Sandy Mucky Sandy Gleye Sandy Redox Stripped Mat Dark Surface Indicators of hydi Restrictive Layer Remarks: Description of Hat Wetland Quality:						neral (F1) (•		e (S7) (LRR K, L, M)
Depleted Bell Thick Dark Si Sandy Mucky Sandy Gleye Sandy Redox Stripped Mat Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Hat Wetland Quality:			· 	-	Gleyed Ma			_	elow Surface (S8) (LRR K, L)
☐ Thick Dark Si☐ Sandy Mucky☐ Sandy Gleye☐ Sandy Redood Stripped Mat☐ Dark Surface Indicators of hydrace Indicators of hydrace Remarks: Description of Hat Wetland Quality:	elow Dark Surf	ace (A11)	_	•	d Matrix (f	` '			urface (S9) (LRR K, L)
□ Sandy Mucky □ Sandy Gleye □ Sandy Redoo □ Stripped Mat □ Dark Surface ³Indicators of hyde Restrictive Layer Remarks: Description of Hat Wetland Quality:	Surface (A12)	()	_		Dark Surfa	•		_	nese Masses (F12) (LRR K, L, R)
Sandy Gleye Sandy Redox Stripped Mat Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Hat	cky Mineral (S1)	_			rface (F7)		_ `	podplain Soils (F19) (MLRA 149B)
Sandy Redox Stripped Mat Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Hat Wetland Quality:	•				Depressio				c (TA6) (MLRA 144A, 145, 149B)
Stripped Mat Dark Surface Indicators of hyd Restrictive Layer Remarks: Description of Hat Wetland Quality:			_		.,	- (- /			Material (F21)
Dark Surface 3Indicators of hyde Restrictive Layer Remarks: Description of Hat Wetland Quality:	atrix (S6)								v Dark Surface (TF12)
3Indicators of hydrace Restrictive Layer Remarks: Description of Hat Wetland Quality:		MIRA 1	49B)						in in Remarks)
Restrictive Layer Remarks: Description of Hat Wetland Quality:			•	ology w	aust bo pr	ocent unle	and disturbed or prob		
Wetland Quality:									
	abitat Characte	eristics, Aq	quatic Diversity	or Ge	neral Com	nments:			
General Comment	: High	✓ Mod	derate	Low			Isolated Wetland?	Yes 🗆	No 🗹 Unknown
	ents:								







WETLAND DETERMINA	TION FORM - Nor	rthcentral and N	lortheast Region					
	☐ Ancillary Facility	Transmission Line						
Project/Site: NED Milepo		unty: Franklin	Date:	07/08/2015				
Applicant/Owner: Kinder Morgan	Sta	ate: MA San	npling Point: AS-M-W	002-UPL				
Investigators: CM Quad Name: Ashfie	ld Tov	wnship: Ashfield						
Logbook No.: 4M Logbook Pg.: 87	Tract: 11968							
Landform (hillslope, terrace, etc.): Slope - mid	Local Relief:	☐ Concave ☑	Convex None	Slope%.: 3				
Subregion (LRR): Middle Atlantic	Lat: 42.528686	Long: -72.8	368194	Datum: NAD83				
Soil Map Unit Name: Peru fine sandy loam, 3 to 8 perce	nt slopes, very stony		NWI Classification:	Not mapped				
Are climatic / hydrologic conditions on the site typical for this	time of year?: Y	res No (If no, ex	plain in Remarks.)					
Are Vegetation Soil □ or Hydrology □ signil	ficantly disturbed?	No Are "Normal" C	ircumstances present?	✓ Yes □ No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ natur	rally problematic? ✓	No						
SUMMARY OF FINDINGS - Attach site map s	showing sampling p	ooint locations, tr	ansects, important	t features, etc.				
Hydrophytic Vegetation Present? ☐ Yes ☑	No							
Hydric Soil Present? ☐ Yes ☑	No	Is the Sample within a Wetla	II VAC IV	∐ No				
Wetland Hydrology Present? ☐ Yes ☑	No	Within a Work						
Field Wetland Classification: UPLAND PLOT								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:			Secondary Indicators (2	or more required)				
Primary Indicators (minimum of one required; check all that	annly)		☐ Surface Soil Cracks	s (B6)				
	ater-Stained Leaves (B9)		☐ Drainage Patterns (B10)				
-			☐ Moss Trim Lines (B					
_	quatic Fauna (B13)		☐ Dry-Season Water	•				
	arl Deposits (B15)		☐ Crayfish Burrows (C					
	drogen Sulfide Odor (C1)	a Livina Boots (C2)	_ :	n Aerial imagery (C9)				
	kidized Rhizospheres along		☐ Stunted or Stressed	3 , (,				
	esence of Reduced Iron (C ecent Iron Reduction in Tille	•	☐ Geomorphic Position	` ,				
		ed Solis (Cb)	☐ Shallow Aquitard (□	,				
	nin Muck Surface (C7)		☐ Microtopographic R					
	her (Explain in Remarks)		FAC-Neutral Test (I	, ,				
Sparsely Vegetated Concave Surface (B8)								
Field Observations:								
Surface Water Present? ☐ Yes ☑ No Depth	(inches):							
Water Table Present? ☐ Yes ☑ No Depth	(inches):	Wetland H	ydrology Present?					
Saturation Present?	(inches):			Yes ☑ No				
Remarks (Describe Recorded Data (stream gage, monitoring	well, aerial photos, previou	us inspections), if availa	able):					
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name		% Cover	Dominant	Indicator Status				
-								
	Total (Cover:	1	ı				



Providence, Ri 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Viburnum dentatum Spiraea alba Populus grandidentata		5 5 5	YES YES YES	FAC FACW FACU
	Total Cover:	15		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Fragaria virginiana		20	YES	FACU
Pteridium aquilinum	Total Cover:	80 100	YES	FACU
Manada Vina Charlesan	Total Cover.	100		
Woody Vine Stratum Plot Size: 30				
	1	0/ Cover	Dominant	Indicator Status
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	Total % Cover of	of:	Multiply by:	
That Are OBL, I ACW, OF I AC.	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species:	: <u>5</u>	x 2 = <u>10</u>	
	FAC Species:	<u>5</u>	x 3 = <u>15</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)	FACU Species:	<u>105</u>	x 4 = <u>420</u>	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>115 (A)</u>	<u>445 (B)</u>	
	F	Prevalence Index =	= B/A = 3.87	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? 🗌 Yes 🛭	☑ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	I			



	(1 0200+								The second second second			
SOIL												
Profile Descrip	otion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	r confirm the abs	ence of indicators.))			
Depth	Matrix		Redox Features				_					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	le	exture	Remarks			
0-3	10YR 3/2	100					LOAMY CO	DARSE SAND				
3-8	10YR 4/6	100					LOAMY CO	DARSE SAND				
							20,	5, to _				
9.46	7.5YR 5/4	100					LOAMY	FINE CAND				
8-16	7.51K 5/4	100					LOAMY	FINE SAND				
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. ² Location: PL=Pore Lining, M=Matrix												
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :												
☐ Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)			
☐ Histic Epip	pedon (A2)		N	ILRA 1	149B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)			
☐ Black Histic (A3) ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L												
	Sulfide (A4)		_				(LRR K, L)	= '	e (S7) (LRR K, L, M)			
	Layers (A5)			-	Gleyed Ma		(—····, — /		elow Surface (S8) (LRR K, L)			
	Below Dark Surfa	ace (Δ1		-	-							
		ace (A i	_	-	d Matrix (I	•		_	urface (S9) (LRR K, L)			
_	k Surface (A12)		_		Dark Surfa			_	Iron-Manganese Masses (F12) (LRR K, L, R)			
_	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)			
☐ Sandy Gle	eyed Matrix (S4)		□ F	edox l	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)			
☐ Sandy Re	dox (S5)							□ Red Parent	Material (F21)			
☐ Stripped N	Matrix (S6)							□ Very Shallov	w Dark Surface (TF12)			
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)			
3Indicators of h	nvdrophytic veae	tation a	and wetland hydro	loav n	nust be pr	esent. unle	ess disturbed or pr	oblematic.				
Restrictive Lay					Inknown	<u> </u>	<u>.</u>					
Restrictive Lay	er Fresent?	ш	ies 🔽 No		IIKIIOWII							
								Hydric Soil Prese	ent? ☐ Yes ☑ No			
Remarks:												
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:						
Wetland Qualit	v. 🗖 High		Moderate	ΟW			Isolated Wetland	d? □ Yes □	No Unknown			
Welland Quant	y. 🔲 iligii	ш.	vioderate	_0**			isolatea Wetlani	u: [] 163 []	No Chikhowh			
General Comm	ents:											





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WETLAND DETERMINATION FORM - Northce	entral and Northeast Region				
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ T	ransmission Line				
Project/Site: NED Milepost: 144978.6 County:	Franklin Date: 07/08/2015				
Applicant/Owner: Kinder Morgan State: 1	MA Sampling Point: AS-M-W003-PSS				
Investigators: CM Quad Name: Ashfield Township	: Ashfield				
Logbook No.: 4M Logbook Pg.: 92 Tract: 11968					
Landform (hillslope, terrace, etc.): Slope - mid Local Relief: ✓	Concave Convex None Slope%.: 1				
Subregion (LRR): Middle Atlantic Lat: 42.528947	Long: -72.866731 Datum: NAD83				
Soil Map Unit Name: Peru fine sandy loam, 3 to 8 percent slopes, very stony	NWI Classification: Not mapped				
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, explain in Remarks.)				
Are Vegetation ✓ Soil ☐ or Hydrology ☐ significantly disturbed? ☐ No	Are "Normal" Circumstances present? ✓ Yes No				
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No					
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations, transects, important features, etc.				
Hydrophytic Vegetation Present?	Is the Sampled Area				
Hydric Soil Present?	within a Wetland? Yes No				
Wetland Hydrology Present?					
Field Wetland Classification: PSS					
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)				
□ Surface Water (A1) □ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)				
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)				
☐ Saturation (A3) ☐ Marl Deposits (B15)	□ Dry-Season Water Table (C2)				
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)				
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	Living Roots (C3) Saturation Visible on Aerial imagery (C9)				
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Chunted or Chrosped Diante (D4)				
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soil	s (C6) Geomorphic Position (D2)				
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)				
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)				
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations					
Field Observations: Surface Water Present? □ Yes ☑ No Depth (inches):					
	Wetland Hydrology Present?				
	Wettand Hydrology Present? ✓ Yes □ No				
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)					
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	pections), if available):				
VEGETATION					
Tree Stratum					
Plot Size: 30					
Scientific Name	% Cover Dominant Indicator Status				
Total Cover:					



Providence, RI 02904				ALCOM			
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Prunus serotina Spiraea alba		5 25	NO YES	FACU FACW			
Viburnum dentatum		20	YES	FACW			
	Total Cover:	50					
Herb Stratum							
Plot Size: 5							
Scientific Name		% Cover	Dominant	Indicator Status			
Thelypteris noveboracensis		40	YES	FAC			
Fragaria virginiana Euthamia caroliniana		10 20	NO YES	FACU FAC			
Solidago gigantea Onoclea sensibilis		15 10	NO NO	FACW FACW			
Onociea sensibilis	Total Cover:	95	NO	I AOW			
Woody Vine Stratum							
Plot Size: 30							
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:			1			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:					
Number of Dominant Species	Total % Cover	of:	Multiply by:				
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>50</u>	x 2 = <u>100</u>				
Species Across All Strata: 4 (B)	FAC Species:	<u>80</u>	x 3 = <u>240</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)	FACU Species:	<u>15</u>	x 4 = <u>60</u>				
That the OBE, I NOW, OI THO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	<u>145 (A)</u>	<u>400 (B)</u>				
	Prevalence Index = B/A = 2.76						
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic Vegetation Present? ☑ Yes ☐ No						
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
Remarks:							



SOIL									
Profile Descri	ption: (Describe	the d	epth needed to	docum	ent the ir	ndicator o	r confirm the absen	ce of indicators.)	
Depth	Matrix		Re	dox Fe	atures		_		5
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Text	ure	Remarks
0-1	10YR 2/1	100					ORGA	NIC	
1-12	10YR 4/1	35	10YR 6/1 10YR 5/6	60 5	D C	M M	LOAMY	SAND	
¹Type: C=Con	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil In	dicators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
☐ Histosol (A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epi	pedon (A2)		N	/ILRA 1	149B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
☐ Black His	tic (A3)		П 1	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydroger	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	11) 🗹 🖸	Peplete	d Matrix (F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Da	k Surface (A12)		☐ F	Redox [Dark Surfa	ace (F6)		✓ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy M	ucky Mineral (S1)			Peplete	d Dark Su	urface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy G	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Sur	face (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of	hydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	lematic.	
Remarks:								Hydric Soil Prese	nt? ☑ Yes ☐ No
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qual	ty:	7 1	Moderate	Low			Isolated Wetland?	☐ Yes 🗹	No Unknown
General Comm	nents:								





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WET	AND DI	ETERN	IINATI	ON FORM - I	Northce	entral an	d No	ortheast	Region	ı	
☑ Centerline ☐ Re-Rout	e 🗖 Ad	ccess Roa	d 🗖	Ancillary Facility		Transmission	Line	☐ Oth	er		
Project/Site: NED		1	Milepost:	145018.0	County:	Frankl	lin		Date:	07/08/201	15
Applicant/Owner: Kinder Morga	n				State:	MA	Samp	oling Point	AS-M-W	003-UPL	
Investigators: CM	Quad	d Name:	Ashfield		Township	o: Ashfie	eld				
Logbook No.: 4M	Logbook	Pg.: 93		Tract: 11968							
Landform (hillslope, terrace, etc.	: Slo	pe - mid	·	Local R	elief:	Concave	$\overline{\checkmark}$	Convex	☐ None	Slope%.:	3
Subregion (LRR): Middle A	lantic		Lat:	42.529013		Long:	-72.86	6599		Datum: NA	D83
Soil Map Unit Name: Peru f	ne sandy loa	am, 3 to 8	percent s	lopes, very stony				NWI Cla	assification:	Not ma	apped
Are climatic / hydrologic condition	ns on the site	e typical fo	or this time	e of year?:	7 Yes	☐ No (If n	o, expl	ain in Rema	arks.)		
Are Vegetation ✓ Soil □	or Hydrol	ogy 🔲	significar	ntly disturbed?	☐ No	Are "Norma	al" Circ	cumstances	present?	✓ Yes	□ No
Are Vegetation	or Hydrol	ogy 🗖	naturally	problematic?	☑ No						
SUMMARY OF FINDING	S - Attac	h site n	nap sho	wing samplir	ng point	locations	s, traı	nsects, i	mportan	t features	, etc.
Hydrophytic Vegetation Present		Yes	☑ No	1		1- 41- 0					
Hydric Soil Present?	[Yes	☑ No	1		Is the San within a V	npied Vetlan	nd?] Yes 🖸	∑ No	
Wetland Hydrology Present?		Yes	☑ No	1							
Field Wetland Classification:	UPLAND	PLOT									
Remarks:											
HYDROLOGY											
Wetland Hydrology Indicators							<u>S</u>	Secondary I	ndicators (2	or more requ	uired)
Primary Indicators (minimum of	one required	d; check al	I that appl	<u>y)</u>				Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)			☐ Water	-Stained Leaves (I	B9)			Drainag	ge Patterns	(B10)	
☐ High Water Table (A2)			☐ Aquat	ic Fauna (B13)				Moss T	rim Lines (B	16)	
☐ Saturation (A3)			Marl E	Deposits (B15)				Dry-Sea	ason Water	Table (C2)	
■ Water Marks (B1)] Hydro	gen Sulfide Odor ((C1)				h Burrows (0	•	
☐ Sediment Deposits (B2)			Oxidiz	ed Rhizospheres	along Livin	g Roots (C3)	, [_		n Aerial imag	
☐ Drift Deposits (B3)			Prese	nce of Reduced Iro	on (C4)					d Plants (D1)	
☐ Algal Mat or Crust (B4)			Recer	nt Iron Reduction in	n Tilled Soi	ils (C6)			rphic Position	, ,	
☐ Iron Deposits (B5)			Thin N	/luck Surface (C7)				_	/ Aquitard (E	•	
☐ Inundation Visible on Aeria		_	Other	(Explain in Remar	rks)		L		pographic R		
Sparsely Vegetated Conca	/e Surface (I	B8)					L	_ FAC-Ne	eutral Test (D5)	
Field Observations:											
Surface Water Present?	: =		Depth (inc	•							
Water Table Present?	: =		Depth (incl	•		wetian	na Hya	Irology Pre		Yes ☑	No
Saturation Present? [Includes capillary fringe]	Yes √	No [Depth (inc	nes):							
Remarks (Describe Recorded Da	ta (stream g	gage, mon	itoring we	ll, aerial photos, pr	revious ins	pections), if a	availabl	le):			
VEGETATION											
Tree Stratum											
Plot Size: 30											
Scientific Name						% Co	over	Do	ominant	Indicat	or Status
Fagus grandifolia						10	0	,	YES	FA	ACU
				Т	otal Cover	r: 10	0	•			



Providence, RI 02904				ALCOM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Prunus serotina Spiraea alba		10 10	YES YES	FACU FACW
Acer rubrum		10	YES	FAC
	Total Cover:	30	'	
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Solidago rugosa		15	NO	FAC
Rubus allegheniensis Dennstaedtia punctilobula		15 60	NO YES	FACU UPL
ренняваеціа риновіюрива	Total Cover:	90	1123	OFL
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
- Colonial Hallo		70 JOVOI	Bonniant	maioator Otatus
	Total Cover:			
Dominance Test Worksheet:		dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 2 (A)	OBL Species:	0. <u>0</u>	x 1 = 0	
Total Number of Dominant	FACW Species		x 2 = 20	
Species Across All Strata: 5 (B)	FAC Species:	. <u>10</u> <u>25</u>	$x 3 = \frac{75}{}$	
Percent of Dominant Species	FACU Species		$x = \frac{10}{140}$	
That Are OBL, FACW, or FAC: 40 (A/B)	UPL Species:	. <u>55</u> <u>60</u>	$x = \frac{1+0}{1+0}$ $x = \frac{300}{1+0}$	
	Column Totals:		535 (B)	
		Prevalence Index		
Hadaankada Vanatatan ladiaataa		1 Tevalence index	- D/A - <u>4.12</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
□ 3 - Prevalence Index is ≤ 3.0				- 7
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic	egetation Prese	nt?	✓ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				
Remarks.				



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	r confirm the abs	ence of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		To	xture	Remarks
(IIICHES)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		xture	Remarks
0-3	10YR 3/2	100					LOAMY CO	DARSE SAND	
0.40	10)/D 0/4		40)/D 0/4	00			10440/00	ADOL CAND	
3-10	10YR 3/4	80	10YR 3/1	20	С	М	LOAMY CC	DARSE SAND	
10-18	10YR 4/4	100					LOAMY CC	DARSE SAND	
							20/	7.11.02 07.11.13	
¹Type: C=Cond	centration, D=De	pletion	l n, RM=Reduced l	Matrix,	CS=Cov	L ered Sand	or Coated Grains.	. ² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)		Indicators for Pi	oblematic Hydric Soils³:
☐ Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)		M	ILRA 1	49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy I	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified L	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted i	Below Dark Surfa	ace (A1	(1) D	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
☐ Thick Dark	k Surface (A12)		□ R	edox [Dark Surfa	ce (F6)		☐ Iron-Mangar	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	icky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□R	edox [Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pre	esent, unle	ess disturbed or pro	oblematic.	
Restrictive Lay	er Present?	□ `	Yes ☑ No	□ ∪	nknown			Hydric Soil Prese	nt? ☐ Yes ☑ No
								riyane oon riese	iii: □ 162 ☑ NO
Remarks:									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	ments:			
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland	d? 🔲 Yes 🔲	No Unknown
General Comm	ents:								





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WE	TLAND) DET	ERN	IINATI	ON F	ORM -	Northc	entr	al an	d No	orthea	ast Re	egion	l	
☑ Centerline ☐ Re-Ro	ute _	Acce	ss Roa	d 🗖	Ancill	ary Facility		Trans	smission	Line		Other			
Project/Site: NED			ľ	Milepost:	1560	046.1	County:		Frankli	in			Date:	07/16/201	15
Applicant/Owner: Kinder Mor	gan						State:	MA		Sam	oling Po	oint: A	S-M-W	014-PEM	
Investigators: CM SB	(Quad N	ame: /	Ashfield			Townshi	p:	Ashfie	ld					
Logbook No.: 5M	Logi	ook Pg	.: 33		Tra	ct: 358	•								
Landform (hillslope, terrace, e	tc.):	Depres	ssion	'		Local R	Relief:	7 C	oncave		Convex		None	Slope%.:	1
Subregion (LRR): Middle	Atlantic			Lat	: 42.5	34837		Lo	ong:	-72.82	6455			Datum: NA	D83
Soil Map Unit Name: Wor	nsqueak w	oody pe	eat, 0 to	o 1 percei	nt slope	es					NWI	Classif	ication:	Not ma	apped
Are climatic / hydrologic condi	tions on th	e site ty	pical fo	or this tim	e of ye	ar?:	✓ Yes		No (If no	o, exp	lain in R	emarks	.)		
Are Vegetation Soil	☐ or H	/drology	⁄ П	significa	ntly dis	sturbed?	_ ✓ No	Are	e "Norma	al" Cir	cumstar	ices pre	sent?	✓ Yes	□ No
l		/drology	_	naturally	proble	ematic?	_ No								
.		. 0,	_	,	•		_								
SUMMARY OF FINDIN	GS - At	tach	site m	nap sho	owing	g sampli	ng poin	t loc	ations	s, tra	nsect	s, imp	ortan	t features	s, etc.
Hydrophytic Vegetation Prese	nt?		Yes	☐ No)			le t	he San	nnloc	l Aroa				
Hydric Soil Present?		\checkmark	Yes	☐ No)			wit	hin a W	Vetla	nd?	☑ `	Yes [□ No	
Wetland Hydrology Present?		$\overline{\mathbf{V}}$	Yes	☐ No)										
Field Wetland Classification:	PEM														
Remarks: BEAVER D	AM DOW	NSTEA	M HAS	INUNDA	TED T	HE PEM W	ΈTLAND (JPSTI	REAM						
HYDROLOGY															
Wetland Hydrology Indicator	s:									5	Seconda	ary Indic	ators (2	or more requ	uired)
Primary Indicators (minimum c	f one req	uired; c	heck al	I that app	ly)					[Sur	face Soi	I Cracks	s (B6)	
☐ Surface Water (A1)] Wate	r-Stain	ed Leaves ((B9)			[☐ Dra	inage P	atterns ((B10)	
─ High Water Table (A2)			_	_] Aqua'	tic Fau	na (B13)				[] Mos	ss Trim	Lines (B	316)	
✓ Saturation (A3)				☐ Marl I	Deposi	ts (B15)				[☐ Dry	-Seasor	Water	Table (C2)	
□ Water Marks (B1)			5	Z Hydro	gen S	ulfide Odor	(C1)			[☐ Cra	yfish Bu	rrows (0	C8)	
☐ Sediment Deposits (B2)			5	☑ Oxidi:	zed Rh	izospheres	along Livir	ng Ro	ots (C3)	[Sat	uration \	√isible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Prese	ence of	Reduced II	ron (C4)			[Stu	nted or	Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Rece	nt Iron	Reduction i	in Tilled Sc	ils (C	6)	E	✓ Geo	omorphi	c Positic	on (D2)	
☐ Iron Deposits (B5)				Thin I	Muck S	Surface (C7))			[☐ Sha	llow Aq	uitard (D	03)	
☐ Inundation Visible on Aer	ial Image	y (B7)		Other	(Expla	ain in Rema	ırks)			[Mic	rotopog	raphic R	Relief (D4)	
☐ Sparsely Vegetated Con-	cave Surfa	ace (B8)	1							[√ FAC	C-Neutra	al Test (I	D5)	
Field Observations:															
	√ Yes	П	No [Depth (inc	hes).	2									
	✓ Yes			Depth (inc	,	0			Wetlan	d Hvd	drology	Presen	t?		
Saturation Present?	✓ Yes	_		Depth (inc	,	0			Wettan	iu i iye	arology	1 103011		Yes □	No
(includes capillary fringe)	V 103	Ь.	10 .	opui (iiic	1100).	Ü									
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring we	ell, aeria	al photos, p	revious ins	pection	ons), if a	vailab	le):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Co	over		Domin	ant	Indicat	or Status
Tsuga canadensis								T	10)		YES		FA	ACU
						-	Total Cove	r:	10	0					



Providence, RI 02904				A_COM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Prunus serotina		5	YES	FACU
Acer rubrum Spiraea alba		10 5	YES YES	FAC FACW
	Total Cover:	20	ı	
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Carex lurida		5	NO	OBL
Carex comosa Scirpus cyperinus		35 35	YES YES	OBL OBL
Euthamia caroliniana		10	NO	FAC
Typha latifolia	 Total Cover:	15 100	NO	OBL
Woody Vine Stratum	Total Gover.	100		
Plot Size: 30				
Scientific Name	I	% Cover	Dominant	Indicator Status
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	20mman	siodioi Oldius
	 Total Cover		T	I
Dominance Test Worksheet:		dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 4 (A)	OBL Species:	<u>90</u>	x 1 = 90	
Total Number of Dominant	FACW Species		x 2 = 10	
Species Across All Strata: 6 (B)	FAC Species:	<u>20</u>	x 3 = <u>60</u>	
Percent of Dominant Species That Are OBL_FACW_or FAC: 67 (A/B)	FACU Species	: <u>15</u>	x 4 = <u>60</u>	
That Are OBL, FACW, or FAC: 67 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	130 (A)	<u>220 (B)</u>	
		Prevalence Index	c = B/A = <u>1.69</u>	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic \	egetation Prese	ent? ☑ Yes │	□ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				



Providence, R	1 02904								
SOIL									
Profile Descrip	tion: (Describe	the de	epth needed to d	locum	ent the in	ndicator o	confirm the abs	ence of indicators.)	
Depth	Matrix		Red	dox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	exture	Remarks
0-4	7.5YR 2.5/2	100					ORG	GANIC	
4-8	7.5YR 3/3	95	7.5YR 4/4	5	С	PL	SILT	LOAM	
8-12	7.5YR 5/2	70	7.5YR 3/1	30	С	M	COARSE S	SANDY LOAM	
12-16	10YR 5/3	30	10YR 6/1	70	D	M	LOAMY CO	DARSE SAND	
1Type: C-Cond	entration D-De	nletion	PM-Paducad	Matrix	CS-Cov	ared Sand	or Coated Grains	2l ocation: Pl -	Pore Lining, M=Matrix
		•					or Coated Grains		
Histosol (A Histic Epip Black Hist Hydrogen Stratified L Depleted I Sandy Mu Sandy Gle Sandy Re Stripped M Dark Surfa JIndicators of h	bedon (A2) ic (A3) Sulfide (A4) Layers (A5) Below Dark Surface (A12) icky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	ace (A1 , MLRA tation a	1)	olyvalu ILRA 1 hin Da oamy I oamy I eeplete eedox I eeplete	ue Below (49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	Surface (S e (S9) (LRI neral (F1) (atrix (F2) F3) ace (F6) urface (F7) ns (F8)	8) (LRR R, R R, MLRA 149B) LRR K, L) ess disturbed or pr	2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark St Iron-Mangan Piedmont Flo Mesic Spodie Red Parent I Very Shallov Other (Expla	roblematic Hydric Soils³: A10) (LRR K, L, MLRA 149B) Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) Redox (S7) (LRR K, L, M) Relow Surface (S8) (LRR K, L) Rese Masses (F12) (LRR K, L, R) Rododplain Soils (F19) (MLRA 149B) Rodotplain Soils (MLRA 149B) Rodotplain
Remarks:									
Description of I BEAVER DAM	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetland	d? ☐ Yes ☑	No Unknown
General Comm	ents:								







WETLAND DETERMINATION FORM - Northce	entral and No	ortheast Region	1
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility ☐ 1	Transmission Line	☐ Other	
Project/Site: NED Milepost: 156197.6 County:	Franklin	Date	: 07/16/2015
Applicant/Owner: Kinder Morgan State:	MA Sam	pling Point: AS-M-W	/014-PSS
Investigators: CM SB Quad Name: Ashfield Township	o: Ashfield	· · · ·	
Logbook No.: 5M Logbook Pg.: 35 Tract: 358			
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave	Convex None	Slope%.: 3
Subregion (LRR): Middle Atlantic Lat: 42.534607	Long: -72.82	25817	Datum: NAD83
Soil Map Unit Name: Ashfield fine sandy loam, 3 to 8 percent slopes, very stony		NWI Classification:	Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	☐ No (If no, exp	lain in Remarks.)	
Are Vegetation 🔽 Soil 🗹 or Hydrology 🗹 significantly disturbed? 🔲 No	Are "Normal" Cir	cumstances present?	✓ Yes □ No
Are Vegetation \square Soil \square or Hydrology \square naturally problematic? \square No			
SUMMARY OF FINDINGS - Attach site map showing sampling point	locations tra	nsects importan	t features etc
Hydrophytic Vegetation Present? ✓ Yes ☐ No	Toodiiono, iro	moodio, importan	
Hydric Soil Present? ✓ Yes ☐ No	Is the Sample		□ No
Wetland Hydrology Present? ✓ Yes ☐ No	within a Wetla	nd?	
Field Wetland Classification: PSS			
Remarks: SURFACE HYDROLIC CONNECTION TO SMITH BROOK			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (2	2 or more required)
Primary Indicators (minimum of one required; check all that apply)		☐ Surface Soil Crack	s (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)		✓ Drainage Patterns	(B10)
✓ High Water Table (A2) ☐ Aquatic Fauna (B13)		Moss Trim Lines (316)
✓ Saturation (A3) ☐ Marl Deposits (B15)		□ Dry-Season Water	Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	g Roots (C3)	Saturation Visible	on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)		☐ Stunted or Stresse	d Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soil	Is (C6)	Geomorphic Positi	on (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)		☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)		☐ Microtopographic F	Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)		✓ FAC-Neutral Test	(D5)
Field Observations:			
	Wotland Hy	drology Present?	
Water Table Present?	welland ny	urology Fresent? ✓	ĭ Yes □ No
(includes capillary fringe)			
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous insp	pections), if availab	lle):	
VEGETATION			
Tree Stratum			
Plot Size: 30			
Scientific Name	% Cover	Dominant	Indicator Status
Tsuga canadensis	5	YES	FACU
Betula populifolia	5	YES	FAC
Total Cover:	: 10		



Providence, RI 02904				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Carex crinita Spiraea alba Acer rubrum Salix interior	Total Cover:	5 45 10 35 95	NO YES NO YES	OBL FACW FAC FACW
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Solidago rugosa Sium suave Rubus pubescens	Total Cover:	25 5 15 45	YES NO YES	FAC OBL FACW
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			I
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover		Multiply by:	
That Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant	FACW Species		x 2 = 190	
Species Across All Strata: 6 (B)	FAC Species:	<u>40</u>	x 3 = 120	
Percent of Dominant Species	FACU Species:	: <u>5</u>	x 4 = <u>20</u>	
That Are OBL, FACW, or FAC: 83 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>150 (A)</u>	340 (B)	
	ı	Prevalence Index =	= B/A = <u>2.27</u>	
Hydrophytic Vegetation Indicators:				
 ✓ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50% 				
3 - Prevalence Index is ≤ 3.0 A Marshalogical Adoptational (Provide supporting)	Uvdranhytia V	lagatation Bracan	+2	7 No.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	nyarophytic v	egetation Presen	t? ☑ Yes □] No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				



Providence, r	KI 02904								
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the ir	ndicator o	r confirm the abs	ence of indicators.)	
Depth	Matrix		-		atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Te	xture	Remarks
0-1	, ,		Color (molety	,,,	.,,,,		ODG	CANIC	
0-1	10YR 2/1	100					ORC	GANIC	
1-9	2.5YR 6/1	60	10YR 5/8 10YR 4/4	10 30	C	M M	FINE SAI	NDY LOAM	
¹ Type: C=Con	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains.	. ² Location: PL:	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess otl	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)			olyval	ue Below	Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
Histic Epi	pedon (A2)		N	ILRA 1	149B)			☐ Coast Prairi	e Redox (A16) (LRR K, L, R)
☐ Black Hist			ПΤ	hin Da	rk Surface	e (S9) (LR	R R, MLRA 149B)	=	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)	= '	e (S7) (LRR K, L, M)
	Layers (A5)			-	Gleyed Ma		(2111111, 2)		elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (Δ1	_	-	ed Matrix (= -	urface (S9) (LRR K, L)
	k Surface (A12)	200 (A)	_		Dark Surfa	•			
	ucky Mineral (S1)		_						nese Masses (F12) (LRR K, L, R)
	eyed Matrix (S4)		_			urface (F7)			oodplain Soils (F19) (MLRA 149B)
			□ F	Redox	Depressio	ns (Fo)		_	ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re								_	Material (F21)
	Matrix (S6)							= '	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
³ Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	oblematic.	
Remarks:									
Description of	Hahitat Characte	rietice	Aquatic Diversity	or Ge	neral Con	nments:			
Description of	riabitat Orialacte	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Aquatic Diversity	01 00	noral Con	iiiioiiio.			
Wetland Quali	ty: 🗹 High	<u> </u>	Moderate	Low			Isolated Wetland	d? ☐ Yes 🗹	No Unknown
General Comm	ients:								





S



WETLAND DETERMINATION FORM - Northcei	ntral and Northeast Region
│ ☑ Centerline	ransmission Line
Project/Site: NED Milepost: 156174.8 County:	Franklin Date: 07/16/2015
	MA Sampling Point: AS-M-W014-PFO
Investigators: CM SB Quad Name: Ashfield Township:	Ashfield
Logbook No.: 5M Logbook Pg.: 32 Tract: 358	
Landform (hillslope, terrace, etc.): Depression Local Relief:	Concave Convex None Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.535002	Long: -72.826003 Datum: NAD83
Soil Map Unit Name: Ashfield fine sandy loam, 3 to 8 percent slopes, very stony	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?: Yes	No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes ✓ Normal
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No	
SUMMARY OF FINDINGS - Attach site map showing sampling point I	agations transacts important features ato
Hydrophytic Vegetation Present? Yes No	ocations, transects, important reatures, etc.
li ii I	Is the Sampled Area
Hydric Soil Flesent?	within a Wetland? ✓ Yes ☐ No
Wetland Hydrology Present?	
Remarks:	
Ivenidias.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
✓ Surface Water (A1) ✓ Water-Stained Leaves (B9)	□ Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)
✓ Saturation (A3)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living	Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
	✓ Microtopographic Relief (D4)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Sparsony regulated conserve currence (55)	_
Field Observations:	
Surface Water Present?	
Water Table Present? ☑ Yes ☐ No Depth (inches): 0	Wetland Hydrology Present?
Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe)	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspe	ections), if available):
RED MAPLE-CONIFER PEAT BOG	
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Acer pensylvanicum	15 NO FACU
Betula alleghaniensis Acer rubrum	30 YES FAC 40 YES FAC
Tsuga canadensis	20 YES FACU
Total Cover:	105



Providence, RI 02904			- 1	AECON
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Betula alleghaniensis		15	YES	FAC
Acer rubrum Ilex verticillata		10 20	NO YES	FAC FACW
Fraxinus pennsylvanica		15	YES	FACW
Picea glauca	Total Cayers	10	NO	FACU
	Total Cover:	70		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Dryopteris intermedia		10	YES	FAC
	Total Cover:	10		
Voody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence In	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 6 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant	FACW Species	s: <u>35</u>	x 2 = <u>70</u>	
Species Across All Strata: 7 (B)	FAC Species:	<u>105</u>	x 3 = <u>315</u>	
Percent of Dominant Species That Are OBL_FACW_or FAC: 86 (A/B)	FACU Species	: <u>45</u>	x 4 = <u>180</u>	
That Are OBL, FACW, or FAC: 86 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals	: <u>185 (A)</u>	<u>565 (B)</u>	
		Prevalence Index	= B/A = 3.05	
Hydrophytic Vegetation Indicators:				
✓ 1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic	Vegetation Prese	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)	riyaropriyac	vegetation i rese	nt: V 165 I	NO
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
venians.				



T TOVIGETICE, I									100000000000000000000000000000000000000
SOIL									
Profile Descrip	•	the d				ndicator o	r confirm the ab	sence of indicators.))
Depth (inches)	Matrix				atures		т	「exture	Remarks
(11101100)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		- Oxtor O	romano
0-12	5YR 3/2	90	10YR 4/6	10	С	PL	OF	RGANIC	
12-16	7.5YR 5/2	40	7.5YR 7/1	60	D	М	FINE S	ANDY LOAM	
16-18	10YR 7/3	40	10YR 6/1	60	D	М	SAN	DY LOAM	
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grain	s. ² Location: PL:	=Pore Lining, M=Matrix
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)		Indicators for P	roblematic Hydric Soils³:
☐ Histosol (A	A1)		□ P	olyvalı	ue Below	Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
✓ Histic Epip	pedon (A2)		N	ILRA 1	49B)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		п т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B	3) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surfac	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1		eplete	d Matrix (F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□R	edox [Dark Surfa	ace (F6)		☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Fl	loodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	edox I	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							─ Very Shallov	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)						ain in Remarks)
_			and wetland hydro	oloav n	nust be pr	esent. unle	ess disturbed or r		•
Restrictive Lay					nknown				
Nestrictive Lay	er Fresent!	ш	ies 🔽 No	υσ	TIKITOWIT			Undia Call Base	
								Hydric Soil Prese	ent? ☑ Yes ☐ No
D 1									
Remarks:									
PEAT BOG									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Con	nments:			
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetla	nd? 🔲 Yes 🗹	∫ No ☐ Unknown
General Comm	ents:								







WE	TLAND) DET	ERN	IINATI	ON FORM -	Northce	entral ar	nd No	ortheast	Region		
☑ Centerline ☐ Re-R	oute _	Acce	ss Roa	d 🗖	Ancillary Facility	_ ¹	Transmissio	n Line	☐ Othe	er		
Project/Site: NED			ľ	Milepost:	156126.3	County:	Frank	din		Date:	07/16/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	oling Point:	AS-M-W	014-UPL	
Investigators: CM SB	(Quad N	ame: /	Ashfield		Township	: Ashfi	eld				
Logbook No.: 5M	Logi	oook Pg	.: 34		Tract: 358	•						
Landform (hillslope, terrace, e	etc.):	Hilltop		· ·	Local R	Relief:	Concave	$\overline{\mathbf{V}}$	Convex	None	Slope%.:	30
Subregion (LRR): Middl	e Atlantic			Lat:	42.534924		Long:	-72.82	6166		Datum: NAI	D83
Soil Map Unit Name: Asl	nfield fine s	andy lo	am, 3 t	o 8 percei	nt slopes, very sto	ony			NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic cond	litions on th	ne site ty	pical fo	or this time	e of year?:	⊘ Yes	☐ No (If r	no, exp	lain in Rema	arks.)		
Are Vegetation	or Hy	ydrology	/ 	significar	ntly disturbed?	☑ No	Are "Norm	nal" Cir	cumstances	present?	✓ Yes	■ No
Are Vegetation	or Hy	ydrology	/ □	naturally	problematic?	✓ No						
SUMMARY OF FINDIN	NGS - At	tach	site n	nap sho	wing sampli	ng point	location	s, tra	nsects, ir	mportant	t features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	√ No)							
Hydric Soil Present?			Yes	☑ No)		Is the Sa within a	mpled Wetlar	l Area nd? □	Yes ⊻	∐ No	
Wetland Hydrology Present?			Yes	√ No)		Within a	rocia				
Field Wetland Classification:	UPL	AND PL	.OT									
Remarks: TOP OF N	ARROW R	RIDGE L	INE									
HYDROLOGY												
Wetland Hydrology Indicato	ors:							5	Secondary Ir	ndicators (2	or more requ	uired)
Primary Indicators (minimum	of one req	uired; c	heck al	I that appl	l <u>y)</u>			[Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)				☐ Water	-Stained Leaves ((B9)		[☐ Drainag	e Patterns (B10)	
☐ High Water Table (A2)				_ Aquat	ic Fauna (B13)			[☐ Moss Tr	rim Lines (B	16)	
☐ Saturation (A3)				Marl D	Deposits (B15)			[☐ Dry-Sea	son Water	Table (C2)	
				Hydro	gen Sulfide Odor	(C1)		[Crayfish	Burrows (C	28)	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizospheres	along Livin	g Roots (C3) [Saturation	on Visible o	n Aerial imag	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of Reduced I	ron (C4)	<u> </u>					
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction i	in Tilled Soi	<u> </u>					
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7))	Shallow Aquitard (D3)					
☐ Inundation Visible on A	rial Imagei	ry (B7)		Other	(Explain in Rema	ırks)		[_ `	oographic R		
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)	1					[☐ FAC-Ne	eutral Test (I	D5)	
Field Observations:	_											
Surface Water Present?	☐ Yes	7 1	No [Depth (inc	hes):							
Water Table Present?	☐ Yes	_		Depth (inc	•		Wetla	nd Hyd	drology Pres		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes		No [Depth (inc	hes):						ies 🖭	NO
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring we	ll, aerial photos, p	revious insp	pections), if	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Do	minant	Indicate	or Status
Tsuga canadensis Betula populifolia							7	30 70		/ES /ES		ACU AC
					-	Total Cover:	: 1	00				



Providence, Ri 02904			- 15				
Sapling/Shrub Stratum							
Plot Size: 15							
Scientific Name		% Cover	Dominant	Indicator Status			
Acer pensylvanicum Tsuga canadensis		10 15	YES YES	FACU FACU			
rsuga cariaderisis	Total Cover:	25	11.5	TACO			
Herb Stratum							
Plot Size: 5	1		1	ı			
Scientific Name		% Cover	Dominant	Indicator Status			
	T 0						
	Total Cover:						
Woody Vine Stratum							
Plot Size: 30	1	24.2	1				
Scientific Name		% Cover	Dominant	Indicator Status			
	Total Cover:						
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:					
Number of Dominant Species	Total % Cover of	of:	Multiply by:				
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>				
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>				
Species Across All Strata: 4 (B)	FAC Species:	<u>70</u>	x 3 = <u>210</u>				
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)	FACU Species:	<u>55</u>	x 4 = <u>220</u>				
That Ale OBE, I AOW, OI I AO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>				
	Column Totals:	125 (A)	430 (B)				
	F	Prevalence Index :	= B/A = 3.44				
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
2 - Dominance Test is > 50%							
☐ 3 - Prevalence Index is ≤ 3.0							
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☐ Yes ☑ No						
data in Remarks or on a separate sheet)							
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹Indicators of hydric soil and wetland hydrology must be							
present, unless disturbed or problematic.							
Remarks:							



SOIL									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the in	dicator o	r confirm the	absence of indicators.)	
Depth	Matrix		Re	dox Fe	atures			T .	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texture	Remarks
0-5	2.5YR 3/2	100						ORGANIC	
	7. EVD. C/O	100						LOAM	
5-6	7.5YR 6/2	100						LOAM	
6-8	2.5YR 4/6	80	5YR 5/6	20	С	М		LOAM	
8-10	10YR 5/6	60	7.5YR 5/8	40	С	M	SA	ANDY LOAM	Restrictive rock layer at 10"
									,
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Gra	ains. ² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Inc	dicators: (Appli	cable t	to all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	oblematic Hydric Soils³:
Histosol (A	A1)					Surface (S	8) (LRR R,	2 cm Muck (A	A10) (LRR K, L, MLRA 149B)
☐ Histic Epi	pedon (A2)		N	/ILRA 1	496)			☐ Coast Prairie	Redox (A16) (LRR K, L, R)
☐ Black Hist	tic (A3)		□ 1	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 14	9B)	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			.oamy I	Mucky Mir	neral (F1) ((LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted	Below Dark Surfa	ace (A1	11) 🔲 🖸	Peplete	d Matrix (I	F3)		☐ Thin Dark Su	ırface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□ R	Redox [Dark Surfa	ace (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1))		Peplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	odplain Soils (F19) (MLRA 149B)
☐ Sandy Gl	eyed Matrix (S4)		□ F	Redox [Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	edox (S5)							□ Red Parent N	Material (F21)
☐ Stripped I	Matrix (S6)							□ Very Shallow	Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLR	A 149B)					Other (Explain	in in Remarks)
3Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology m	nust be pr	esent, unle	ess disturbed o	or problematic.	
Restrictive Lay	er Present?	<u> </u>	Yes ∏ No	<u> </u>	nknown				
YES		<u></u>						Hydric Soil Prese	nt? ☐ Yes ☑ No
								Trydric Soil Trese	III. II 162 🗹 NO
10 Remarks:									
ivemaiks.									
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	ty: 🔲 High	_ ,	Moderate	Low			Isolated We	etland?	No ☐ Unknown
		<u></u>	Moderate	LOW			isolated we	elland? Tes	NO DIKHOWII
General Comm	ients:								







WE	TLAND	DET	ERM	IINATIO	ON FORM - I	Northce	entral an	d No	rtheast R	egion		
☑ Centerline ☐ Re-R	oute _	Acce	ss Roa	d 🔲	Ancillary Facility	п т	ransmission	Line	☐ Other			
Project/Site: NED			N	/lilepost:	156992.0	County:	Frankl	in		Date:	07/20/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	ling Point:	AS-M-W	15-PFO	
Investigators: CM	(Quad N	ame: A	Ashfield		Township	: Ashfie	ld				
Logbook No.: 5M	Logk	ook Pg	.: 74		Tract: 358	'						
Landform (hillslope, terrace,	etc.):	Slope	- mid		Local R	elief: 🔽	Concave		Convex 🔲	None	Slope%.:	3
Subregion (LRR): Middl	e Atlantic			Lat:	42.535318		Long:	-72.822	2998		Datum: NAI	D83
Soil Map Unit Name: Asi	nfield fine s	andy lo	am, 3 to	o 8 percer	nt slopes, very sto	ny			NWI Classi	fication:	Not ma	pped
Are climatic / hydrologic cond	litions on th	e site ty	pical fo	or this time	e of year?:	Yes	☐ No (If no	o, expla	ain in Remarks	s.)		
Are Vegetation	☐ or Hy	/drology	/ M	significar	ntly disturbed?	_ No	Are "Norma	al" Circ	umstances pr	esent?	✓ Yes	☐ No
Are Vegetation Soil		/drology		naturally	problematic?	_ No						
_						_			_			
SUMMARY OF FINDI	NGS - At	tach			wing samplir	ng point	locations	s, trar	nsects, imp	oortant	features	, etc.
Hydrophytic Vegetation Prese	ent?		Yes	☑ No			Is the San	nnled	Δroa			
Hydric Soil Present?		$\overline{\mathbf{V}}$	Yes	☐ No			within a V			Yes [] No	
Wetland Hydrology Present?		<u> </u>	Yes	☐ No	1							
Field Wetland Classification:	PFO											
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicate	ors:							<u>S</u>	econdary Indi	cators (2	or more requ	<u>iired)</u>
Primary Indicators (minimum	of one req	uired; c	heck al	l that appl	<u>y)</u>] Surface So	oil Cracks	(B6)	
☐ Surface Water (A1)			v	☑ Water	-Stained Leaves (B9)		v	Drainage F	Patterns (B10)	
☐ High Water Table (A2)				−] Aquat	ic Fauna (B13)	•			Moss Trim	Lines (B	16)	
☐ Saturation (A3)				Marl D	Deposits (B15)				Dry-Seaso	n Water ⁻	Table (C2)	
■ Water Marks (B1)] Hydro	gen Sulfide Odor ((C1)			Crayfish B	urrows (C	28)	
☐ Sediment Deposits (B2)			v	☑ Oxidiz	ed Rhizospheres	along Living	g Roots (C3)] Saturation	Visible o	n Aerial imag	jery (C9)
☐ Drift Deposits (B3)			v	Prese	nce of Reduced Ir	on (C4)	☐ Stunted or Stressed Plants (D1)					
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction in	n Tilled Soil	ls (C6)] Geomorph	ic Positio	n (D2)	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7)				Shallow Ad	quitard (D	03)	
☐ Inundation Visible on A	rial Imagei	y (B7)		Other	(Explain in Remar	rks)] Microtopog	graphic R	elief (D4)	
☐ Sparsely Vegetated Cor	ncave Surfa	ace (B8)						v	FAC-Neutr	al Test ([D5)	
Field Observations:												
Surface Water Present?	☐ Yes	1	No E	Depth (incl	hes):							
Water Table Present?	☐ Yes			Depth (incl	•		Wetlan	nd Hvd	rology Prese	nt?		
Saturation Present?	☐ Yes	_		Depth (incl	•		Wetlan	ia iiya	rology i resci		Yes □	No
(includes capillary fringe)		<u>.</u>	10 2	opui (iiioi	1100).							
Remarks (Describe Recorded	Data (stre	am gag	e, moni	toring wel	ll, aerial photos, pr	revious insp	pections), if a	availabl	e):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% Co	over	Domi	nant	Indicato	or Status
Acer rubrum Tsuga canadensis							60		YES YES			AC .CU
r suga cariautrisis					Т	otal Cover:	1		150	_	PA	



			A_CON
	% Cover	Dominant	Indicator Status
	10	YES	FAC
	10	YES	FACU FACU
			FACU FAC
Total Cover:	70	. =0	1
1	0/ 0	Densinent	In diameter Otatura
			Indicator Status
	30	YES	FACU FAC
Total Cover:	40	•	•
	% Cover	Dominant	Indicator Status
Total Cover:			
Prevalence Inc	dex Worksheet:		
Total % Cover	of:	Multiply by:	
OBL Species:	<u>0</u>	x 1 = <u>0</u>	
FACW Species	s: <u>5</u>	x 2 = <u>10</u>	
FAC Species:	<u>130</u>	x 3 = <u>390</u>	
FACU Species	: <u>70</u>	x 4 = <u>280</u>	
UPL Species:	<u>0</u>	x 5 = <u>0</u>	
Column Totals:	205 (A)	<u>680 (B)</u>	
	Prevalence Index	= B/A = 3.32	
Hydrophytic \	/egetation Presei	nt?	☑ No
	Total Cover: Prevalence Inc Total % Cover OBL Species: FACW Species: FACU Species: UPL Species: Column Totals	10 10 10 10 10 30 Total Cover: 70 % Cover 10 30 Total Cover: 40 % Cover Total Cover: Prevalence Index Worksheet: Total % Cover of: OBL Species: 0 FACW Species: 5 FAC Species: 130 FACU Species: 70 UPL Species: 0 Column Totals: 205 (A) Prevalence Index	10



-									
Profile Descrip	otion: (Describe	the d	epth needed to	docum	ent the in	dicator o	r confirm the absen	ce of indicators.)	
Depth (inches)	Matrix		Re	dox Fe	atures		Text	ure	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	rext	uiū	izemanz
0-3	2.5Y 2.5/1	100					ORGA	NIC	
3-8	2.5Y 4/1	70	2.5Y 6/1 2.5Y 4/4	25 5	D C	M PL	LOA	ιM	
8-16	2.5Y 5/1	20	2.5Y 6/2	70	D	M	SANDY	LOAM	
0-10	2.51 5/1	20	2.5Y 4/4	10	C	M	SANDT	LOAIVI	
¹Type: C=Con	entration. D=De	epletion	. RM=Reduced	Matrix.	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix
			o all LRR's, unle				or occurrence or annormal		oblematic Hydric Soils³:
☐ Histosol (/						-	8) (LRR R,	_	A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILŔA 1		(-	-, (e Redox (A16) (LRR K, L, R)
☐ Black Hist			П 1	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)						(LRR K, L)		e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)		_	oamy (Gleyed Ma	atrix (F2)		Polyvalue Be	elow Surface (S8) (LRR K, L)
□ Depleted	Below Dark Surfa	ace (A1	 11)	eplete	d Matrix (I	F3)		☐ Thin Dark Su	ırface (S9) (LRR K, L)
☐ Thick Dar	k Surface (A12)		□ F	Redox [Dark Surfa	ce (F6)		☐ Iron-Mangan	ese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ucky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)		☐ Mesic Spodie	c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent I	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallow	Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					Other (Expla	in in Remarks)
3Indicators of I	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or prob	lematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ ∪	nknown				
								Hydric Soil Prese	nt? ✓ Yes 🗆 No
Remarks:									
omano.									
. tomano.									
	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Description of	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Description of AC4-VP009 LC	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No 🔲 Unknown
Description of AC4-VP009 LO	CATED IN PFO		Aquatic Diversity		neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LC	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No 🔲 Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown
Description of AC4-VP009 LO	CATED IN PFO				neral Com	nments:	Isolated Wetland?	☐ Yes ☑	No Unknown







WETLAND DETERMINATION FORM - Northcen	ntral and Northeast Region			
	ansmission Line			
Project/Site: NED Milepost: 157076.9 County:	Franklin Date: 07/20/2015			
Applicant/Owner: Kinder Morgan State: M.	A Sampling Point: AS-M-W015-UPL			
Investigators: CM Quad Name: Ashfield Township:	Ashfield			
Logbook No.: 5M Logbook Pg.: 76 Tract: 358				
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave 🗹 Convex 🔲 None Slope%.: 3			
Subregion (LRR): Middle Atlantic Lat: 42.535363	Long: -72.822689 Datum: NAD83			
Soil Map Unit Name: Ashfield fine sandy loam, 3 to 8 percent slopes, very stony	NWI Classification: Not mapped			
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ☑ Yes □ No			
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No				
SUMMARY OF FINDINGS - Attach site map showing sampling point to	ocations, transects, important features, etc.			
Hydrophytic Vegetation Present? ☐ Yes ☑ No				
Hydric Soil Present?	s the Sampled Area			
Wetland Hydrology Present? ☐ Yes ☑ No	within a Wetland?			
Field Wetland Classification: UPLAND PLOT				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)			
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)			
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)				
☐ Saturation (A3) ☐ Marl Deposits (B15)	□ Dry-Season Water Table (C2)			
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)			
□ Sediment Deposits (B2) □ Oxidized Rhizospheres along Living I	Roots (C3) Saturation Visible on Aerial imagery (C9)			
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)			
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils	(C6) Geomorphic Position (D2)			
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)			
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)			
□ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)			
Field Observations:				
Surface Water Present? ☐ Yes ☑ No Depth (inches):				
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ☑ No			
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)				
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspec	ctions), if available):			
VEGETATION				
Tree Stratum				
Plot Size: 30	1 1			
Scientific Name	% Cover Dominant Indicator Status			
Betula alleghaniensis Prunus serotina	15 NO FAC 15 NO FACU			
Acer rubrum Tsuga canadensis	30 YES FAC 30 YES FACU			
Total Cover:	90			
,				



Sapling/Shrub Stratum Plot Size: 15 Scientific Name Fagus grandifolia Fraxinus americana Quercus rubra Acer pensylvanicum Tsuga canadensis Total Cover: Herb Stratum Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1(A) Total Number of Dominant Species Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) FAC Species: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) FACU Species: Column Totals	ies: <u>0</u> ies: <u>0</u> s: <u>45</u> es: <u>145</u>	Dominant YES NO NO YES NO NO YES NO NO NO NO NO NO NO N	Indicator Status FACU FACU FACU FACU FACU FACU FACU FAC				
Scientific Name Fagus grandifolia Fraxinus americana Quercus rubra Acer pensylvanicum Tsuga canadensis Total Cover: Herb Stratum Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1(A) Prevalence Ir Species Across All Strata: 6(B) FAC Species: That Are OBL, FACW, or FAC: 17 (A/B) Prevalence Ir FAC Species: FACU Species: That Are OBL, FACW, or FAC: 17 (A/B) Prevalence Ir FACU Species: FACU Species: FACU Species: UPL Species:	20 10 10 25 15 80 % Cover 5 15 20 % Cover 5 15 20 lindex Worksheet er of: s: 0 ies: 0 s: 45 es: 145	Dominant YES NO Dominant YES YES Multiply by: x 1 = 0	FACU FACU FACU FACU FACU FACU FACU FACU				
Fagus grandifolia Fraxinus americana Quercus rubra Acer pensylvanicum Tsuga canadensis Total Cover: Herb Stratum Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Dryopteria Cover: Total Cover: Prevalence In Total % Cover OBL Species: FACW Species: FACW Species: FACW Species: FACW Species: FACU Species: Total Number of Dominant Species That Are OBL, FACW, or FAC: Dryopteria Cover: Dryo	20 10 10 25 15 80 % Cover 5 15 20 % Cover 5 15 20 lindex Worksheet er of: s: 0 ies: 0 s: 45 es: 145	Dominant YES NO Dominant YES YES Multiply by: x 1 = 0	FACU FACU FACU FACU FACU FACU FACU FACU				
Fraxinus americana Quercus rubra Acer pensylvanicum Tsuga canadensis Total Cover: Herb Stratum Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Ir FACW Species: FACW Species: FACW Species: Tratal Are OBL, FACW, or FAC: 17 (A/B) FACU Species: FACU Species: FACU Species: FACU Species:	10 10 25 15 80 % Cover 5 15 20 % Cover % Cover s: 0 ies: 0 ies: 0 s: 45 es: 145	Dominant YES YES Dominant Williply by: x 1 = 0	FACU FACU FACU FACU FACU FACU Indicator Status FACU FACU				
Herb Stratum Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species: Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent OBL, FACW, or FAC:	% Cover 5 15 20 % Cover	Dominant Builtiply by: x 1 = 0	FACU FACU				
Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species: Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Cover: Prevalence Ir Total Cover: Prevalence Ir Total % Cover To	5 15 20 % Cover % Cover lindex Worksheet er of: 5:	Dominant Builtiply by: x 1 = 0	FACU FACU				
Plot Size: 5 Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species: TACW Species: FACW Species: TACU Species:	5 15 20 % Cover % Cover lindex Worksheet er of: 5:	Dominant Builtiply by: x 1 = 0	FACU FACU				
Scientific Name Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Prevalence Ir OBL Species: Total Number of Dominant Species Across All Strata: Pack Species: FACW Species: FACW Species: That Are OBL, FACW, or FAC: 17 (A/B) PACH Species: FACU Species: UPL Species:	5 15 20 % Cover % Cover lindex Worksheet er of: 5:	Dominant Builtiply by: x 1 = 0	FACU FACU				
Dryopteris campyloptera Maianthemum canadense Total Cover: Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Prevalence Ir OBL Species: Total Number of Dominant Species Across All Strata: Paccy Species FACW Species Paccy Species: FACU Species: That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC:	5 15 20 % Cover % Cover lindex Worksheet er of: 5:	Dominant Builtiply by: x 1 = 0	FACU FACU				
Maianthemum canadense Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) Total Cover: Prevalence Ir Total % Cover OBL Species: FACW Species: FACW Species: FACW Species: FACU Species: UPL Species:	15 20 % Cover % Co	Dominant Builtiply by: x 1 = 0	FACU				
Woody Vine Stratum Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) Prevalence Ir Total % Cover OBL Species: FACW Species: FACW Species: FACW Species: FACU Species: UPL Species:	% Cover 	:: Multiply by: x 1 = 0	Indicator Status				
Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A) OBL Species: FACW Species FAC Species: FAC Species: That Are OBL, FACW, or FAC: 17 (A/B) UPL Species:	Index Worksheet er of: s:	:: Multiply by: x 1 = 0	Indicator Status				
Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A) 6 (B) FACW Species: FACU Species: That Are OBL, FACW, or FAC: 17 (A/B) UPL Species:	Index Worksheet er of: s:	:: Multiply by: x 1 = 0	Indicator Status				
Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A) OBL Species: FACW Species FACW Species FAC Species: That Are OBL, FACW, or FAC: 17 (A/B) UPL Species:	Index Worksheet er of: s:	:: Multiply by: x 1 = 0	Indicator Status				
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) 1 (A) OBL Species: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) Prevalence Ir Total % Cover OBL Species: FACW Species: FACW Species: FACU Species: UPL Species:	er of: 5: 0 ies: 0 5: 45 es: 145	Multiply by: $x 1 = 0$					
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) Prevalence Ir Total % Cover OBL Species: FACW Species: FACW Species: FACU Species: UPL Species:	er of: 5: 0 ies: 0 5: 45 es: 145	Multiply by: $x 1 = 0$					
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) OBL Species: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A) 1 (A) FACW Species: FACU Species: FACU Species: UPL Species:	er of: 5: 0 ies: 0 5: 45 es: 145	Multiply by: $x 1 = 0$					
That Are OBL, FACW, or FAC: 1 (A) OBL Species: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A) OBL Species: FACW Species: FACU Species: UPL Species:	ies: <u>0</u> ies: <u>0</u> s: <u>45</u> es: <u>145</u>	x 1 = <u>0</u>					
Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: OBL Species: FACW Species FAC Species: FACU Species: UPL Species:	ies: <u>0</u> s: <u>45</u> es: <u>145</u>	-					
Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) FAC Species: FACU Species: UPL Species:	s: <u>45</u> es: <u>145</u>	x 2 = <u>0</u>					
Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B) FAC Species: FACU Species: UPL Species:	es: <u>145</u>						
That Are OBL, FACW, or FAC: 17 (A/B) UPL Species:		x 3 = <u>135</u>					
UPL Species:		x 4 = <u>580</u>					
Column Totals	s: <u>0</u>	x 5 = <u>0</u>					
	als: <u>190 (A)</u>	<u>715 (B)</u>					
	Prevalence Inde	ex = B/A = <u>3.76</u>					
Hydrophytic Vegetation Indicators:							
1 - Rapid Test for Hydrophytic Vegetation							
2 - Dominance Test is > 50%							
	Hydrophytic Vegetation Present? ☐ Yes ☑ No						
data in Remarks or on a separate sheet)	o vegetation i res	sent: 🔲 Tes	<u>v</u> NO				
☐ Problematic Hydrophytic Vegetation¹ (Explain)							
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
1							
Remarks:							



Providence, R	1 02904										
SOIL											
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	ndicator o	r confirm th	e absen	ce of indicators.)		
Depth	Matrix				atures				•		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2		Textu	ıre	Rer	narks
0-2	, ,				71 -			ORGA	NIC		
0-2	10YR 2/1	100						UKGA	INIC		
2-4	10YR 3/2	100						SILT LO	MAC		
4-10	10YR 3/3	100						LOA	М		
10-18	10YR 3/3	50	10YR 4/4	50	С	М		SANDY I	OAM		
10 10	10111 0/0		1011(1) 1				· ·	07111011	207 1101		
		l	L			L					
¹Type: C=Cond	centration, D=De	epletior	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated G	Brains.	² Location: PL=	Pore Lining, M=M	atrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)			Indicators for Pr	roblematic Hydric	Soils³:
☐ Histosol (A	A1)			,		Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR K, L, ML	.RA 149B)
☐ Histic Epip	pedon (A2)		N	ILRA 1	149B)				☐ Coast Prairie	e Redox (A16) (LRF	₹ K, L, R)
☐ Black Hist	ic (A3)		Пт	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 1	149B)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
_	Sulfide (A4)		_				(LRR K, L)	,		e (S7) (LRR K, L, M	
	Layers (A5)		_	•	Gleyed Ma	, ,	(LIXIX IX, L)			elow Surface (S8) (´
_		(11	_	•	•	, ,			_ ′	, , ,	. ,
	Below Dark Surfa	ace (A	_	•	d Matrix (I	•			_	urface (S9) (LRR K,	,
_	k Surface (A12)		_		Dark Surfa	. ,			☐ Iron-Mangan	ese Masses (F12)	(LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1))		eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox I	Depressio	ns (F8)				c (TA6) (MLRA 144	A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F21)	
☐ Stripped N	Matrix (S6)								□ Very Shallov	v Dark Surface (TF	12)
☐ Dark Surfa	ace (S7) (LRR R	, MLR	A 149B)						Other (Expla	in in Remarks)	
3Indicators of h	ydrophytic vege	tation a	and wetland hydro	ology n	nust he nr	esent unle	ess disturbed	l or probl		•	
								or probl	iomatio.		
Restrictive Lay	er Present?	□ `	Yes ☑ No		Inknown						
								l	Hydric Soil Prese	ent? 🗌 Yes	☑ No
Remarks:							1				
5			A .: B: ::								
Description of I	Habitat Characte	eristics,	Aquatic Diversity	or Ge	neral Com	nments:					
Wetland Qualit	y: 🔲 High		Moderate	Low			Isolated W	/etland?	☐ Yes ☐	No 🔲 Unkn	own
General Comm	onto:										
General Comm	ienis.										





S



WETLAND DETERMINATION FORM - Nort	hcentral and Northeast Region
	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 11975.3 Cou	nty: Franklin Date: 07/25/2015
Applicant/Owner: Kinder Morgan State	e: MA Sampling Point: CN-M-W001-PFO
Investigators: CM Quad Name: Shelburne Falls Tow	nship: Conway
Logbook No.: 5M Logbook Pg.: 132 Tract: 603	
Landform (hillslope, terrace, etc.): Depression Local Relief:	✓ Concave ☐ Convex ☐ None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.541079	Long: -72.722197 Datum: NAD83
Soil Map Unit Name: Ninigret very fine sandy loam, 3 to 8 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	es No (If no, explain in Remarks.)
	No Are "Normal" Circumstances present? ☑ Yes ☐ No
	No
CUMMARY OF FINDINGS. Attack sits were about a resulting a	and handless to see the form and and for the see
SUMMARY OF FINDINGS - Attach site map showing sampling po	oint locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present?	within a Wetland? Yes 🗆 No
Wetland Hydrology Present?	
Field Wetland Classification: PFO	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	✓ Drainage Patterns (B10)
☐ Aquatic Fauna (B13)	
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
Sediment Deposits (B2)	Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4	4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tille	d Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	✓ Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
	Westernel Hundreleys Present?
Water Table Present?	Wetland Hydrology Present? ☑ Yes □ No
Saturation Present?	
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previou	s inspections), if available):



Providence, RI 02904				
VEGETATION				
Tree Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
Ulmus americana		40	YES	FACW
Betula alleghaniensis Tsuga canadensis		10 20	NO YES	FAC FACU
Betula lenta		10	NO	FACU FACU
Acer saccharum	 Total Cover:	10 90	NO	FACU
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Acer rubrum		30	YES	FAC
Berberis thunbergii Ulmus americana		10 30	NO YES	FACU FACW
Lonicera morrowii		10	NO NO	FACU
Acer saccharum		10	NO	FACU
Tsuga canadensis	T-4-1 O	10	NO	FACU
	Total Cover:	100		
Herb Stratum				
Plot Size: 5	1		1	ı
Scientific Name		% Cover	Dominant	Indicator Status
Onoclea sensibilis Impatiens capensis		10 5	YES NO	FACW FACW
Parathelypteris noveboracensis		10	YES	FAC
Dryopteris intermedia	T	15	YES	FAC
	Total Cover:	40		
Woody Vine Stratum Plot Size: 30				
	1		1 5	1
Scientific Name		% Cover	Dominant	Indicator Status
Vitis riparia	Total Cover:	10 10	YES	FAC
Dominance Test Worksheet:	Prevalence Ind			
Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)	Total % Cover of		Multiply by:	
	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 8 (B)	FACW Species:		x 2 = <u>170</u>	
·	FAC Species:	<u>75</u>	x 3 = <u>225</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 88 (A/B)	FACU Species:	<u>80</u>	x 4 = <u>320</u>	
That rice OBE, I NOW, SI I NO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	240 (A)	715 (B)	
	F	Prevalence Index	= B/A = 2.98	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
✓ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	nt? ☑ Yes [] No
data in Remarks or on a separate sheet)	Tiyal opiiyae v	egetation i resc	🖭 les L] 140
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:	1			



SOIL												
Profile Descrip	otion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	confirm the abs	ence of indicators.)				
Depth (inches)	Matrix		Redox Features				Т.	xture	Remarks			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		xture	Remarks			
0-6	5Y 3/1	95	10YR 6/4	5	С	PL	SILT	LOAM				
6-10	6-10 5Y 2.5/1 100					SILT L		LOAM				
10-24	GLEY1 4/10Y	100					SILT	LOAM				
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced l	Matrix,	CS=Cov	ered Sand	or Coated Grains.	² Location: PL=	Pore Lining, M=Matrix			
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :												
Black Hist Hydrogen Stratified Depleted Thick Dar Sandy Mt Sandy Gle Sandy Re Stripped I Dark Surf	bedon (A2) cic (A3) Sulfide (A4) Layers (A5) Below Dark Surfa k Surface (A12) ucky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	, MLRA	N T L I1) R A 149B) and wetland hydro	hin Da oamy I oamy I oamy I oeplete dedox I deplete dedox I	.49B) Mucky Mirk Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	e (S9) (LR heral (F1) hatrix (F2) F3) hace (F6) hrface (F7) ns (F8)	8) (LRR R, R R, MLRA 149B) LRR K, L) ess disturbed or pro	Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark Su Iron-Mangan Piedmont Fle Mesic Spodi Red Parent I Very Shallov Other (Expla	A10) (LRR K, L, MLRA 149B) Peat or Peat (S3) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R) Peotor (S7) (LRR K, L, M) Pelow Surface (S8) (LRR K, L) Perfect (S9) (LRR K, L) Peotor (LRR K, L) Peotor (LRR K, L) Peotor (S9) (LRR K, L, R) Peotor (S9) (LRR K, L)			
·			Aquatic Diversity		neral Com	nments:						
Wetland Qualit	ty: High		Moderate ✓	Low			Isolated Wetland	d? ☐ Yes ☑	No Unknown			
General Comm	ents:											





SW



WETLAND DETERMINATION FORM - Northcentral and Northeast Region										
 ☑ Centerline	ansmission Line									
Project/Site: NED Milepost: 12013.7 County:	Franklin Date: 07/25/2015									
Applicant/Owner: Kinder Morgan State: M.										
Investigators: CM MN Quad Name: Shelburne Falls Township:	Conway									
Logbook No.: 5M Logbook Pg.: 133 Tract: 603	·									
Landform (hillslope, terrace, etc.): Slope - mid Local Relief:	Concave ☑ Convex ☐ None Slope%.: 5									
Subregion (LRR): Middle Atlantic Lat: 42.540988	Long: -72.722046 Datum: NAD83									
Soil Map Unit Name: Ninigret very fine sandy loam, 3 to 8 percent slopes	NWI Classification: Not mapped									
Are climatic / hydrologic conditions on the site typical for this time of year?:	No (If no, explain in Remarks.)									
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑ No	Are "Normal" Circumstances present? ✓ Yes ✓ No									
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? ☑ No										
SUMMARY OF FINDINGS - Attach site map showing sampling point to	ocations transects important features etc									
Hydrophytic Vegetation Present?	——————————————————————————————————————									
	s the Sampled Area									
	within a Wetland? ☐ Yes ☑ No									
Wetland Hydrology Present? ☐ Yes ☑ No Field Wetland Classification: UPLAND PLOT										
Remarks:										
Torrang.										
HYDROLOGY										
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)									
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)									
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)	□ Drainage Patterns (B10)									
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)									
Saturation (A3) Marl Deposits (B15)	☐ Dry-Season Water Table (C2)									
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)									
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living I	Cotynetics Wishleson Assisting and (CO)									
□ Drift Deposits (B3) □ Presence of Reduced Iron (C4)	Churched on Otropolad Diamete (D4)									
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils	Comment in Desition (DO)									
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)									
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)									
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)									
Field Observations:										
Surface Water Present? ☐ Yes ☑ No Depth (inches):										
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ☐ Yes ☑ No									
Saturation Present? ☐ Yes ☑ No Depth (inches): (includes capillary fringe)	☐ 163 M									
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available):										
VEGETATION										
Tree Stratum										
Plot Size: 30										
Scientific Name	% Cover Dominant Indicator Status									
Betula lenta Tsuga canadensis	10 NO FACU 40 YES FACU									
Ulmus americana	15 NO FACW									
Betula populifolia	10 NO FAC									
Total Cover:	75									



Providence, RI 02904			- 1			
Sapling/Shrub Stratum						
Plot Size: 15						
Scientific Name		% Cover	Dominant	Indicator Status		
Lonicera morrowii		10	NO	FACU		
Betula alleghaniensis Tsuga canadensis		10 30	NO YES	FAC FACU		
-	Total Cover:	50	1	1		
Herb Stratum						
Plot Size: 5						
		% Cover	Dominant	Indicator Status		
Scientific Name		% Cover	Dominant YES	FACU		
Polystichum acrostichoides Poa spp.		20	NA	NONE		
Dryopteris intermedia	T 0	20	YES	FAC		
	Total Cover:	50				
Woody Vine Stratum						
Plot Size: 30		ı	1	1		
Scientific Name		% Cover	Dominant	Indicator Status		
	Total Cover:					
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:				
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)	Total % Cover	of:	Multiply by:			
THAT ARE OBL, FACW, OF FAC.	OBL Species:	<u>0</u>	x 1 = <u>0</u>			
Total Number of Dominant Species Across All Strata: 4 (B)	FACW Species	s: <u>15</u>	x 2 = <u>30</u>			
CPCOICE / ISI CHAIG.	FAC Species:	<u>40</u>	x 3 = <u>120</u>			
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)	FACU Species	: <u>100</u>	x 4 = <u>400</u>			
	UPL Species:	<u>0</u>	x 5 = <u>0</u>			
	Column Totals:	: <u>155 (A)</u>	<u>550 (B)</u>			
		Prevalence Index	$= B/A = \underline{3.55}$			
Hydrophytic Vegetation Indicators:						
1 - Rapid Test for Hydrophytic Vegetation						
2 - Dominance Test is > 50%						
3 - Prevalence Index is ≤ 3.0						
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	Vegetation Prese	nt? 🔲 Yes [☑ No		
data in Remarks or on a separate sheet)						
☐ Problematic Hydrophytic Vegetation¹ (Explain)						
¹Indicators of hydric soil and wetland hydrology must be						
present, unless disturbed or problematic.						
Remarks:	-1					



2011	02004											
SOIL												
Profile Descrip	otion: (Describe	the de				dicator o	r confirm	he absen	nce of indicators.)			
Depth	Matrix		Red	dox Fe	atures			Tour			Dar	ma elsa
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Text	ure		Ker	narks
0-1	7.5YR 2.5/1	100						ORGA	ANIC			
1-6	7.5YR 3/2	100						LOA	AM			
. 0	7.0111 0,2	100						20,				
0.40	7.5\/5.0/4	70	10)/5 5/0					011.7.1	0444			
6-12	7.5YR 3/1	70	10YR 5/6	30				SILT L	OAM		Rock refu	usal at 12"
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced l	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	² Location: PL=	Pore Linin	g, M=Ma	atrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ss oth	nerwise n	oted.)			Indicators for Pr	oblematic	Hydric	Soils ³ :
☐ Histosol (A	A1)		□Р	olvvalı	ue Below :	Surface (S	8) (LRR R		2 cm Muck (A10) (LRR	K. L. ML	-RA 149B)
_ `	pedon (A2)			ILRA 1			-, (=		☐ Coast Prairie			•
				hin Do	rk Surfoor	(CO) (LD	D D MIDA	140P)				LRR K, L, R)
☐ Black Hist							R R, MLRA	1490)			, , ,	
	Sulfide (A4)		_	•	•	` '	(LRR K, L)		☐ Dark Surface			
	Layers (A5)			•	Gleyed Ma	` '			Polyvalue Be			
_	Below Dark Surfa	ace (A1	(1) 🔲 D	eplete	d Matrix (I	F3)			☐ Thin Dark Su	ırface (S9)	(LRR K,	L)
☐ Thick Darl	k Surface (A12)		☐ R	edox [Dark Surfa	ice (F6)			☐ Iron-Mangan	ese Masse	s (F12)	(LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)			☐ Piedmont Flo	odplain So	oils (F19)) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□R	edox [Depressio	ns (F8)				c (TA6) (MI	∟RA 144	A, 145, 149B)
☐ Sandy Re	dox (S5)								☐ Red Parent I	Material (F2	21)	
☐ Stripped N	Matrix (S6)								☐ Very Shallov	/ Dark Surf	ace (TF	12)
	ace (S7) (LRR R	MIRA	\ 149B)						Other (Expla			,
_			and wetland hydro	ما د ما د			oo diatuub					
					· ·	esem, ume	sss distuib	ed of prob	nematic.			
Restrictive Lay	er Present?	✓ /	res ☐ No	U U	nknown							
ROCK									Hydric Soil Prese	nt?	Yes	☑ No
12												
Remarks:												
Description of I	Hahitat Characte	rietice	Aquatic Diversity	or Ge	neral Com	ments:						
Description of t	Tabilal Characte	noucs,	Aquatic Diversity	01 06	nerai con	iiiieiiis.						
W (I 10 II							11					
Wetland Qualit	y: 📙 High	П	Moderate	Low			Isolated	Wetland?	Yes	No 📙	Unkno	own
General Comm	ents:											





W



WE	TLAND) DET	ERN	IINATI	ON F	ORM -	Northc	ent	tral an	d No	ortheas	st Regi	on		
✓ Centerline ☐ Re-R	oute _	Acces	ss Roa	nd 🔲	Ancill	ary Facility		Trar	nsmission	Line		ther			
Project/Site: NED				Milepost:	2306	61.5	County:		Frankl	lin		Da	ate:	07/28/201	5
Applicant/Owner: Kinder Mo	rgan						State:	MA		Sam	oling Poi	nt: CN-N	/I-W0	03-PSS	
Investigators: CM	(Quad Na	ame:	Shelburn	e Falls		Townshi	p:	Conwa	ay					
Logbook No.: 6M	Logk	ook Pg	.: 19		Tra	ct: 26954									
Landform (hillslope, terrace,	etc.):	Slope	- mid			Local R	telief:	7 (Concave		Convex	☐ No	ne	Slope%.:	1
Subregion (LRR): Middl	e Atlantic			Lat	: 42.5	551054		L	_ong:	-72.68	4342			Datum: NAI	D83
Soil Map Unit Name: Ch	atfield-Holli	s compl	ex, 15	to 25 per	cent sl	opes, rocky	i				NWI (Classificati	on:	Not ma	pped
Are climatic / hydrologic cond	litions on th	e site ty	pical f	or this tim	ne of ye	ar?:	Z Yes		No (If n	o, exp	lain in Re	marks.)			
Are Vegetation ✓ Soil	or Hy	/drology	, \Box	significa	intly dis	sturbed?	□ No	Α	re "Norm	al" Cir	cumstanc	es present	t?	 ✓ Yes	☐ No
Are Vegetation Soil	or Hy	/drology	, _□	naturally	, proble	ematic?	— ✓ No								
_					•		_								
SUMMARY OF FINDII	NGS - At	tach	site n	nap sh	owing	g sampli	ng poin	t lo	cations	s, tra	nsects	import	ant	features	, etc.
Hydrophytic Vegetation Pres	ent?	\checkmark	Yes	□ N	0			le	the San	mplod	l Aroa				
Hydric Soil Present?		V	Yes	□ N	0				ithin a V			✓ Yes		No	
Wetland Hydrology Present?		V	Yes	□ N	0										
Field Wetland Classification:	PSS														
Remarks: Floodplain															
HYDROLOGY															
Wetland Hydrology Indicate	ors:									5	Secondar	/ Indicator	s (2 c	or more requ	iired)
Primary Indicators (minimum	of one req	uired; cl	heck a	ll that app	oly)					[Surfa	ce Soil Cra	acks	(B6)	
☐ Surface Water (A1)			Г	☐ Wate	r-Stain	ed Leaves ((B9)			E	☑ Drain	age Patter	rns (E	310)	
✓ High Water Table (A2)			_			na (B13)	,			[Moss	Trim Line	s (B1	6)	
✓ Saturation (A3)						ts (B15)				[Dry-S	eason Wa	ater T	able (C2)	
☐ Water Marks (B1)						ulfide Odor	(C1)			[Crayf	ish Burrow	vs (C	3)	
☐ Sediment Deposits (B2)			-	_	_	izospheres		ng R	oots (C3)	, [☐ Satur	ation Visib	le on	Aerial imag	ery (C9)
☐ Drift Deposits (B3)			E	_ ☑ Pres	ence of	Reduced Ir	ron (C4)			[Stunt	ed or Stres	ssed	Plants (D1)	
☐ Algal Mat or Crust (B4)			-	_ □ Rece	nt Iron	Reduction i	in Tilled Sc	oils (0	C6)	[☑ Geon	orphic Po	sition	n (D2)	
☐ Iron Deposits (B5)			[Thin	Muck S	Surface (C7))			[Shall	ow Aquitar	rd (D3	3)	
☐ Inundation Visible on A	rial Imagei	y (B7)	[☐ Othe	r (Expla	ain in Rema	rks)			[Micro	topograph	ic Re	elief (D4)	
☐ Sparsely Vegetated Co	ncave Surfa	ace (B8)								E	✓ FAC-	Neutral Te	est (D	5)	
								I							
Field Observations:															
Surface Water Present?	Yes			Depth (inc		_									
Water Table Present?	✓ Yes	_		Depth (ind	•	6			Wetlan	nd Hyd	drology P	resent?	V	Yes □	No
Saturation Present? (includes capillary fringe)	✓ Yes	□ N	No I	Depth (ind	ches):	0							Ľ	163	140
Remarks (Describe Recorded	Data (stre	am gag	e, mon	itoring we	ell, aeria	al photos, p	revious ins	pect	tions), if a	availab	le):		_		
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Co	over		Dominant		Indicato	or Status
Tsuga canadensis Acer saccharum									10 15	5		YES YES			CU CU
						٦	Total Cove	r:	2	5					



rovidence, RI 02904			- 1	
apling/Shrub Stratum				
lot Size: 15				
cientific Name		% Cover	Dominant	Indicator Status
almia latifolia alix interior cer saccharum		10 15 10	NO YES NO	FACU FACW FACU
suga canadensis onicera morrowii		15 35	YES YES	FACU FACU
	Total Cover:	85		1
look Ctrotum				
lerb Stratum Plot Size: 5				
	ı	% Cover	Dominant	Indicator Status
cientific Name Equisetum palustre		% Cover 15	Dominant NO	Indicator Status FACW
Typha latifolia		10	NO	OBL
mpatiens capensis Onoclea sensibilis		35 25	YES YES	FACW FACW
	Total Cover:	85		ı
Voody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:		1	1
Dominance Test Worksheet:	Prevalence Ind	lex Worksheet:		
Number of Dominant Species	Total % Cover of	of:	Multiply by:	
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>10</u>	x 1 = <u>10</u>	
Total Number of Dominant	FACW Species	: <u>90</u>	x 2 = <u>180</u>	
Species Across All Strata: 7 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>	
Percent of Dominant Species That Are OBL FACW or FAC: 43 (A/B)	FACU Species:	<u>95</u>	x 4 = <u>380</u>	
That Are OBL, FACW, or FAC: 43 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>195 (A)</u>	<u>570 (B)</u>	
	F	Prevalence Index	z = B/A = 2.92	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic V	egetation Prese	ent? 🗹 Yes [] No
data in Remarks or on a separate sheet)				_
Problematic Hydrophytic Vegetation¹ (Explain)				
Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
,				



	(1 0200+								
SOIL									
Profile Descrip		the d				ndicator o	r confirm the abse	nce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		Tov	turo	Pomorko
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Tex	ture	Remarks
0-7	7.5YR 4/1	100					FINE SAN	DY LOAM	
7-10	10YR 5/2	30	10YR 6/1	70	D	М	SANDY	LOAM	
10-14	10YR 5/1	20	10YR 6/1	65	D	М	COARSE SA	ANDY I OAM	Cobble at 14", refusal
10 11	1011(0,1	20	10YR 5/8	15	Č	M	00/11/02/0/		Cobbie at 11, forded
1T 0.0			DM D 1				0 / 10 :	al .: DI	<u></u>
		<u> </u>					or Coated Grains.		=Pore Lining, M=Matrix
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pr	roblematic Hydric Soils³:
☐ Histosol (A	A1)			olyvalı 1LRA 1		Surface (S	8) (LRR R,	2 cm Muck ((A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	oedon (A2)		IV	ILIXA I	490)			☐ Coast Prairie	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		□т	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)	☐ 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1)	(LRR K, L)	☐ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	 11)	eplete	d Matrix (I	F3)		☐ Thin Dark Su	urface (S9) (LRR K, L)
	k Surface (A12)			•	` Dark Surfa	•		_	nese Masses (F12) (LRR K, L, R)
_	ıcky Mineral (S1)		_			ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)
_	eyed Matrix (S4)		_	•	Depressio	, ,			
☐ Sandy Re			<u></u>	iedox i	Depressio	113 (1 0)		_	c (TA6) (MLRA 144A, 145, 149B)
								_	Material (F21)
	Matrix (S6)							_	w Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown				
								Hydric Soil Prese	ent? ☑ Yes ☐ No
								,	<u> </u>
Remarks:									
rtomanto.									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: High	√ 1	Moderate	Low			Isolated Wetland	? ☐ Yes ☑	No Unknown
General Comm	anta								
General Comm	ienis.								





Ε



WE	TLAND	DET	ERMIN	IATI	ON FORM - I	Northc	entral ar	nd No	ortheast	Region	l	
☑ Centerline ☐ Re-Ro	ute 🔲	Acces	s Road		Ancillary Facility		Transmissio	n Line	☐ Oth	er		
Project/Site: NED			Mile	epost:	23124.8	County:	Frank	klin		Date:	07/28/201	15
Applicant/Owner: Kinder Mor	gan					State:	MA	Sam	pling Point	: CN-M-W	003-UPL	
Investigators: CM	(Quad Na	me: She	elburne	Falls	Townshi	p: Conv	vay				
Logbook No.: 6M	Logb	ook Pg.:	: 20		Tract: 26954							
Landform (hillslope, terrace, e	tc.):	Floodpl	ain terra	ce	Local R	elief: v	Concave	· 🗆	Convex	■ None	Slope%.:	1
Subregion (LRR): Middle	Atlantic			Lat:	42.551085		Long:	-72.68	34104		Datum: NA	D83
Soil Map Unit Name: Pax	ton fine sa	ındy loan	n, 8 to 15	perce	nt slopes, very sto	ny			NWI Cla	assification:	Not ma	apped
Are climatic / hydrologic condi	tions on th	e site typ	oical for t	his time	e of year?:	1 Yes	☐ No (If	no, exp	lain in Rem	arks.)		
Are Vegetation Soil	or Hy	/drology	☐ si	gnifica	ntly disturbed?	□ No	Are "Norn	nal" Cir	cumstances	s present?	√ Yes	☐ No
Are Vegetation	or Hy	/drology	☐ na	aturally	problematic?	☑ No						
SUMMARY OF FINDIN	GS - At	tach s	ite ma	p sho	owing samplir	ng point	location	s, tra	ınsects, i	mportan	t features	, etc.
Hydrophytic Vegetation Prese	nt?		Yes [Z No)		l- (l- 0-					
Hydric Soil Present?			Yes 5	Z No)		Is the Sa within a	impled Wetla	nd?] Yes [☑ No	
Wetland Hydrology Present?			Yes [Z No)							
Field Wetland Classification:	UPLA	AND PLO	TC									
Remarks: Disturbed v	egetation	due to O	HVPL m	aintena	ance							
HYDROLOGY												
Wetland Hydrology Indicator	rs:								Secondary I	ndicators (2	or more requ	uired)
Primary Indicators (minimum c	of one requ	uired; ch	eck all th	at app	<u>ly)</u>				☐ Surface	Soil Crack	s (B6)	
☐ Surface Water (A1)				Water	-Stained Leaves (I	B9)			☐ Drainaç	ge Patterns	(B10)	
☐ High Water Table (A2)				Aquat	ic Fauna (B13)				☐ Moss T	rim Lines (E	316)	
☐ Saturation (A3)				Marl E	Deposits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
				Hydro	gen Sulfide Odor ((C1)		I	☐ Crayfis	h Burrows (C8)	
☐ Sediment Deposits (B2)				Oxidiz	zed Rhizospheres	along Livir	ng Roots (C3	₃₎ l	☐ Saturat	ion Visible o	on Aerial imaç	gery (C9)
☐ Drift Deposits (B3)				Prese	nce of Reduced Ire	on (C4)		I	Stunted	d or Stresse	d Plants (D1)	
☐ Algal Mat or Crust (B4)				Recer	nt Iron Reduction in	n Tilled So	ils (C6)	ļ	☐ Geomo	rphic Position	on (D2)	
☐ Iron Deposits (B5)				Thin N	Muck Surface (C7)			l	Shallov	v Aquitard ([D3)	
☐ Inundation Visible on Aer	ial Imager	y (B7)		Other	(Explain in Remar	ks)			☐ Microto	pographic F	Relief (D4)	
☐ Sparsely Vegetated Cond	cave Surfa	ace (B8)							☐ FAC-N	eutral Test (D5)	
Field Observations:												
	☐ Yes	☑ N	o Dep	th (inc	hes):							
	☐ Yes	☑ N	•	th (inc	,		Wetla	and Hy	drology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ N	o Dep	oth (inc	hes):						l les 🔽	NO
Remarks (Describe Recorded	Data (strea	am gage	, monitor	ing we	ll, aerial photos, pr	evious ins	pections), if	availab	ole):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	Cover	Do	ominant	Indicate	or Status
Pinus strobus								50		YES	FA	ACU
					Т	otal Cove	r: '	50	•		•	



Tsuga canadensis S	tentific Name	Indicator Status FACU FACU FACU FACU FACU FACU FACU FAC
Scientific Name	lentific Name	FACU FACU FACU FACU FACU
Total Cover: Section	uga canadensis er saccharum 10 NO Imia latifolia 30 YES Inicera morrowii 25 YES 20 YES 20 YES Total Cover: 90 Total Cover Dominant Internocissus quinquefolia Total Cover: 5 Total Cover: 5 Total Cover: 5	FACU FACU FACU FACU FACU
10 N Kalmia latifolia 30 Yt 10 25 Yt 10 10 10 10 10 10 10 1	er saccharum Initial atifolia Initial at	FACU FACU FACU FACU
Herb Stratum	Total Cover: 90 The Stratum In Size: 5 Identific Name	
Plot Size: 5 Scientific Name	of Size: 5 dentific Name	
Plot Size: 5 Scientific Name	of Size: 5 dentific Name	
Scientific Name Parthenocissus quinquefolia Total Cover: 5 Woody Vine Stratum Plot Size: 30 Scientific Name **Total Cover: 5 **Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0_(A) Percent of Dominant Species That Are OBL, FACW, or FAC: 0_(AB) Percent of Dominant Species That Are OBL, FACW, or FAC: 0_(AB) Percent of Dominant Species That Are OBL, FACW, or FAC: 0_(AB) Prevalence Index Worksheet: Total % Cover of: Multiply OBL Species: 0_ x 1 = FACW Species: 0_ x 2 = FAC Species: 0_ x 3 = FACW Species: 0_ x 3 = FACU Species: 0_ x 3 = FACU Species: 0_ x 5 = Column Totals: 145	ientific Name % Cover Dominant rthenocissus quinquefolia 5 YES Total Cover: 5 rody Vine Stratum of Size: 30	
Parthenocissus quinquefolia 5 Yi	rthenocissus quinquefolia 5 YES Total Cover: 5 rody Vine Stratum ot Size: 30	
Total Cover: 5	Total Cover: 5 body Vine Stratum of Size: 30	17.00
Plot Size: 30 Scientific Name	oody Vine Stratum ot Size: 30	
Plot Size: 30 Scientific Name Total Cover: Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) Prevalence Index Worksheet: Total % Cover of: Multiply OBL Species: 0 x1 = FACW Species: 0 x2 = FACW Species: 0 x3 = FACW Species: 0 x3 = FACU Species: 0 x3 = FACU Species: 0 x3 = FACU Species: 0 x5 = Column Totals: 145 x4 = UPL Species: 0 x5 = Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)	ot Size: 30	
Total Cover: Dominance Test Worksheet: Number of Dominant Species Total % Cover of: Multiply OBL Species: Q x1 = Total % Cover of: Multiply OBL Species: Q x1 = Total % Cover of: Multiply OBL Species: Q x2 = FACW Species: Q x3 = FACW Species: Q x4 = UPL Species: Q x5 = UPL Spec		
Total Cover: Dominance Test Worksheet: Prevalence Index Worksheet: Total % Cover of: Multiply OBL Species: 0		Indicator Status
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total % Cover of: Multiply OBL Species: 0 x 1 = Total Number of Dominant Species Across All Strata: 5 (B) FACW Species: 0 x 2 = Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) FACU Species: 0 x 4 = UPL Species: 0 x 5 = Column Totals: 145 (A) UPL Species: 0 x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Prevalence Index = B/A = Hydrophytic Vegetation Indicators: Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? 1 - Rapid Test for Hydrophytic Vegetations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □	refullic Name // Cover Dominant	Thulcator Status
Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total % Cover of: Multiply OBL Species: 0 x 1 = Total Number of Dominant Species Across All Strata: 5 (B) FACW Species: 0 x 2 = Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) FACU Species: 0 x 4 = UPL Species: 0 x 5 = Column Totals: 145 (A) UPL Species: 0 x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Prevalence Index = B/A = Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? □ 1 - Rapid Test for Hydrophytic Vegetations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □	Total Cover:	
Number of Dominant Species That Are OBL, FACW, or FAC: O(A) OBL Species: OBL Spe		
That Are OBL, FACW, or FAC: OBL Species: OBL Species: OBL Sp		
Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: O(A/B) FACW Species: O(x x 2 = FACW Species: O(x x 3 = FACU Species: O(x x 4 = UPL Species: O(x x 5 = Column Totals: O(a/B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: O(a/B) 1 - Rapid Test for Hydrophytic Vegetation O(x - Dominance Test is > 50% O(x - Dominance Te	at Are OBL, FACW, or FAC: 0 (A)	
Species Across All Strata: 5 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: O(A/B) FAC Species: 0 x 3 = FACU Species: 145 x 4 = UPL Species: 0 x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Problematic Hydrophytic Vegetation¹ (Explain)	tal Number of Dominant FACW Species: 0 x 2 = 0	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B) FACU Species: 0 x 4 = UPL Species: 0 x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Problematic Hydrophytic Vegetation¹ (Explain)	pecies Across All Strata: 5 (B)	
UPL Species: 0 x 5 = Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Problematic Hydrophytic Vegetation¹ (Explain)	ercent of Dominant Species FACIL Species 145 x 4 = 580	
Column Totals: 145 (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: □ 1 - Rapid Test for Hydrophytic Vegetation □ 2 - Dominance Test is > 50% □ 3 - Prevalence Index is ≤ 3.0 □ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) □ Problematic Hydrophytic Vegetation¹ (Explain)	at Are OBL, FACW, or FAC:	
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Problematic Hydrophytic Vegetation¹ (Explain)		
Hydrophytic Vegetation Indicators:	Prevalence Index = $B/A = 4.00$	
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? Problematic Hydrophytic Vegetation¹ (Explain)		
2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □		
3 - Prevalence Index is ≤ 3.0 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present? □ Problematic Hydrophytic Vegetation¹ (Explain)		
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Present?		
data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)		1 No
		, NO
	Problematic Hydrophytic Vegetation¹ (Explain)	
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Remarks:	emarks:	



SOIL									
Profile Descrip	tion: (Describe	the d	epth needed to d	locum	ent the in	dicator o	r confirm the abse	nce of indicators.)	
Depth (inches)	Matrix		Red	dox Fe	atures		Toy	ture	Remarks
(11101162)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	iex	uul 5	IZIIIIINS
0-5	7.5YR 4/3	100					LO	AM	
5-15	7.5YR 3/3	60	7.5YR 5/4	40	С	М	SANDY	/ LOAM	
45.40	7.EVD.E/4	70	7 EVD 6/6	20		M	COARCE	ANDVIOAM	
15-18	7.5YR 5/4	70	7.5YR 6/6	30	С	М	COARSE SA	ANDY LOAM	
¹Type: C=Cond	centration D=De	enletion	RM=Reduced I	Matrix	CS=Cov	ered Sand	or Coated Grains.	²l ocation: Pl =	 =Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·	·	o all LRR's, unle				or coated craine.		roblematic Hydric Soils³:
☐ Histosol (A						-	8) (LRR R,	_	A10) (LRR K, L, MLRA 149B)
	pedon (A2)			ILRA 1		(-	-, (=: :: : :,		e Redox (A16) (LRR K, L, R)
☐ Black Hist			ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149B)		Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		_				LRR K, L)		e (S7) (LRR K, L, M)
☐ Stratified I	_ayers (A5)			oamy (Gleyed Ma	atrix (F2)		☐ Polyvalue Be	elow Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A1		-	d Matrix (I				urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		_ R	edox [Dark Surfa	ice (F6)		 ☐ Iron-Mangar	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ R	edox I	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							□ Very Shallov	v Dark Surface (TF12)
☐ Dark Surfa	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
3Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blematic.	
Restrictive Lay	er Present?		Yes ☑ No	□ U	nknown				
•		_	_					Hydric Soil Prese	ent? ☐ Yes ☑ No
								_	
Remarks:									
Description of I	Habitat Characte	ristics.	Aquatic Diversity	or Ge	neral Com	ments:			
, , , , ,		,	, , , , , , , , , , , , , , , , , , , ,						
Wetland Qualit	y: High		Moderate	Low			Isolated Wetland	?	No Unknown
General Comm	ents:								





S



WET	LAND DET	TERMINA	ATION F	ORM - N	Northc	entral an	d No	ortheast	Region		
☑ Centerline ☐ Re-Rout	e 🔲 Acce	ss Road	☐ Ancilla	ary Facility		Transmission	n Line	☐ Othe	er		
Project/Site: NED		Milepo	ost: 1224	45.6	County:	Frankl	lin		Date:	08/10/201	5
Applicant/Owner: Kinder Morga	n				State:	MA	Samp	oling Point:	NO-M-W	002A-PEM	
Investigators: CM	Quad N	ame: North	field		Township	p: Northf	field				
Logbook No.: 6M	Logbook Pg	j.: 106	Trac	t: 21118	'						
Landform (hillslope, terrace, etc): Depre	ssion	<u> </u>	Local Re	elief: v	Concave		Convex	None	Slope%.:	0
Subregion (LRR): Middle A	tlantic		Lat: 42.65	58341		Long:	-72.42	4839		Datum: NA	D83
Soil Map Unit Name: Wood	stock-Millsite-R	ock outcrop	complex, 8	to 15 percei	nt slopes			NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic condition	ns on the site t	ypical for this	time of year	ar?: ▽	¶ Yes	☐ No (If n	io, expl	lain in Rema	rks.)		
Are Vegetation ✓ Soil ✓	or Hydrolog	y √ sign	ificantly dist	urbed?	□ No	Are "Norm	al" Circ	cumstances	present?	 ✓ Yes	☐ No
Are Vegetation ☐ Soil ☐			rally proble		— ☑ No						
SUMMARY OF FINDING	S - Attach	cite man	showing	eamplin	a noint	locations	e tra	neacte ii	mnortani	t foatures	etc
		Yes	No	Sampini	ig point	liocations	5, II a	1136613, 11	пропан	i reatures	., e.c.
Hydrophytic Vegetation Present		=				Is the Sar	mpled	Area 🗔	. V	7 N	
Hydric Soil Present?	☑	Yes	No No			within a V	Netlar	nd? ✓	Yes [] No	
Wetland Hydrology Present?	<u></u>	Yes	No								
Field Wetland Classification:	PEM	VET: 4115									
Remarks: ACCESS RC	AD BISECTS V	VETLAND									
HYDROLOGY											
Wetland Hydrology Indicators							<u> </u>	Secondary Ir	ndicators (2	or more requ	uired)
Primary Indicators (minimum of	one required; o	heck all that	apply)					Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)		√ ∨	/ater-Staine	d Leaves (E	39)			☐ Drainag	e Patterns ((B10)	
☐ High Water Table (A2)		□ A	quatic Faun	ia (B13)				☐ Moss Tr	im Lines (B	16)	
☐ Saturation (A3)		□ N	larl Deposits	s (B15)				☐ Dry-Sea	son Water	Table (C2)	
■ Water Marks (B1)		□н	ydrogen Su	lfide Odor (C1)			Crayfish	Burrows (0	C8)	
☐ Sediment Deposits (B2)		☑ C	xidized Rhi	zospheres a	along Livin	ng Roots (C3)) [☐ Saturation	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)		 P	resence of I	Reduced Iro	on (C4)			Stunted	or Stressed	d Plants (D1)	
☐ Algal Mat or Crust (B4)		☐ R	ecent Iron F	Reduction in	Tilled So	ils (C6)		Geomor	phic Position	on (D2)	
☐ Iron Deposits (B5)		□⊤	hin Muck St	urface (C7)			5	✓ Shallow	Aquitard (D	03)	
☐ Inundation Visible on Aeria	Imagery (B7)		ther (Explai	n in Remarl	ks)			Microtop	ographic R	elief (D4)	
☐ Sparsely Vegetated Conca	ve Surface (B8)						☐ FAC-Ne	utral Test (I	D5)	
Field Observations:											
Surface Water Present?	Yes √ ∣	No Depth	(inches):								
Water Table Present?	: = .	•	(inches):			Wetlar	nd Hvd	Irology Pres	sent?		
Saturation Present? (includes capillary fringe)	: <u> </u>	•	(inches):	14				3,		Yes □	No
Remarks (Describe Recorded D	nto (etroem ===	no monitorio	a woll com-	I photos ==	ovious is-	noctions) if =	nvoilat	lo):			
Remarks (Describe Recorded D	ila (Siream gag	je, monitorinį	y well, aeria	i priotos, pre	evious iris	pections), ii a	avallab	ie).			
VEGETATION											
Tree Stratum											
Plot Size: 30											
Scientific Name						% C	over	Do	minant	Indicate	or Status
				To	otal Cover	r:					



pling/Shrub Stratum				
ot Size: 15				
ientific Name		% Cover	Dominant	Indicator Status
tula alleghaniensis		10	YES	FAC
rix laricina Ilmia latifolia		2 5	NO NO	FACW FACU
er rubrum		2	NO	FAC
accinium corymbosum		10	YES	FACW
	Total Cover:	29		
rb Stratum				
ot Size: 5				
ientific Name		% Cover	Dominant	Indicator Status
irpus cyperinus oodwardia virginica		5 5	YES YES	OBL OBL
arex lurida		5	YES	OBL
	Total Cover:	15	'	•
pody Vine Stratum				
ot Size: 30				
eientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
ominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
umber of Dominant Species nat Are OBL_FACW_or FAC: 5 (A)	Total % Cover	of:	Multiply by:	
nat Are OBL, FACW, or FAC: 5 (A)	OBL Species:	<u>15</u>	x 1 = <u>15</u>	
otal Number of Dominant	FACW Species	: <u>12</u>	x 2 = <u>24</u>	
pecies Across All Strata: 5 (B)	FAC Species:	<u>12</u>	x 3 = 36	
ercent of Dominant Species	FACU Species		x = 4 = 4 = 4 = 4 = 4 = 4 = 4 = 4 = 4 =	
nat Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>o</u>	x = 0	
	Column Totals:	, ,	<u>95 (B)</u>	
		Prevalence Index	= B/A = <u>2.16</u>	
ydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic \	egetation Prese	nt? ☑ Yes [□ No
data in Remarks or on a separate sheet)		_		_
Problematic Hydrophytic Vegetation¹ (Explain)				
ndicators of hydric soil and wetland hydrology must be esent, unless disturbed or problematic.				
emarks:				



2011	02004								The second of the second
SOIL									
•		the d				dicator o	r confirm the abs	sence of indicators.)	·
Depth (inches)	Matrix			dox Fe			Te	exture	Remarks
(Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			. tomane
0-7	10YR 2/2	100					OR	GANIC	
7-14	10YR 4/1	30	10YR 6/1	60	D	М	VERY F	FINE SAND	
			10R 5/8	10	С	M,PL			
14-16	2.5Y 4/2	40	2.5Y 5/2	50	D	М	COARSE	SANDY LOAM	Refusal at 16"
			2.5Y 5/6	10	С	PL			
¹Type: C=Cond	centration, D=De	epletion	n, RM=Reduced	Matrix,	CS=Cov	ered Sand	or Coated Grains	s. ² Location: PL=	=Pore Lining, M=Matrix
			o all LRR's, unle						roblematic Hydric Soils ³ :
Histosol (/						-	8) (LRR R,		(A10) (LRR K, L, MLRA 149B)
_ `	pedon (A2)			ILRA 1		Surface (S	o) (LKK K,		e Redox (A16) (LRR K, L, R)
				hin Do	rk Surface	, (SO) (LD)	R R, MLRA 149B)	_	Peat or Peat (S3) (LRR K, L, R)
☐ Black Hist			_			` ' '	•	= '	, , , , , , , , , , , , , , , , , , , ,
	Sulfide (A4)			-	-		(LRR K, L)	_	e (S7) (LRR K, L, M)
	Layers (A5)	200 (44		-	Gleyed Ma				elow Surface (S8) (LRR K, L)
	Below Dark Surfa	ace (A	_	-	d Matrix (I	•			urface (S9) (LRR K, L)
_	k Surface (A12)				Dark Surfa			_ ,	nese Masses (F12) (LRR K, L, R)
_	icky Mineral (S1)		_	-		ırface (F7)		_	oodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)		□ F	Redox L	Depressio	ns (F8)			c (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re								_	Material (F21)
	Matrix (S6)							= '	w Dark Surface (TF12)
☐ Dark Surf	ace (S7) (LRR R	, MLRA	A 149B)					☐ Other (Expla	ain in Remarks)
³ Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology m	nust be pr	esent, unle	ess disturbed or pr	roblematic.	
Restrictive Lay	er Present?	☑ '	Yes 🔲 No	□ U	nknown				
ROCK								Hydric Soil Prese	ent? ☑ Yes 🗆 No
16									
Remarks:							1		
Description of	Hahitat Characte	rietice	Aquatic Diversity	or Ge	neral Com	ments:			
•	WITH NO-AC3-\		Aquatic Diversity	01 00	noral con	inionis.			
			Moderate	Low			Isolated Wetlan	nd? 🗹 Ves 🗖	No. Unknown
Welland Qualit	y. 🔽 Ingn	ч.	vioderate	LOW			isolated Wetlan	iu: 🚺 ies 🔟	No Unknown
General Comm	ents:								





NE



WE	TLAND	DETE	ERMIN	ATION	FORM -	Northc	entral an	d No	ortheast	Region		
☑ Centerline ☐ Re-Ro	oute 🔲	Access	s Road	☐ An	cillary Facility		Transmission	n Line	☐ Oth	er		
Project/Site: NED			Milep	ost: 12	22404.5	County:	Frank	lin		Date:	08/10/201	5
Applicant/Owner: Kinder Mo	rgan					State:	MA	Samp	oling Point	NO-M-W	002A-UPL	
Investigators: CM	С	Quad Nar	me: North	field		Townshi	p: Northf	field				
Logbook No.: 6M	Logb	ook Pg.:	107	Т	ract: 21118	•						
Landform (hillslope, terrace, e	tc.):	Hilltop			Local R	elief:	Concave	$\overline{\checkmark}$	Convex	None	Slope%.:	10
Subregion (LRR): Middle	e Atlantic			Lat: 4	2.658256		Long:	-72.42	4943		Datum: NA	D83
Soil Map Unit Name: Wo	odstock-Mil	llsite-Ro	ck outcrop	complex	, 8 to 15 perce	ent slopes			NWI Cla	ssification:	Not ma	apped
Are climatic / hydrologic condi	tions on the	e site typ	ical for thi	s time of	year?:	7 Yes	☐ No (If n	o, expl	lain in Rema	arks.)		
Are Vegetation ✓ Soil	or Hy	drology	☐ sigr	nificantly	disturbed?	□ No	Are "Norm	al" Circ	cumstances	present?	✓ Yes	☐ No
Are Vegetation Soil	or Hy	drology	nati	urally pro	blematic?	✓ No						
SUMMARY OF FINDIN	IGS - Att	tach si	ite map	showi	ng samplir	ng point	locations	s, tra	nsects, i	mportant	t features	, etc.
Hydrophytic Vegetation Prese	nt?		Yes 🗹	No								
Hydric Soil Present?			Yes 🗹	No			Is the Sar within a V	mpled Netlar	l Area nd? □] Yes ⊡	∐ No	
Wetland Hydrology Present?			Yes 🗹	No								
Field Wetland Classification:	UPLA	ND PLC	T									
Remarks:												
HYDROLOGY												
Wetland Hydrology Indicato	rs:							5	Secondary I	ndicators (2	or more requ	<u>uired)</u>
Primary Indicators (minimum o	of one requ	uired; che	eck all tha	t apply)					Surface	Soil Cracks	s (B6)	
☐ Surface Water (A1)				Vater-Sta	ined Leaves (B9)			☐ Drainag	je Patterns (B10)	
☐ High Water Table (A2)				Aquatic F	auna (B13)				☐ Moss T	rim Lines (B	16)	
☐ Saturation (A3)				/larl Depo	osits (B15)				☐ Dry-Sea	ason Water	Table (C2)	
□ Water Marks (B1)			□ +	Hydrogen	Sulfide Odor	(C1)				n Burrows (C	•	
☐ Sediment Deposits (B2)				Oxidized I	Rhizospheres	along Livir	ng Roots (C3)) [Saturati	on Visible o	n Aerial imaç	gery (C9)
☐ Drift Deposits (B3)			□ F	Presence	of Reduced Ir	on (C4)					d Plants (D1)	
☐ Algal Mat or Crust (B4)			☐ F	Recent Iro	on Reduction is	n Tilled So	ils (C6)			rphic Positio	, ,	
☐ Iron Deposits (B5)			י ם	hin Mucl	Surface (C7)					Aquitard (D	•	
☐ Inundation Visible on Ae	rial Imagery	y (B7)		Other (Ex	plain in Remai	rks)		L		pographic R		
Sparsely Vegetated Con	cave Surfa	ce (B8)						L	_ FAC-N∈	eutral Test (I	D5)	
Field Observations:												
Surface Water Present?	☐ Yes	✓ No	o Depth	n (inches)):							
Water Table Present?	☐ Yes	✓ No	•	(inches)			Wetlar	nd Hyd	Irology Pre		Yes ☑	No
Saturation Present? (includes capillary fringe)	☐ Yes	☑ No	o Depth	n (inches)): 14						ies 🗹	NO
Remarks (Describe Recorded	Data (strea	am gage,	, monitorin	g well, a	erial photos, pi	revious ins	pections), if a	availab	le):			
VEGETATION												
Tree Stratum												
Plot Size: 30												
Scientific Name							% C	over	Do	minant	Indicate	or Status
Quercus rubra Acer rubrum Tsuga canadensis							1, 1, 4	0		NO NO YES	F	ACU AC ACU
					Т	otal Cove	1	60	I	-	.,	



1 Tovidence, IXI 02504				
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Kalmia latifolia Viburnum lantanoides Tsuga canadensis Hamamelis virginiana Betula lenta		5 15 10 10 5	NO YES YES YES NO	FACU FACU FACU FACU FACU
	Total Cover:	45		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
Vaccinium angustifolium		5	YES	FACU
	Total Cover:	5	'	•
Woody Vine Stratum				
Plot Size: 30				
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	lex Worksheet:		
Number of Dominant Species That Are OBL FACW or FAC: 0 (A)	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 0 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>	
Total Number of Dominant Species Across All Strata: 5 (B)	FACW Species	: <u>0</u>	x 2 = <u>0</u>	
Species Across All Strata: 5 (B)	FAC Species:	<u>10</u>	x 3 = <u>30</u>	
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)	FACU Species:	<u>100</u>	x 4 = <u>400</u>	
That the OBE, I NOW, OI THO.	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals:	<u>110 (A)</u>	430 (B)	
		Prevalence Index :	= B/A = <u>3.91</u>	
Hydrophytic Vegetation Indicators:				
☐ 1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is > 50%				
☐ 3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	Hydrophytic V	egetation Preser	nt? ☐ Yes ☑	∐ No
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks:				

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Profile Describe the depth needed to document the indicator or confirm the absence of indicators.) Describe	Providence, F	1 02904																			
Depth (inches)	SOIL																				
Color (moist)	Profile Descrip	otion: (Describe	the de	pth need	ed to	docum	ent the ir	ndicator o	r confirm	he absen	nce of	f indi	cato	rs.)							
Occident (moist)		Matrix			Re	dox Fe	atures														
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Sand or Coated Grains. **Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Hydrogen Sulfide (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Stripped Matrix (S6) Red Surface (S7) (LRR R, MLRA 149B) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Player Present? Yes No Unknown	(inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc²		Text	ure							Rem	narks		
Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1)	0-3	5YR 3/2	100						ORGANIC Bedrock re						efusa	l at 3"					
Histosol (A1)	¹Type: C=Cond	L centration, D=De	pletion	, RM=Red	duced	Matrix,	CS=Cov	ered Sand	l I or Coated	Grains.	2[_ocati	ion: I	 PL=P	ore L	ining	, M	 1=Мг	atrix		
Histosol (A1)																				3.	
DUFF LAYER OVER EXPOSED BEDROCK SHELF Description of Habitat Characteristics, Aquatic Diversity or General Comments: DATA PLOT TAKEN ON CENTERLINE Wetland Quality:	Histic Epip Black Hist Hydrogen Stratified I Depleted Thick Darl Sandy Mt Sandy Gle Stripped I Dark Surfi	bedon (A2) iic (A3) Sulfide (A4) Layers (A5) Below Dark Surfack Surface (A12) iicky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R	, MLRA	1) \ 149B) and wetland		MLŔA 1 Thin Da Loamy I Loamy (Deplete Redox I Deplete Redox I	49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depressio	e (S9) (LR) neral (F1) atrix (F2) F3) ace (F6) urface (F7) ns (F8)	R R, MLRA	a 149B)		Coa: 5 cm Dark Poly Thin Iron- Pied Mes Red Very Othe	st Practical States of the Sta	airie F cky Pe face (Belo Surfa ganes t Flood odic (ent Ma kylain	Redox Redox S7) (S7) (See Ma dplai TA6) Dark in Re	x (A1) r Pea (LRR (S9) (assessin Soi) (MLI Surfaal (F2)	(I6) (In the second sec	(LRR (LRR) (L, M) (S8) (L (R K, (12) ((F19) (TF1) (TF1)	K, L, LRR F) LRR K L) (L) (MLF (MLF 2)	R) (, L, R) (, L) K, L, R) RA 149B) 5, 149B)	
DATA PLOT TAKEN ON CENTERLINE Wetland Quality: High Moderate Low Isolated Wetland? Yes No Unknown		OVER EXPOSE	D BEDF	ROCK SHI	ELF																
	·			•	versity	y or Ge	neral Com	nments:													
General Comments:	Wetland Qualit	y: High		/loderate		Low			Isolated	Wetland?	· [□ Y	es/		No		U	nkno	wn		
	General Comm	ents:																			





ΝE



WETLAND DETERMINATION FORM - N	Iorthcentral and Northeast Region							
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other							
Project/Site: NED Milepost: 122490.2	County: Franklin Date: 08/26/2015							
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: NO-M-W002-PEM							
Investigators: CM MN Quad Name: Northfield	Township: Northfield							
Logbook No.: 7M Logbook Pg.: 59 Tract: 21118								
Landform (hillslope, terrace, etc.): Depression Local Re	lief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 0							
Subregion (LRR): Middle Atlantic Lat: 42.658537	Long: -72.424948 Datum: NAD83							
Soil Map Unit Name: Woodstock-Millsite-Rock outcrop complex, 8 to 15 percei	nt slopes NWI Classification: Not mapped							
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)							
Are Vegetation ✓ Soil ✓ or Hydrology ✓ significantly disturbed?	No Are "Normal" Circumstances present? ☑ Yes ☐ No							
Are Vegetation	☑ No							
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, transects, important features, etc.							
Hydrophytic Vegetation Present?								
Hydric Soil Present? ✓ Yes □ No	Is the Sampled Area							
Wetland Hydrology Present?								
Field Wetland Classification: PEM								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)							
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)							
□ Surface Water (A1) □ Water-Stained Leaves (B9) □ Drainage Patterns (B10)								
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	Moss Trim Lines (B16)							
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)							
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (·							
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a								
☐ Drift Deposits (B3) ☐ Presence of Reduced Iro	<u> </u>							
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	_							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	✓ Shallow Aquitard (D3)							
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark								
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)							
Field Observations:								
Surface Water Present?								
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present? ✓ Yes □ No							
Saturation Present? ✓ Yes ☐ No Depth (inches): 14 (includes capillary fringe)	₩ Tes □ NU							
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pro	evious inspections), if available):							
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name	% Cover Dominant Indicator Status							
Т	otal Cover:							



Providence, RI 02904			- 1	ALCOM
Sapling/Shrub Stratum				
Plot Size: 15				
Scientific Name		% Cover	Dominant	Indicator Status
Larix laricina		5	NO	FACW
Acer rubrum Vaccinium corymbosum		2 10	NO NO	FAC FACW
Kalmia latifolia		15	NO	FACU
Betula alleghaniensis		5	NO	FAC
	Total Cover:	37		
Herb Stratum				
Plot Size: 5				
Scientific Name		% Cover	Dominant	Indicator Status
SPAGHNUM SP.		25	YES	OBL
Scirpus cyperinus Carex Iurida		10 15	NO NO	OBL OBL
Woodwardia virginica		10	NO	OBL
	Total Cover:	60		
Voody Vine Stratum				
Plot Size: 30		<u> </u>		
Scientific Name		% Cover	Dominant	Indicator Status
	Total Cover:			
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:		
Number of Dominant Species	Total % Cover	of:	Multiply by:	
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>60</u>	x 1 = <u>60</u>	
Total Number of Dominant	FACW Species		x 2 = <u>30</u>	
Species Across All Strata: 1 (B)	FAC Species:	<u> </u>	x 3 = <u>21</u>	
Percent of Dominant Species	FACU Species		$x 4 = \frac{60}{}$	
That Are OBL, FACW, or FAC: 100 (A/B)			· 	
	UPL Species:	<u>0</u>	x 5 = <u>0</u>	
	Column Totals	: <u>97 (A)</u>	<u>171 (B)</u>	
		Prevalence Index	x = B/A = <u>1.76</u>	
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
✓ 2 - Dominance Test is > 50%				
3 - Prevalence Index is ≤ 3.0				
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic	Vegetation Prese	ent? ☑ Yes [□ No
data in Remarks or on a separate sheet)	.,,		<u></u>	
☐ Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be				
present, unless disturbed or problematic.				
Remarks:				
Acmand.				



T TOVIGOTICO, I	(1 0200+												
SOIL													
Profile Descrip	otion: (Describe	the de	epth needed to d	docum	ent the ir	ndicator o	r confirm the a	absence of indicators.)					
Depth	Matrix		Red	dox Fe	atures			- .					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texture	Remarks				
0-7	10YR 2/2	100					0	ORGANIC					
7-14	10YR 4/1	30	10YR 5/8	10	С	M,PL	VERY FIN						
			10YR 6/1	60	D	M							
14-16	2.5Y 4/2	40	2.5Y 5/2	50	D	М	COARSE SANDY LOAM						
2.5Y 5/6 10 C M													
¹Type: C=Cond	centration, D=De	epletion	, RM=Reduced I	Matrix,	CS=Cov	ered Sand	or Coated Grai	ins. ² Location: PL=	Pore Lining, M=Matrix				
Hydric Soil Inc	licators: (Appli	cable t	o all LRR's, unle	ess oth	nerwise n	oted.)		Indicators for Pro	oblematic Hydric Soils³:				
Histosol (/	A1)		□ P	olyvalı	ue Below	Surface (S	8) (LRR R,	2 cm Muck (A	A10) (LRR K, L, MLRA 149B)				
☐ Histosol (A1) ☐ Polyvalue Below Surface (S8) (LRR R, ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B) ☐ Histic Epipedon (A2) ☐ Coast Prairie Redox (A16) (LRR K, L, R)													
☐ Black Hist			ПΤ	hin Da	rk Surface	e (S9) (LRI	R R, MLRA 149		Peat or Peat (S3) (LRR K, L, R)				
 ☐ Hydrogen	Sulfide (A4)			oamy l	Mucky Mir	neral (F1) ((LRR K, L)	☐ Dark Surface	(S7) (LRR K, L, M)				
	Layers (A5)			-	Gleyed Ma		,	☐ Polyvalue Be	low Surface (S8) (LRR K, L)				
☐ Depleted	Below Dark Surfa	ace (A1	=	-	d Matrix (rface (S9) (LRR K, L)				
☐ Thick Darl	k Surface (A12)		R	edox [Dark Surfa	ace (F6)		— Iron-Mangane	ese Masses (F12) (LRR K, L, R)				
☐ Sandy Mu	ucky Mineral (S1))		eplete	d Dark Su	ırface (F7)		☐ Piedmont Flo	odplain Soils (F19) (MLRA 149B)				
☐ Sandy Gle													
☐ Sandy Re													
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)													
Dark Surface (S7) (LRR R, MLRA 149B)													
3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.													
Restrictive Lay	er Present?	7	res □ No	пυ	nknown								
ROCK			_	_				Hydric Soil Preser	nt? ☑ Yes ☐ No				
16								,					
Remarks:													
- rtorriamor													
Description of	Habitat Characta	riotion	Aguatia Divaraitu	or Co	noral Com	amonto:							
Description of	nabilal Characte	iiislics,	Aquatic Diversity	or Ge	nerai Con	intents.							
Watland Qualit	h∉ ⊡ Liah	_ ,	Anderste 🗖	Low			Incloted Wetle	land? \square Vac \square	No. 17 Unknown				
welland Qualii	ty: 🗹 High	⊔ '	vioderate	LOW			isolated wetta	land? Yes	NO 🗸 UNKNOWN				
General Comm	ents:												

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WETLAND DETERMINATION FORM - I	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 5855.0	County: Middlesex Date: 08/11/2015
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: DR-D-W008-PSS
Investigators: PB Quad Name: Lowell	Township: Dracut
Logbook No.: 6 Logbook Pg.: 25 Tract: 21267	
Landform (hillslope, terrace, etc.): Depression Local Re	slief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 2
Subregion (LRR): Middle Atlantic Lat: 42.693321	Long: -71.272507 Datum: NAD83
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8 percent slopes	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No
Are Vegetation Soil or Hydrology naturally problematic?	☑ No
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ☑ Yes ☐ No	
Hydric Soil Present? ☑ Yes ☐ No	ls the Sampled Area
Wetland Hydrology Present?	Titling a Frontiera
Field Wetland Classification: PSS	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
☐ Surface Water (A1) ☐ Water-Stained Leaves (I	Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	
✓ Saturation (A3)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres a	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Inc	on (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remark	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present?	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	☑ Yes ☐ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, pr	evious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
Т	otal Cover:



	% Cover		
	% Cover		
	% Cover		
		Dominant	Indicator Status
	15 10 10 10	YES YES YES YES	FAC FACW FAC FAC
Total Cover:	45		
	% Cover	Dominant	Indicator Status
	5 5 15 10 20 5 5	NO NO NO NO YES NO NO	FAC FACW OBL FAC OBL FACW FACW OBL
Total Cover:	75		
1		ı	ı
	% Cover	Dominant	Indicator Status
Total Cover:			
Prevalence Ind	ex Worksheet:		
	of:	Multiply by:	
OBL Species:	<u>45</u>	x 1 = <u>45</u>	
•			
•			
•			
•	-		
	, ,		
F	Prevalence Index	= B/A = <u>2.04</u>	
Hydrophytic V	egetation Prese	nt? ☑ Yes 🗆] No
	Prevalence Ind Total % Cover of OBL Species: FACW Species: FAC Species: FACU Species: UPL Species: Column Totals:	5 5 15 10 20 5 5 10 20 5 5 10 10 10 10 10 10	S



T TOVIGETICE, T	(1 0200+										1111				
SOIL															
Profile Descrip	otion: (Describe	the de	epth needed to	locum	ent the in	dicator o	confirm the abse	nce o	f indicators.))					
Depth	Matrix		Re	dox Fe	atures		_								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Tex	kture			Rema	arks			
0-12	7.5YR 3/1	100					SI	ILT							
12-18	GLEY1 5/N	100					SA	ND							
12 10	022110/14	100					0,1								
1Tunas C. Cana	controtion D Do	nlation	DM Dadwaad	Matrix	CC Co.	arad Cand	or Coated Grains.	21	anation. DI	Doro Linina	- M Mai	Laiv.			
	<u> </u>	<u> </u>	·				or Coated Grains.		_ocation: PL:		*				
Hydric Soil Ind	licators: (Appli	cable t	o all LRR's, unle	ess otl	herwise n	oted.)		Ind	icators for P	roblematic	Hydric S	ioils³:			
☐ Histosol (A	A1)			olyval 1LRA 1		Surface (S	8) (LRR R,		2 cm Muck (A10) (LRR	K, L, MLF	RA 149B)			
☐ Histic Epip	oedon (A2)		IV.	ILINA	1490)		Coast Prairie Redox (A16) (LRR K, L, R)								
■ Black Hist	ic (A3)		□ ⊺	hin Da	ark Surface	e (S9) (LRI	R R, MLRA 149B)		5 cm Mucky	Peat or Pea	at (S3) (L	RR K, L, R)			
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1) (LRR K, L)		Dark Surfac	e (S7) (LRR	K, L, M)				
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)			Polyvalue B	elow Surfac	e (S8) (LI	RR K, L)			
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔲 🖸	eplete	ed Matrix (I	F3)			Thin Dark S	urface (S9)	(LRR K, I	_)			
✓ Thick Darl	k Surface (A12)		F	edox l	Dark Surfa	ace (F6)			Iron-Mangar		•				
_	ıcky Mineral (S1)		_			ırface (F7)			_			(MLRA 149B)			
	eyed Matrix (S4)		_		Depressio					•	. ,	, 145, 149B)			
☐ Sandy Re				.ouox	2 00.000.0	(. 0)			Red Parent			, 140, 1400)			
								_			•	2)			
	Matrix (S6)		1.10D)				☐ Very Shallow Dark Surface (TF12)								
_	ace (S7) (LRR R		•						Other (Expla	ain in Remai	rks)				
³ Indicators of h	nydrophytic vege	tation a	and wetland hydro	ology n	nust be pr	esent, unle	ess disturbed or pro	blema	tic.						
Restrictive Lay	er Present?		∕es 🗹 No	□ └	Jnknown			Hydr	ic Soil Prese	ent? ☑	Yes [□ No			
Remarks:															
· · · · · · · · · · · · · · · · · ·			A Di												
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	nerai Com	iments:									
Wetland Qualit	y: High	☑ N	Moderate	Low			Isolated Wetland	? [☐ Yes 🗹	No 🗖	Unknov	wn			
General Comm	ents:														





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WETLAND DETERMINATION FORM - No	rthcentral and Northeast Region							
✓ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other							
Project/Site: NED Milepost: 5941.0 Co	ounty: Middlesex Date: 08/11/2015							
Applicant/Owner: Kinder Morgan Sta	ate: MA Sampling Point: DR-D-W008-UPL							
Investigators: PB Quad Name: Lowell To	wnship: Dracut							
Logbook No.: 6 Logbook Pg.: 26 Tract: 21267								
Landform (hillslope, terrace, etc.): Flat Local Relief	: Concave 🗹 Convex 🔲 None Slope%.: 1							
Subregion (LRR): Middle Atlantic Lat: 42.693200	Long: -71.272180 Datum: NAD83							
Soil Map Unit Name: Scituate fine sandy loam, 3 to 8 percent slopes	NWI Classification: Not mapped							
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)							
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? ☑	No Are "Normal" Circumstances present? ☑ Yes ☐ No							
Are Vegetation ☑ Soil ☐ or Hydrology ☐ naturally problematic? ☐	No							
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? ☐ Yes ☑ No								
Hydric Soil Present? ☐ Yes ☑ No	ls the Sampled Area □ Yes ☑ No within a Wetland?							
Wetland Hydrology Present?								
Field Wetland Classification: UPLAND PLOT								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)							
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)							
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) ☐ Drainage Patterns (B10)								
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)								
☐ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)							
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)							
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres alon	g Living Roots (C3) Saturation Visible on Aerial imagery (C9)							
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1)							
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Till	led Soils (C6) Geomorphic Position (D2)							
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)							
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)							
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)							
Field Observations:								
Surface Water Present?								
Water Table Present?	Wetland Hydrology Present? ☐ Yes ☑ No							
Saturation Present?	□ res ☑ no							
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, previous)	us inspections), if available):							
VEGETATION								
Tree Stratum								
Plot Size: 30								
Scientific Name	% Cover Dominant Indicator Status							
Total	Cover:							



	% Cover	Dominant	Indicator Status
	25	YES	FAC
Total Cavari		YES	FACU
Total Cover:	30		
	% Cover	Dominant	Indicator Status
	3	NO	OBL
	5	NO NO	FACU FACU
	15 15	YES	FACU FACU
	5	NO	FACW
T 0		NO	FAC
Total Cover:	58		
1		T	T
	% Cover	Dominant	Indicator Status
Total Cover:			
Prevalence Inc	lex Worksheet:		
Total % Cover	of:	Multiply by:	
OBL Species:	<u>3</u>	x 1 = <u>3</u>	
FACW Species	: <u>5</u>	x 2 = <u>10</u>	
FAC Species:	<u>35</u>	x 3 = <u>105</u>	
FACU Species:	<u>50</u>	x 4 = <u>200</u>	
UPL Species:	<u>0</u>	x 5 = <u>0</u>	
Column Totals:	93 (A)	318 (B)	
	Prevalence Index	= B/A = 3.42	
			
			
Hydrophytic V	egetation Prese	ent? 🗌 Yes 🖢	⊿ No
	Total % Cover of OBL Species: FACW Species: FAC Species: FACU Species: UPL Species: Column Totals:	% Cover 35 35 35 35 35 35 35 3	25

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1 TOVIGETICE, I	02004																		
SOIL																			
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the ir	ndicator o	r confirm	he abser	nce o	f indica	tors.)							
Depth	Matrix			Re	dox Fe	atures													
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc ²		Text	ure					F	₹em	arks		
0-18	7.5YR 4/3	100							SIL	т_Т									
¹Type: C=Cond	centration, D=De	epletion	⊥ n, RM=Re∈	duced	Matrix,	CS=Cov	ered Sand	L I or Coated	Grains.	2	_ocatior	n: PL=	Pore	Lining	. M=	-Ma	trix		
	licators: (Appli	<u> </u>	-								icators				-			3-	
Histosol (A	`	ouble !	io un Eixix	_			,	8) (LRR R		П	2 cm N				-				
_ `	pedon (A2)				ILRA 1		ourrace (c	O) (LIXIX IX		_								-	
_ ::					hin Do	rk Curfoo	Coast Prairie Redox (A16) (LRR K, L, R)								-				
☐ Black Hist				_	Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M)									Λ, L, K)					
	Sulfide (A4)				-	-		(LKK K, L)						-				<i>(</i> 1)	
_	_ayers (A5)	200 (A	11)		-	Gleyed Ma					Polyva							(, L)	
:	Below Dark Surfa	ACE (A	11)	_	-	d Matrix (•				Thin D						-	K I D)	
	k Surface (A12)					Dark Surfa						_						K, L, R)	
	icky Mineral (S1)			_			ırface (F7)						-					RA 149B)	
_	eyed Matrix (S4)			☐ F	keaox I	Depressio	ns (F8)					-				.44	۱, 14	5, 149B)	
☐ Sandy Re											Red P				-		٥)		
	Matrix (S6)										Very S					ΓF1:	2)		
☐ Dark Surfa	ace (S7) (LRR R	, MLR	4 149B)								Other	(Expla	in in F	₹emar	ks)				
3Indicators of h	nydrophytic vege	tation a	and wetlan	d hydro	ology m	nust be pr	esent, unle	ess disturb	ed or prob	olema	tic.								
Restrictive Lay	er Present?		Yes 🗹	No	□ U	nknown													
										Hydr	ic Soil	Prese	nt?		Yes	s [\checkmark	No	
Remarks:														-					
Description of I	Habitat Characte	riction	Aquatia D	iversity	or Co	noral Cam	amonto:									_			
Description of t	Habitat Characte	iiisiics,	Aquatic Di	iversity	or Ge	nerai Con	intents.												
Watland Qualit	🗖 Lliada	_	Madarata	_	Law			laalatad	Matland?	, F	7 Va	. –	Na	_	l la	ممادم			
Wetland Qualit	y: High		Moderate		Low			isolated	Wetland?	Ĺ	Yes	S 📙	No		Un	kno	WH		
General Comm	ents:																		





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WETLAND DETERMINATION FORM -	Northcentral and Northeast Region
☑ Centerline ☐ Re-Route ☐ Access Road ☐ Ancillary Facility	☐ Transmission Line ☐ Other
Project/Site: NED Milepost: 53694.9	County: Middlesex Date: 12/08/2014
Applicant/Owner: Kinder Morgan	State: MA Sampling Point: WL-P-W003-PSS
Investigators: AF CV Quad Name: Wilmington	Township: Wilmington
Logbook No.: 2014P3 Logbook Pg.: 60 Tract: 8628	
Landform (hillslope, terrace, etc.): DEPRESSION Local I	Relief: 🗹 Concave 🗌 Convex 🔲 None Slope%.: 0
Subregion (LRR): Middle Atlantic Lat: 42.590676	Long: -71.152672 Datum: NAD83
Soil Map Unit Name: Udorthents, loamy	NWI Classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year?:	Yes No (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed?	✓ No Are "Normal" Circumstances present? ✓ Yes ☐ No
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic?	✓ No
SUMMARY OF FINDINGS - Attach site map showing sample	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? ✓ Yes ☐ No	Is the Sampled Area
Hydric Soil Present? ✓ Yes No	within a Wetland?
Wetland Hydrology Present? ✓ Yes ☐ No	
Field Wetland Classification: PSS	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	☐ Surface Soil Cracks (B6)
✓ Surface Water (A1) ✓ Water-Stained Leaves	(B9) Drainage Patterns (B10)
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
✓ Saturation (A3) ☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres	along Living Roots (C3) Saturation Visible on Aerial imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced	ron (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction	in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Rema	rks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? ✓ Yes No Depth (inches): 1-6	
Water Table Present? ☐ Yes ☑ No Depth (inches):	Wetland Hydrology Present?
Saturation Present?	☑ Yes □ No
Remarks (Describe Recorded Data (stream gage, monitoring well, aerial photos, particular photos), particular photos, particular	revious inspections), if available):
VEGETATION	
Tree Stratum	
Plot Size: 30	
Scientific Name	% Cover Dominant Indicator Status
	Total Cover:



Providence, RI 02904									
Sapling/Shrub Stratum									
Plot Size: 15									
Scientific Name		% Cover	Dominant	Indicator Status					
Alnus incana		15	YES	FACW					
	Total Cover:	15		•					
Herb Stratum									
Plot Size: 5									
Scientific Name	ı	% Cover	Dominant	Indicator Status					
Carex stricta		76 Cover	NO	OBL					
Juncus effusus		30	YES	OBL					
Scirpus cyperinus Carex comosa		30 10	YES NO	OBL OBL					
Lythrum salicaria		5	NO	OBL					
	Total Cover:	85							
Woody Vine Stratum									
Plot Size: 30									
Scientific Name		% Cover	Dominant	Indicator Status					
	Total Cover:								
Dominance Test Worksheet:	Prevalence Inc	dex Worksheet:							
Number of Dominant Species	Total % Cover	of:	Multiply by:						
That Are OBL, FACW, or FAC: 3 (A)	OBL Species:	<u>85</u>	x 1 = <u>85</u>						
Total Number of Dominant	FACW Species	s: <u>15</u>	x 2 = <u>30</u>						
Species Across All Strata: 3 (B)	FAC Species:	<u>0</u>	x 3 = <u>0</u>						
Percent of Dominant Species	FACU Species	: <u>15</u>	x 4 = <u>60</u>						
That Are OBL, FACW, or FAC: 100 (A/B)	UPL Species:	<u>0</u>	x 5 = <u>0</u>						
	Column Totals:	115 (A)	<u>175 (B)</u>						
		Prevalence Index =	= B/A = <u>1.52</u>						
Hydrophytic Vegetation Indicators:			<u> </u>						
☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is > 50%									
☑ 3 - Prevalence Index is ≤ 3.0	Understadie Verstedies Brown (2)								
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 	Hydrophytic Vegetation Present? ✓ Yes ☐ No								
☐ Problematic Hydrophytic Vegetation¹ (Explain)									
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.									
Describer									
Remarks:									



T TOVIGETICE, T	(1 0200+								The second of the second
SOIL									
Profile Descrip	otion: (Describe	the de	epth needed to	docum	ent the in	dicator o	confirm the ab	sence of indicators.)
Depth	Matrix Redox Features				_				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2] 	Texture	Remarks
0-12	10YR 2/1	100					SAN	IDY LOAM	
12-20	10YR 3/3	100					SAN	IDY LOAM	
.2 20	10111 0,0						G/ ii. i	.5 . 20/	
1Typo: C-Cond	contration D-D	nlotion	, RM=Reduced	Matrix	CS-Cov	orod Sand	or Coated Grain	os 2l ocation: DL	 =Pore Lining, M=Matrix
	· · · · · · · · · · · · · · · · · · ·						or Coaled Grain		
-		cable t	o all LRR's, unle			-			roblematic Hydric Soils ³ :
☐ Histosol (A	A1)			olyval ILRA 1		Surface (S	8) (LRR R,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)
☐ Histic Epip	pedon (A2)				02)			☐ Coast Prairi	e Redox (A16) (LRR K, L, R)
■ Black Hist	ic (A3)		П	hin Da	ark Surface	e (S9) (LRI	R R, MLRA 149B	3) 🔲 5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen	Sulfide (A4)			oamy	Mucky Mir	neral (F1)	(LRR K, L)	□ Dark Surface	e (S7) (LRR K, L, M)
☐ Stratified I	Layers (A5)			oamy	Gleyed Ma	atrix (F2)		☐ Polyvalue B	elow Surface (S8) (LRR K, L)
☐ Depleted I	Below Dark Surfa	ace (A1	1) 🔽 🖸	eplete	ed Matrix (I	F3)		☐ Thin Dark S	urface (S9) (LRR K, L)
☐ Thick Darl	k Surface (A12)		□ F	Redox I	Dark Surfa	ace (F6)		☐ Iron-Mangai	nese Masses (F12) (LRR K, L, R)
☐ Sandy Mu	ıcky Mineral (S1)			eplete	ed Dark Su	ırface (F7)		☐ Piedmont FI	oodplain Soils (F19) (MLRA 149B)
☐ Sandy Gle	eyed Matrix (S4)		□ F	Redox	Depressio	ns (F8)			ic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Re	dox (S5)							☐ Red Parent	Material (F21)
☐ Stripped N	Matrix (S6)							☐ Very Shallo	w Dark Surface (TF12)
	ace (S7) (LRR R	. MLRA	\ 149B)						ain in Remarks)
_			and wetland hydro	ology n	nuet ha nr	ecent unla	see dieturhed or r		,,
Remarks:								Hydric Soil Prese	ent? 🗹 Yes 🗌 No
ivemarks.									
Description of I	Habitat Characte	ristics,	Aquatic Diversity	or Ge	neral Com	nments:			
Wetland Qualit	y: 🗹 High		Moderate	Low			Isolated Wetla	and? ☐ Yes ☑	No □ Unknown
General Comm	ents:								





SE



WET	AND	DET	ERN	IINAT	ION F	ORM -	Northc	entra	al and	l No	ortheas	t Reg	ion		
☑ Centerline ☐ Re-Rout		Acces	ss Roa	d 🔲	Ancilla	ary Facility		Transr	mission L	Line	Ot	her			
Project/Site: NED			ı	Milepost:	5367	2.1	County:		Middles	sex		D	Date:	12/08/201	4
Applicant/Owner: Kinder Morga	n						State:	MA	5	Samp	oling Poir	nt: WL-	P-W0	03-UPL	
Investigators: AF CV	Q	uad Na	ame: \	Wilmingt	on		Townshi	p:	Wilming	gton					
Logbook No.: 2014P3	Logbo	ook Pg	.: 61		Trac	ct: 8628	•								
Landform (hillslope, terrace, etc):	HILLS	IDE			Local F	Relief:] Co	ncave	$\overline{\mathbf{V}}$	Convex	□ N	one	Slope%.:	10
Subregion (LRR): Middle A	tlantic			La	t: 42.5	90738		Lo	ng: -7	71.15	2731			Datum: NA	D83
Soil Map Unit Name: Udort	ents, loa	amy									NWI C	lassificat	tion:	Not ma	apped
Are climatic / hydrologic condition	ns on the	site ty	pical f	or this tin	ne of year	ar?:	√ Yes	— 1	No (If no	, expl	lain in Ren	narks.)			
Are Vegetation	or Hy	drology	/ 	significa	antly dis	turbed?	☑ No	Are	"Normal	l" Circ	cumstance	es preser	nt?	√ Yes	☐ No
Are Vegetation	or Hyd	drology	∕ □	naturall	y proble	matic?	☑ No								
SUMMARY OF FINDING	S - Att	ach s	site n	nap sh	owing	ı sampli	ng poin	t loca	ations,	, traı	nsects,	impor	tant	features	, etc.
Hydrophytic Vegetation Present)		Yes	V N	0										
Hydric Soil Present?			Yes	☑ N	0			is tr with	ne Sam nin a W	ipied 'etlar	nd?	☐ Yes	s 🗸	No	
Wetland Hydrology Present?			Yes	V N	0										
Field Wetland Classification:	UPLA	ND PL	.OT												
Remarks:															
HYDROLOGY															
Wetland Hydrology Indicators										<u>S</u>	Secondary	Indicato	rs (2 o	or more requ	uired)
Primary Indicators (minimum of	one requ	ired; cl	heck a	II that ap	oly)						Surfac	e Soil Cı	racks	(B6)	
☐ Surface Water (A1) ☐ Water-Stained Leaves (B9)									☐ Draina	ige Patte	erns (E	310)			
☐ High Water Table (A2) ☐ Aquatic Fauna (B13)					Moss Trim Lines (B16)										
☐ Saturation (A3) ☐ Marl Deposits (B15)									Dry-Se	eason W	ater T	able (C2)			
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)						(C1)	Crayfish Burrows (C8)								
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Liv						along Livir									
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)						ron (C4)	Stunted or Stressed Plants (D1)								
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled						in Tilled Sc	<u> </u>								
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7))	Shallow Aquitard (D3)								
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)						arks)	Microtopographic Relief (D4)								
☐ Sparsely Vegetated Concave Surface (B8) ☐ FAC-Neutral Test (D5)															
Field Observations:															
Surface Water Present?		= .		Depth (in	-										
Water Table Present?		_		Depth (in	•				Wetland	d Hyd	Irology Pr	esent?	П	Yes ☑	No
Saturation Present? [(includes capillary fringe)	Yes	☑ 1	No [Depth (in	ches):									.00	
Remarks (Describe Recorded D	ta (strea	m gag	e, mon	itoring w	ell, aeria	al photos, p	revious ins	pectio	ns), if av	/ailabl	le):				
VEGETATION															
Tree Stratum															
Plot Size: 30															
Scientific Name									% Cov	ver		Oominant	t	Indicate	or Status
Juniperus virginiana									5			YES		FA	CU
						-	Total Cove	r:	5						



1 10 Vidence, 1(1 02504				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Sapling/Shrub Stratum									
Plot Size: 15	1		ı						
Scientific Name		% Cover	Dominant	Indicator Status					
Elaeagnus angustifolia		20	YES	FACU					
	Total Cover:	20							
Herb Stratum									
Plot Size: 5									
Scientific Name	I	% Cover	Dominant	Indicator Status					
Euthamia graminifolia Schizachyrium scoparium		10 20	YES YES	FAC FACU					
	Total Cover:	30	ı	I					
Woody Vine Stratum									
Plot Size: 30									
Scientific Name	I	% Cover	Dominant	Indicator Status					
- Colemine Ivaline		70 COVEI	Dominant	Indicator Status					
	Total Cover:								
Dominance Test Worksheet:	Prevalence Ind	dex Worksheet:							
Number of Dominant Species	Total % Cover	of:	Multiply by:						
That Are OBL, FACW, or FAC: 1 (A)	OBL Species:	<u>0</u>	x 1 = <u>0</u>						
Total Number of Dominant	FACW Species		x 2 = 0						
Species Across All Strata: 4 (B)	FAC Species:	. <u>u</u> 10	x = 30						
Percent of Dominant Species	FACU Species:		x = 3 = 30 x = 4 = 180						
That Are OBL, FACW, or FAC: 25 (A/B)	•								
	UPL Species:	<u>0</u>	x 5 = 0						
	Column Totals:	<u>55 (A)</u>	<u>210 (B)</u>						
	F	Prevalence Index	= B/A = 3.82						
Hydrophytic Vegetation Indicators:									
☐ 1 - Rapid Test for Hydrophytic Vegetation									
2 - Dominance Test is > 50%									
☐ 3 - Prevalence Index is ≤ 3.0									
4 - Morphological Adaptations¹ (Provide supporting	Hydrophytic Vegetation Present? ☐ Yes ☑ No								
data in Remarks or on a separate sheet)									
☐ Problematic Hydrophytic Vegetation¹ (Explain)									
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.									
Remarks:				_					



SOIL																_	
Profile Descrip	tion: (Describe	the d	epth need	ed to	docum	ent the in	ndicator o	r confirm	he absen	ce of	indicators.)					
Depth (inches)	Matrix			Re	dox Fe	atures			Text	uro				D.	emark		
(inches)	Color (moist)	%	Color (m	noist)	%	Type ¹	Loc²		rexu	ure					mark		
0-20	10YR 4/6	100							LOA	M				URB	BAN F	FILL	
¹Type: C=Cond	centration, D=De	pletio	n, RM=Re	duced	Matrix,	CS=Cov	ered Sand	or Coated	Grains.	2 <u>L</u>	ocation: PL	 =Pore l	_ining	, M=N	/latrix	(
Hydric Soil Ind	licators: (Appli	cable	to all LRR'	s, unle	ess oth	nerwise n	oted.)			Indi	cators for F	roblem	natic I	Hydric	: Soi	ls³:	
☐ Histosol (A	A1)			_	,		Surface (S	8) (LRR R			2 cm Muck	(A10) (I	LRR K	ί, L, M	ILRA	149	9B)
☐ Histic Epip	pedon (A2)			N	ILRA 1	49B)					Coast Prair	e Redo	х (A1	6) (LR	RK,	L, F	R)
■ Black Hist	ic (A3)			□ т	hin Da	rk Surface	e (S9) (LR	R R, MLRA	149B)		5 cm Mucky	Peat c	r Pea	t (S3)	(LRF	₹ K,	L, R)
☐ Hydrogen	Sulfide (A4)				oamy I	Mucky Mir	neral (F1)	(LRR K, L)			Dark Surface	e (S7)	(LRR	K, L, I	VI)		
☐ Stratified I	_ayers (A5)				oamy (Gleyed Ma	atrix (F2)				Polyvalue E	elow S	urface	(S8) ŧ	(LRR	≀ K,	L)
☐ Depleted I	Below Dark Surfa	ace (A	11)		eplete	d Matrix (I	F3)				Thin Dark S	urface	(S9) (LRR K	(, L)		
☐ Thick Darl	k Surface (A12)				Redox [Oark Surfa	ace (F6)				Iron-Manga	nese M	asses	(F12)	(LR	RK,	L, R)
_	icky Mineral (S1)				•		ırface (F7)				Piedmont F	loodpla	in Soi	ls (F19	9) (M	LRA	(149B)
_	eyed Matrix (S4)			☐ F	Redox [Depressio	ns (F8)				Mesic Spoo	,	, ,		4A, 1	45,	149B)
☐ Sandy Re	dox (S5)										Red Parent	Materia	al (F2	1)			
☐ Stripped N	Matrix (S6)										Very Shallo	w Dark	Surfa	ce (TF	⁻ 12)		
☐ Dark Surfa	ace (S7) (LRR R	, MLR	4 149B)								Other (Expl	ain in R	emarl	ks)			
3Indicators of h	nydrophytic vege	tation a	and wetlan	d hydro	ology m	nust be pr	esent, unle	ess disturb	ed or prob	lemat	ic.						
Restrictive Lay	er Present?		Yes √	No	□ ∪	nknown			I	Hydr	c Soil Pres	ent?		Yes	Ø	N	o
Remarks:																	
Description of I	Habitat Characte	ristics,	, Aquatic D	iversity	or Ge	neral Com	nments:										
Wetland Qualit	y: 🔲 High	П	Moderate	П	Low			Isolated	Wetland?	Г] Yes [l No		Unkı	nown	1	
	. _							iooiatoa									
General Comm	ents:																



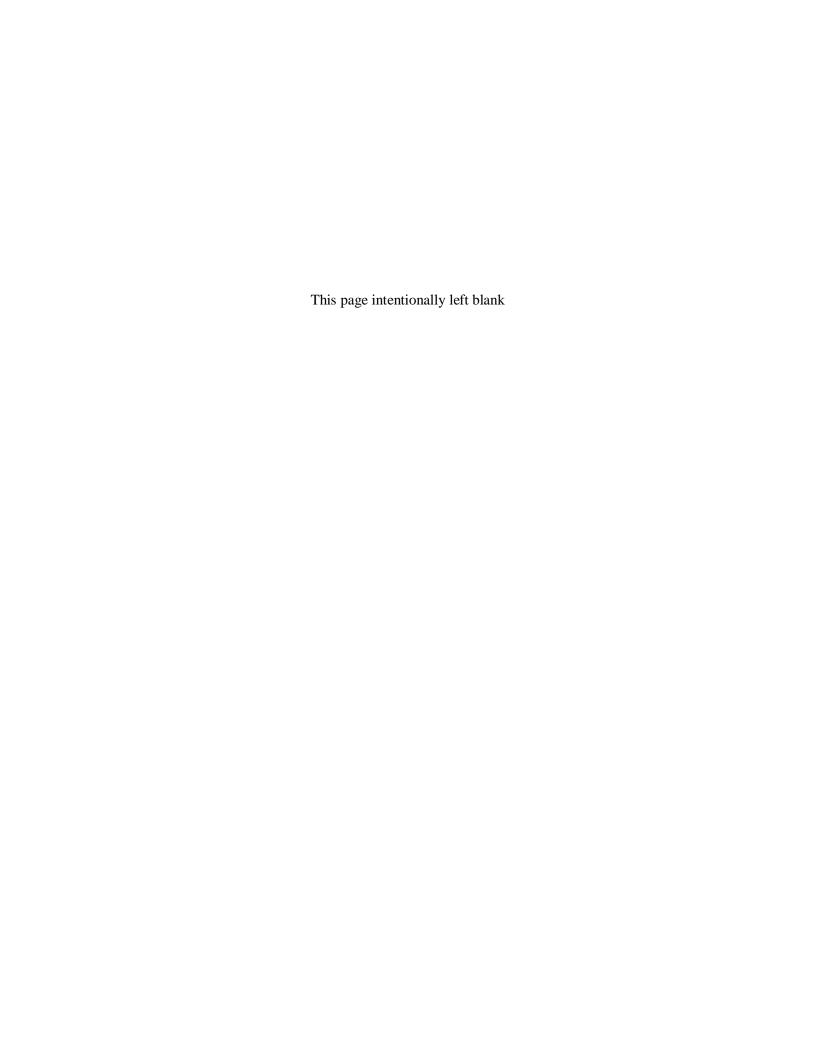
PHOTOS



Ν

APPENDIX 2e-E

Army Corps of Engineers Waterbody Data Sheets and Photographs





Logbook No.: 1 Waterbody Type: ☑ Stre Stream Flow: ☐ Fas Flow Type: ☐ Per	Client/Project Name: NED Latitude/Longitude: County: Berkshire Logbook Pg.: 54 Tract No.: 208 Pond Lake t Moderate Slow Logbook Pg.: Slow Lake Logbook Pond Slow Logbook Pond	Milepost: 3713.0 42.538731, -73.32854 Quad Name: Hancock 930 Borrow Pit
Investigators: N State: MA Logbook No.: 1 Waterbody Type: Stream Flow: Fast Plow Type: Per Seat Plow: Investigation of Flow: Investigation of Flow: Investigation of Flow Type: Investigation of Flow: Inve	Latitude/Longitude: County: Berkshire Logbook Pg.: 54 Tract No.: 209 Pam Pond Lake It Moderate Slow Continuous flow >3 months)	42.538731, -73.32854 Quad Name: Hancock 930 Borrow Pit
State: MA Logbook No.: 1 Waterbody Type: Stream Flow: Fas Flow Type: Per Sea Direction of Flow: I	County: Berkshire Logbook Pg.: 54 Tract No.: 209 Lake t Moderate Slow Lennial (Flows year round) Lake Logbook Pg.: 54 Tract No.: 209 Lake Lake Lake Logbook Pg.: 54 Tract No.: 209 Lake	Quad Name: Hancock Graph Grow Pit
Logbook No.: 1 Waterbody Type: ☑ Stre Stream Flow: ☐ Fas Flow Type: ☐ Per ☐ Sea Direction of Flow: ☐ 1	County: Berkshire Logbook Pg.: 54 Tract No.: 209 Lake t Moderate Slow Lennial (Flows year round) Lake Logbook Pg.: 54 Tract No.: 209 Lake Lake Lake Logbook Pg.: 54 Tract No.: 209 Lake	Borrow Pit
Waterbody Type: Stream Flow: Flow Type: Per Sea Direction of Flow:	t Pond Lake t Slow ennial (Flows year round) sonal (Continuous flow >3 months)	□ Borrow Pit □ Ag Ditch □ Other: □ Very Slow ☑ None Intermittent (Flows <3 months) □ None
Stream Flow:	t Moderate Slow ennial (Flows year round) sonal (Continuous flow >3 months)	☐ Very Slow ☑ None Intermittent (Flows <3 months) ☐ None
Flow Type: Per Sea	ennial (Flows year round) Isonal (Continuous flow >3 months)	Intermittent (Flows <3 months) None
Direction of Flow:	sonal (Continuous flow >3 months)	
Direction of Flow:		Ephemeral (Flows only in response to rainfall)
	N NE T E T SE T SW	
Offivivi wiath (it.): 3.0		W W IN C I NOTION
		□ N/A
	ided Meandering Straight	□ N/A
Stream Width (ft.): 15.0	Water Surface (At Crossing Location	on)(ft.): 0
Stream Depth (in.): 0		
BE SE	AF LITTER DISTURBED ENT, MATTED OR MISSING VEGETATION EDIMENT DEPOSITION COUR	
Bank Height (ft.): Left (looking downstream)		_
Bank Slope (%):	: 1	
- Itig	ht: 1	
Qualitative Attributes		
		on Surface Floating Algal Mats No Flow
☐ Slightly Turbid	☐ Very Turbid ☐ Greenish Color	Obvious Surface Scum Other:
	GRAVEL: 50% COBBLES: 25% SILTS: 20% SANDS: 5%	
Aquatic Habitats:		
Sand Bar	Gravel Riffles	ream Emergent Plants
Gravel Bar		ream Submerged Plants
Mud Bar		ging Wetlands ¹
Undercut Banks	Overhanging Trees/Shrubs	e
_		
Aquatic Organisms Observed	: NONE	
		ral Straightening



Stream Quality:	☐ High	✓ Low
Comments:		



SE UPSTREAM



NW DOWNSTREAM





BANKS WEST



Waterbody D	Oata Form Feature ID: HA-N-S002
	te-Route
Date: 6/13/2015 11:18	2:27 AM Client/Project Name: NED Milepost: 4060.8
Investigators: N	Latitude/Longitude: 42.538668, -73.32726
State: MA	County: Berkshire Quad Name: Hancock
Logbook No.: 1	Logbook Pg.: 56 Tract No.: 20930
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	
Direction of Flow:	Seasonal (Continuous flow >3 months)
OHWM Width (ft.):	3.0 Regided D Meandaring D Straight D N/A
	☐ Braided ☐ Meandering ☐ Straight ☐ N/A
Stream Width (ft.):	7.0 Water Surface (At Crossing Location)(ft.): 1.0
Stream Depth (in.): OHWM Indicators:	12-18 LEAF LITTER DISTURBED
OTTYVINI IIIUICALOIS.	SCOUR
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: 0-2 2-4 4-6 6-8 8+
Bank Slope (%): (looking downstream)	Left: 1 Right: 1
Qualitative Attributes	
Water Appearance:	
	urbid
Stream Substrate %:	GRAVEL: 5% SILTS: 45% SANDS: 45%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	☐ Overhanging Trees/Shrubs ☑ None
Aquatic Organisms Ob	
Channel Condition:	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Stream Quality: Comments:	Aquatic and Terrestrial Diversity Description: High Moderate Low





WEST BANKS



SOUTH UPSTREAM





NORTH DOWNSTREAM



	Data	Form								F	eature	ID: H	N-M-S001	
✓ Centerline	Re-Rou	ute 🔲 A	ccess Road		Ancillar	y Facilit	у ј	☐ Tra	ansmiss	on Line		ther		
Date: 6/1/2015 3:26	6:29 PM	Clie	ent/Project N	ame:	NED						N	lilepost:	71555.7	
Investigators: CM	Л		Latitu	ıde/Lon	gitude:		42.47	3509, -	73.1101	7				
State: MA		County:	Berks						Quad N	lame:	Peru			
Logbook No.: 2		Logbook Pg.	.: 132	Tr	act No.:	20	963							
Waterbody Type:	☑ Str	ream [Pond		Lake		☐ Bor	row Pit		Ag Ditch		Other:		
Stream Flow:	☐ Fa	ıst 🔽	Moderate		Slow		☐ Ver	y Slow		None				
Flow Type:	_	erennial (Flows			15)		Intermit	-		months)	se to ra	☐ No	ne	
Direction of Flow:		•		☐ SE		SW	□ W		NW			No Flo	N	
				П ог	- <u>V</u>		Ш "	L		<u> </u>		1101101	···	
OHWM Width (ft.):		l.0	7 Maandarii	-	Ctrois	-h4	_ ,	N1/A						
Sinuosity:		aided <u>v</u>	Meanderii] Straig			N/A						
Stream Width (ft.):	4.0		Water Surfa	ace (At C	rossing	Location	on)(ft.):		4.0					
Stream Depth (in.):		3-6												
OHWM Indicators:	В	SHELVING BENT, MATTE CLEAR NATUI			SETATIO	ON								
Bank Height (ft.):	Let	eft: 🔽 0-2	2 🔲 2-4		4-6	☐ 6-8	3 🔲	8+						
(looking downstream)	Riç	ght: 🗹 0-2	2 🔲 2-4		4-6	☐ 6-8	3 🔲	8+						
Bank Slope (%): (looking downstream)	Let Riç	eft: 3 ght: 3												
Qualitative Attribute	es													
Water Appearance:		✓ Clear	Tu	urbid		Sheer	on Surf	ace		Floating	Algal M	ats	☐ No Flov	v
☐ Slightly	y Turbid	☐ Very	y Turbid	☐ Gr	eenish (Color		Obvio	ous Surf	ace Scum		Other	:	
Stream Substrate %	:	SANDS: COBBLES:		70% 30%										
Aquatic Habitats:														
Sand Bar		☐ Gravel Ri	iffles] In-si	tream Er	mergen	t Plants					
☐ Sand Bar ☐ Gravel Bar		Gravel Ri					tream Er	_		ts				
☐ Gravel Bar		Deep Poo	ols] In-s	tream Su	ubmerg	ed Plan	ts				
		☐ Deep Poo ☑ Bank Roo	ols	nrubs] In-s	tream Su	ubmerg	ed Plan	ts				
Gravel Bar Mud Bar	E nks	☐ Deep Poo ☑ Bank Roo ☑ Overhang	ols ot Systems] In-s	tream Su	ubmerg	ed Plan	ts				
Gravel Bar Mud Bar Undercut Bar	Chserve	Deep Pool Bank Roo Overhang	ols ot Systems ging Trees/Sh	ATES] In-si] Frin] Non	tream Su	ubmerg	ed Plan		ncutting	1		
Gravel Bar Mud Bar Undercut Bar	Chks S	Deep Pool Bank Roo Overhang	ols ot Systems ging Trees/Sh INVERTEBR blization/Braid	ATES] In-si] Frin] Non Unnatu	tream Suging We	ubmerg tlands ¹ ghtening	ed Plan		ncutting	l Ott	ner	
Gravel Bar Mud Bar Undercut Bar	E Sinks Si	Deep Pool Bank Roo Overhang det: Channe Dikes/Ba	ols ot Systems ging Trees/Sh INVERTEBR/ slization/Braid	ATES		In-si Frin Non Unnatu	tream Suging We	ubmerg tlands ¹ ghtening	ed Plan	☐ Dow	ncutting		ner	
Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist	Cobserve	Deep Poor Bank Roo Overhang d: Channe Dikes/Batic and Terr	ols ot Systems ging Trees/Sh INVERTEBR/ elization/Braid erms restrial Diver	ATES ding rsity De	□ □ □ scriptio	In-si Frin Non Unnatu	tream Suging We	ubmerg tlands ¹ ghtening	ed Plan	☐ Dow	ncutting		ner	
Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	E Sinks Si	Deep Poor Bank Roo Overhang d: Channe Dikes/Batic and Terr	ols ot Systems ging Trees/Sh INVERTEBR/ slization/Braid	ATES	□ □ □ scriptio	In-si Frin Non Unnatu	tream Suging We	ubmerg tlands ¹ ghtening	ed Plan	☐ Dow	ncutting		her	
Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist	Cobserve	Deep Poor Bank Roo Overhang d: Channe Dikes/Batic and Terr	ols ot Systems ging Trees/Sh INVERTEBR/ elization/Braid erms restrial Diver	ATES ding rsity De	□ □ □ scriptio	In-si Frin Non Unnatu	tream Suging We	ubmerg tlands ¹ ghtening	ed Plan	☐ Dow	ncutting		ner	
Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Cobserve	Deep Poor Bank Roo Overhang d: Channe Dikes/Batic and Terr	ols ot Systems ging Trees/Sh INVERTEBR/ elization/Braid erms restrial Diver	ATES ding rsity De	□ □ □ scriptio	In-si Frin Non Unnatu	tream Suging We	ubmerg tlands ¹ ghtening	ed Plan	☐ Dow	ncutting		ner	
Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Cobserve	Deep Poor Bank Roo Overhang d: Channe Dikes/Batic and Terr	ols ot Systems ging Trees/Sh INVERTEBR/ elization/Braid erms restrial Diver	ATES ding rsity De	□ □ □ scriptio	In-si Frin Non Unnatu	tream Suging We	ubmerg tlands ¹ ghtening	ed Plan	☐ Dow	ncutting		her	
Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Cobserve	Deep Poor Bank Roo Overhang d: Channe Dikes/Batic and Terr	ols ot Systems ging Trees/Sh INVERTEBR/ elization/Braid erms restrial Diver	ATES ding rsity De	□ □ □ scriptio	In-si Frin Non Unnatu	tream Suging We	ubmerg tlands ¹ ghtening	ed Plan	☐ Dow	ncutting		ner	
Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Cobserve	Deep Poor Bank Roo Overhang d: Channe Dikes/Batic and Terr	ols ot Systems ging Trees/Sh INVERTEBR/ elization/Braid erms restrial Diver	ATES ding rsity De	□ □ □ scriptio	In-si Frin Non Unnatu	tream Suging We	ubmerg tlands ¹ ghtening	ed Plan	☐ Dow	rncutting		ner	
Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Cobserve	Deep Poor Bank Roo Overhang d: Channe Dikes/Batic and Terr	ols ot Systems ging Trees/Sh INVERTEBR/ elization/Braid erms restrial Diver	ATES ding rsity De	□ □ □ scriptio	In-si Frin Non Unnatu	tream Suging We	ubmerg tlands ¹ ghtening	ed Plan	☐ Dow	ncutting		ner	





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	y Data Form Feature ID: HN-M-S002
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 6/3/2015 10:	0:03:12 AM Client/Project Name: NED Milepost: 71865.3
Investigators: CN	M Latitude/Longitude: 42.473008, -73.10924
State: MA	County: Berkshire Quad Name: Peru
Logbook No.: 2	Logbook Pg.: 142 Tract No.: 20963
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
Direction of Flow:	□ N □ NE □ E □ SE ☑ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	4.0 Water Surface (At Crossing Location)(ft.): 1.0
Stream Depth (in.):	
OHWM Indicators:	SEDIMENT SORTING BENT, MATTED OR MISSING VEGETATION WRACK LINE
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	¹⁾ Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
Bank Slope (%): (looking downstream)	Left: 0 Right: 0
Qualitative Attribute	es
Water Appearance:	: 🔽 Clear 🔲 Turbid 🔲 Sheen on Surface 🔲 Floating Algal Mats 🔲 No Flow
☐ Slightl	tly Turbid Very Turbid Greenish Color Obvious Surface Scum Other:
Stream Substrate %	%: SANDS: 75% MUCK: 25%
Aquatic Habitats:	
Aquatio Habitats.	
Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
-	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants
☐ Sand Bar	
☐ Sand Bar☐ Gravel Bar	□ Deep Pools □ In-stream Submerged Plants □ Bank Root Systems □ Fringing Wetlands¹
Sand Bar Gravel Bar Mud Bar	□ Deep Pools □ In-stream Submerged Plants □ Bank Root Systems □ Fringing Wetlands¹ anks □ Overhanging Trees/Shrubs □ None
Sand Bar Gravel Bar Mud Bar Undercut Bar	Deep Pools In-stream Submerged Plants Bank Root Systems Fringing Wetlands¹ anks Overhanging Trees/Shrubs None INVERTEBRATES, FISH (JUVENILE)
Sand Bar Gravel Bar Mud Bar Undercut Bar	Deep Pools In-stream Submerged Plants Bank Root Systems Fringing Wetlands¹ anks Overhanging Trees/Shrubs None INVERTEBRATES, FISH (JUVENILE)
Sand Bar Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition:	□ Deep Pools □ In-stream Submerged Plants □ Bank Root Systems □ Fringing Wetlands¹ anks □ Overhanging Trees/Shrubs □ None S Observed: INVERTEBRATES, FISH (JUVENILE) : □ Channelization/Braiding □ Unnatural Straightening □ Downcutting
Sand Bar Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition:	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	□ Deep Pools □ In-stream Submerged Plants □ Bank Root Systems □ Fringing Wetlands¹ anks □ Overhanging Trees/Shrubs □ None S Observed: INVERTEBRATES, FISH (JUVENILE) □ Channelization/Braiding □ Unnatural Straightening □ Downcutting □ Dikes/Berms □ Excessive Bank Erosion □ N/A □ Other
Sand Bar Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Deep Pools
□ Sand Bar □ Gravel Bar □ Mud Bar □ Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Deep Pools



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Waterbody	Data Form Feature ID: HN-M-S003
✓ Centerline □	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 6/9/2015 10:5	55:39 AM Client/Project Name: NED Milepost: 77697.7
Investigators: CM	Latitude/Longitude: 42.469392, -73.09079
State: MA	County: Berkshire Quad Name: Peru
Logbook No.: 3	Logbook Pg.: 52 Tract No.: 20984
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	Perennial (Flows year round) Intermittent (Flows <3 months) None
Discretion of Flores	Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W □ NW ☑ S □ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	4.5 Water Surface (At Crossing Location)(ft.): 1.0
Stream Depth (in.):	1-3
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE LEAF LITTER DISTURBED
Bank Height (ft.): (looking downstream)	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Ngiii. 🛂 0-2 📋 2-4 📋 4-6 📋 0-6 📋 0+
Bank Slope (%): (looking downstream)	Left: 2 Right: 2
Qualitative Attributes	s S
Water Appearance:	✓ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	
Stream Substrate %:	: SANDS: 90% SILTS: 10%
Aquatic Habitats:	
■ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	✓ Bank Root Systems
☐ Undercut Ban	ks
Aquatic Organisms	Observed:
Channel Condition:	✓ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characterist	ics, Aquatic and Terrestrial Diversity Description:
Stream Quality:	☐ High ☐ Moderate ☑ Low
Comments:	_
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Date: 6/10/2015 11:02:37 AM	
Investigators: CM Latitude/Longitude: 42.470386, -73.08478	
State: MA County: Berkshire Quad Name: Peru	
Logbook No.: 3 Logbook Pg.: 60 Tract No.: 20984	
Waterbody Type: ☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:	
Stream Flow:	
Flow Type: ☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None ☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)	
Direction of Flow: ☑ N □ NE □ E □ SE □ SW □ W □ NW □ S □ No Flow	
OHWM Width (ft.): 30.0	
Stream Width (ft.): 50.0 Water Surface (At Crossing Location)(ft.): 25.0 Stream Depth (in.): 12-18	
Stream Depth (in.): 12-18 OHWM Indicators: CLEAR NATURAL LINE ON BANK SEDIMENT SORTING BENT, MATTED OR MISSING VEGETATION WRACK LINE	
Bank Height (ft.): Left: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+ (looking downstream) Right: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+	
Bank Slope (%): Left: 90 Right: 90	
Qualitative Attributes	
Water Appearance: ✓ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow ☐ Slightly Turbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:	
Stream Substrate %: COBBLES: 90% SANDS: 5% 5% GRAVEL: 5%	
Aquatic Habitats:	
☐ Sand Bar ☐ Gravel Riffles ☐ In-stream Emergent Plants	
☐ Gravel Bar ☐ Deep Pools ☐ In-stream Submerged Plants	
☐ Mud Bar ☐ Bank Root Systems ☑ Fringing Wetlands¹	
☑ Undercut Banks ☐ Overhanging Trees/Shrubs ☐ None	
Aquatic Organisms Observed: FISH (JUVENILE), FISH (ADULT), INVERTEBRATES	
Channel Condition: ☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting	
☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other	
Habitat Characteristics, Aquatic and Terrestrial Diversity Description:	
Stream Quality: High Moderate Low Comments:	





SOUTH



NORTH

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BANKS



	Data Form Feature ID: HN-M-S004A
☑ Centerline ☐ R	Re-Route
Date: 6/10/2015 11:23	3:24 AM Client/Project Name: NED Milepost: 79386.7
Investigators: CM	Latitude/Longitude: 42.470361, -73.08469
State: MA	County: Berkshire Quad Name: Peru
Logbook No.: 3	Logbook Pg.: 62 Tract No.: 20984
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	Perennial (Flows year round) ☑ Intermittent (Flows <3 months) ☐ None
	Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)
Direction of Flow:	N NE DE DSE DSW DW DNW DS DNo Flow
OHWM Width (ft.):	4.0
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	7.0 Water Surface (At Crossing Location)(ft.): 2.0
Stream Depth (in.):	1-3
OHWM Indicators:	SEDIMENT SORTING WRACK LINE BENT, MATTED OR MISSING VEGETATION SCOUR
Bank Height (ft.): (looking downstream)	Left: □ 0-2 ☑ 2-4 □ 6-8 □ 8+ Right: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+
Bank Slope (%): (looking downstream)	Left: 80 Right: 80
Qualitative Attributes	
Water Appearance:	✓ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly Tu	urbid Very Turbid Greenish Color Obvious Surface Scum Other:
Stream Substrate %:	COBBLES: 5% SILTS: 15% SANDS: 80%
	- CANDO
Aquatic Habitats:	OTHER.
Aquatic Habitats:	Gravel Riffles In-stream Emergent Plants
•	
☐ Sand Bar	Gravel Riffles In-stream Emergent Plants
Sand Bar Gravel Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹
Gravel Bar Mud Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None
Sand Bar Gravel Bar Mud Bar Undercut Banks	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Obs	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Obe Channel Condition: Habitat Characteristics	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Seerved: INVERTEBRATES ☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting ☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other Seerved: Other
☐ Sand Bar ☐ Gravel Bar ☐ Mud Bar ☑ Undercut Banks Aquatic Organisms Obsection: Habitat Characteristics	☐ Gravel Riffles ☐ In-stream Emergent Plants ☑ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☑ Overhanging Trees/Shrubs ☐ None None
☐ Sand Bar ☐ Gravel Bar ☐ Mud Bar ☑ Undercut Banks Aquatic Organisms Obe Channel Condition: Habitat Characteristics	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Seerved: INVERTEBRATES ☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting ☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other Seerved: Other



BANKS



NORTH

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SOUTH



J	Data Form Feature	ID: HN-N-S001
☑ Centerline ☐ R	Re-Route Access Road Ancillary Facility Transmission Line O	ther
Date: 6/11/2015 12:11	1:59 PM Client/Project Name: NED M	ilepost: 81751.3
Investigators: CM	Latitude/Longitude: 42.472544, -73.07643	
State: MA	County: Berkshire Quad Name: Peru	
Logbook No.: 1	Logbook Pg.: 36 Tract No.: 20984	
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch	Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None	
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)	None
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rai	nfall)
Direction of Flow:	□N □NE □E □SE □SW □W □NW ☑ S □	No Flow
OHWM Width (ft.):	15.0	
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A	
Stream Width (ft.):	20.0 Water Surface (At Crossing Location)(ft.): 15.0	
Stream Depth (in.):	12-18	
OHWM Indicators:	SEDIMENT DEPOSITION LEAF LITTER DISTURBED CLEAR NATURAL LINE ON BANK	
Bank Height (ft.): (looking downstream)	Left: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+ Right: ☑ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+	
Bank Slope (%): (looking downstream)	Left: 2 Right: 45	
Qualitative Attributes		
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Ma	nts No Flow
☐ Slightly To	Turbid	Other:
Stream Substrate %:	COBBLES: 45% GRAVEL: 10% SANDS: 40% SILTS: 5%	
Aquatic Habitats:		
Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants	
	✓ Deep Pools	
☐ Gravel Bar		
☐ Gravel Bar☐ Mud Bar	☐ Bank Root Systems ☑ Fringing Wetlands¹	
_		
Mud Bar Undercut Banks	s 🗹 Overhanging Trees/Shrubs 🔲 None	
☐ Mud Bar	s 🗹 Overhanging Trees/Shrubs 🔲 None	
Mud Bar Undercut Banks Aquatic Organisms Ob	bserved: INVERTEBRATES, FISH (ADULT), FISH (ADULT)	☐ Other
Mud Bar Undercut Banks Aquatic Organisms Ob Channel Condition:	bserved: INVERTEBRATES, FISH (ADULT), FISH (ADULT) Channelization/Braiding Unnatural Straightening Downcutting	
☐ Mud Bar ☐ Undercut Banks Aquatic Organisms Ob Channel Condition: Habitat Characteristics	bserved: INVERTEBRATES, FISH (ADULT), FISH (ADULT) Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A	
☐ Mud Bar ☐ Undercut Banks Aquatic Organisms Ob Channel Condition: Habitat Characteristics	bserved: INVERTEBRATES, FISH (ADULT), FISH (ADULT) Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A ss, Aquatic and Terrestrial Diversity Description:	





NW UPSTREAM



SW DOWNSTREAM





BANKS W



Waterbody [Data Form Feature ID: HN-N-S002
✓ Centerline ☐ F	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 6/11/2015 1:45:	44 PM Client/Project Name: NED Milepost: 82502.2
Investigators: JM	Latitude/Longitude: 42.473103, -73.07375
State: MA	County: Berkshire Quad Name: Peru
Logbook No.: 1	Logbook Pg.: 42 Tract No.: 20984
Waterbody Type: [✓ Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type: [Perennial (Flows year round) ☑ Intermittent (Flows <3 months) ☐ None
Γ	Seasonal (Continuous flow >3 months) □ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	☑ N ☐ NE ☐ E ☐ SE ☐ SW ☐ W ☐ NW ☐ S ☐ No Flow
OHWM Width (ft.):	3.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	7.0 Water Surface (At Crossing Location)(ft.): 1.0
Stream Depth (in.):	1-3
OHWM Indicators:	LITTER AND DEBRIS SOIL CHARACTER CHANGES
Bank Height (ft.):	Left: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+
(looking downstream)	Right: 0-2 2-4 🗹 4-6 6-8 8+
Bank Slope (%):	Left: 45
(looking downstream)	Right: 45
Qualitative Attributes	
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly T	
Stream Substrate %:	SILTS: 80% GRAVEL: 10% SANDS: 10%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	Overhanging Trees/Shrubs
Aquatic Organisms Ob	oserved: NONE
Channel Condition:	☑ Channelization/Braiding ☑ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristics	s, Aquatic and Terrestrial Diversity Description:
Stream Quality:	☐ High ☐ Moderate ☑ Low
Comments:	



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Waterbody D	Data Form Feature ID: WR-M-S005
☐ Centerline ☐ R	Re-Route
Date: 5/26/2015 10:34	E:19 AM Client/Project Name: NED Milepost: 93605.5
Investigators: CM	Latitude/Longitude: 42.481327, -73.03408
State: MA	County: Berkshire Quad Name: Peru
Logbook No.: 2	Logbook Pg.: 80 Tract No.: 1316
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	Fast Moderate Slow Very Slow None
Flow Type:	Perennial (Flows year round)
	Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)
Direction of Flow:	☑ N ☐ NE ☐ E ☐ SE ☐ SW ☐ W ☐ NW ☐ S ☐ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	☐ Braided ☑ Meandering ☐ Straight ☐ N/A
Stream Width (ft.):	7.0 Water Surface (At Crossing Location)(ft.): 1.0
Stream Depth (in.):	3-5
OHWM Indicators:	WRACK LINE
	BENT, MATTED OR MISSING VEGETATION ABRUPT PLANT COMMUNITY CHANGE
Bank Height (ft.):	Left: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+
(looking downstream)	Right: 0-2 🗹 2-4 🔲 4-6 🔲 6-8 🔲 8+
Bank Slope (%):	Left: 45
(looking downstream)	Right: 45
Qualitative Attributes	
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☑ No Flow
☐ Slightly To	urbid
Stream Substrate %:	SANDS: 10% COBBLES: 90%
	COBBLES. 90%
Aquatic Habitats:	
☐ Sand Bar	✓ Gravel Riffles
☐ Gravel Bar	✓ Deep Pools
☐ Mud Bar —	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	Overhanging Trees/Shrubs None
Aquatic Organisms Ob	served: FISH (ADULT), INVERTEBRATES, FROGS
Channel Condition:	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristics	s, Aquatic and Terrestrial Diversity Description:
sensitive habitat	
Stream Quality:	☐ High ☐ Moderate ☐ Low
-	
Comments:	





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Waterbody	Data Form Feature ID: WR-M-S009
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 6/15/2015 12:	29:13 PM Client/Project Name: NED Milepost: 99884.0
Investigators: CM	Latitude/Longitude: 42.493491, -73.02147
State: MA	County: Berkshire Quad Name: Peru
Logbook No.: 3M	Logbook Pg.: 100 Tract No.: 1015
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	N NE EØ_ SE SW W NW S No Flow
OHWM Width (ft.):	7.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	10.0 Water Surface (At Crossing Location)(ft.): 7.0
Stream Depth (in.):	24-36
OHWM Indicators:	WRACK LINE SCOUR BENT, MATTED OR MISSING VEGETATION LITTER AND DEBRIS
Bank Height (ft.): (looking downstream)	Left: □ 0-2 □ 2-4 ☑ 4-6 □ 6-8 □ 8+ Right: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+
Bank Slope (%): (looking downstream)	Left: 60 Right: 50
Qualitative Attributes	
Water Appearance:	☐ Clear ☑ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	Turbid
Stream Substrate %:	COBBLES: 50% SANDS: 20% SILTS: 10% GRAVEL: 20%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
✓ Gravel Bar	☑ Deep Pools ☐ In-stream Submerged Plants
	☑ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Bank	xs ☑ Overhanging Trees/Shrubs ☐ None
Aquatic Organisms C	Observed: FISH (JUVENILE), INVERTEBRATES, FROGS
Channel Condition:	☐ Channelization/Braiding ☑ Unnatural Straightening ☐ Downcutting
	☑ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristic	cs, Aquatic and Terrestrial Diversity Description:
OBSERVED AFTER 2	r" OF RAIN



Stream Quality:	√ High	☐ Low
	<u> </u>	

Comments:

Photos



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NW



Waterbody	Data Form Feature ID: WR-M-S016
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/18/2015 9:3	5:11 AM Client/Project Name: NED Milepost: 101032.0
Investigators: CM	MN Latitude/Longitude: 42.495415, -73.01894
State: MA	County: Berkshire Quad Name: Peru
Logbook No.: 5M	Logbook Pg.: 44 Tract No.: 1014
Waterbody Type:	Stream Pond Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E ☑ SE □ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	5.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	6.0 Water Surface (At Crossing Location)(ft.): 3.0
Stream Depth (in.):	3-6
OHWM Indicators:	SCOUR CLEAR NATURAL LINE ON BANK LITTER AND DEBRIS WRACK LINE SEDIMENT DEPOSITION
Bank Height (ft.): (looking downstream)	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+ Right: ☐ 0-2 ☑ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
Bank Slope (%): (looking downstream)	Left: 2 Right: 30
Qualitative Attributes	
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	Turbid
Stream Substrate %:	GRAVEL: 10% COBBLES: 10% BEDROCK: 50% SILTS: 10% SANDS: 20%
Aquatic Habitats:	
✓ Sand Bar	☑ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	✓ Deep Pools ☐ In-stream Submerged Plants
■ Mud Bar	☐ Bank Root Systems ☑ Fringing Wetlands¹
✓ Undercut Bank	ss 🔽 Overhanging Trees/Shrubs 🔲 None
Aquatic Organisms C	Dbserved: FROGS
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
	cs, Aquatic and Terrestrial Diversity Description:
Habitat Characteristic	
Habitat Characteristi	



Stream Quality:	☐ High	☐ Low	

Comments:

Photos



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NW



Waterbody	Data Form Feature ID: WR-M-S018	
✓ Centerline	Re-Route	
Date: 7/19/2015 2	11:07 PM Client/Project Name: NED Milepost: 101378.2	
Investigators: Cl	M Latitude/Longitude: 42.495600, -73.01766	
State: MA	County: Berkshire Quad Name: Peru	
Logbook No.: 5N	Logbook Pg.: 62 Tract No.: 1014	
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:	
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None	
Flow Type:	☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None	
	Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)	
Direction of Flow:	□ N □ NE □ E ☑ SE □ SW □ W □ NW □ S □ No Flow	
OHWM Width (ft.):	6.0	
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A	
Stream Width (ft.):	10.0 Water Surface (At Crossing Location)(ft.): 2.0	
Stream Depth (in.):	1-3	
OHWM Indicators:	BENT, MATTED OR MISSING VEGETATION SEDIMENT SORTING LEAF LITTER DISTURBED SEDIMENT DEPOSITION LITTER AND DEBRIS SCOUR	
Bank Height (ft.):	Left: □ 0-2 □ 2-4 ☑ 4-6 □ 6-8 □ 8+	
(looking downstream	Right: 0-2 2-4 4-6 6-8 8+	
Bank Slope (%):	Left: 45	
(looking downstream	Right: 30	
Qualitative Attribute	es e	
Water Appearance: Slight	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flo y Turbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:	W
Stream Substrate %	GRAVEL: 10% COBBLES: 30% SANDS: 60%	
Aquatic Habitats:		
✓ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants	
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants	
	☐ Bank Root Systems ☑ Fringing Wetlands¹	
☐ Undercut Ba	nks 🗹 Overhanging Trees/Shrubs 🔲 None	
Aquatic Organisms	Observed: SALAMANDER, INVERTEBRATES, FROGS	
Channel Condition	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting	
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other	
Habitat Characteris	tics, Aquatic and Terrestrial Diversity Description:	



Stream Quality:	☐ High	☐ Moderate	✓ Low
Comments:			



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Date: 7/19/2015 1:02 Investigators: CM State: MA Logbook No.: 5M Waterbody Type: [Stream Flow: [Direction of Flow: OHWM Width (ft.):	Re-Route
Investigators: CM State: MA Logbook No.: 5M Waterbody Type: [Stream Flow: [Flow Type: [Direction of Flow: OHWM Width (ft.): Sinuosity: [Stream Width (ft.): Stream Depth (in.):	Latitude/Longitude: 42.495803, -73.01753 County: Berkshire
State: MA Logbook No.: 5M Waterbody Type: [Stream Flow: [Flow Type: [Direction of Flow: OHWM Width (ft.): Sinuosity: [Stream Width (ft.): Stream Depth (in.):	County: Berkshire Quad Name: Peru
State: MA Logbook No.: 5M Waterbody Type: [Stream Flow: [Flow Type: [Direction of Flow: OHWM Width (ft.): Sinuosity: [Stream Width (ft.): Stream Depth (in.):	Logbook Pg.: 64 Tract No.: 1014
Waterbody Type: Stream Flow: Flow Type: Direction of Flow: OHWM Width (ft.): Sinuosity: Stream Width (ft.): Stream Depth (in.):	✓ Stream Pond Lake Borrow Pit Ag Ditch Other: Fast Moderate Slow Very Slow None ✓ Perennial (Flows year round) Intermittent (Flows <3 months)
Stream Flow: Flow Type: Direction of Flow: OHWM Width (ft.): Sinuosity: Stream Width (ft.): Stream Depth (in.):	Fast Moderate Slow None No
Flow Type: [Direction of Flow: OHWM Width (ft.): Sinuosity: Stream Width (ft.): Stream Depth (in.):	Perennial (Flows year round) Intermittent (Flows <3 months) None
Direction of Flow: OHWM Width (ft.): Sinuosity: Stream Width (ft.): Stream Depth (in.):	Seasonal (Continuous flow >3 months)
Direction of Flow: OHWM Width (ft.): Sinuosity: Stream Width (ft.): Stream Depth (in.):	N
OHWM Width (ft.): Sinuosity: Stream Width (ft.): Stream Depth (in.):	15.0 Braided Meandering Straight N/A 21.0 Water Surface (At Crossing Location)(ft.): 5.0 3-6 LITTER AND DEBRIS
Sinuosity: Stream Width (ft.): Stream Depth (in.):	Braided Meandering Straight N/A 21.0 Water Surface (At Crossing Location)(ft.): 5.0 3-6 LITTER AND DEBRIS
Stream Width (ft.): Stream Depth (in.):	21.0 Water Surface (At Crossing Location)(ft.): 5.0 3-6 LITTER AND DEBRIS
Stream Depth (in.):	3-6 LITTER AND DEBRIS
	LITTER AND DEBRIS
OHWM Indicators:	
	SEDIMENT SORTING CLEAR NATURAL LINE ON BANK SCOUR
Bank Height (ft.): (looking downstream)	Left: ✓ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+ Right: ✓ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+
D I. Ol (0/)	Left: 15
Bank Slope (%): (looking downstream)	Right: 15
Qualitative Attributes	
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
Slightly T	Turbid Very Turbid Greenish Color Obvious Surface Scum Other: COBBLES: 80% GRAVEL: 10% SANDS: 10%
Aquatic Habitats:	
Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
✓ Gravel Bar	✓ Deep Pools
☐ Mud Bar	✓ Bank Root Systems ✓ Fringing Wetlands¹
✓ Undercut Banks	
Aquatic Organisms Ol	bserved: FROGS, INVERTEBRATES
Channel Condition:	☐ Channelization/Braiding ☑ Unnatural Straightening ☐ Downcutting
	☑ Dikes/Berms ☑ Excessive Bank Erosion ☐ N/A ☑ Other
Channel Condition:	☐ Channelization/Braiding ☑ Unnatural Straightening ☐ Downcutting



Stream Quality:	☐ High	√ Low

Comments: STEEP GRADIENT

Photos



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Waterbody	Data Form Feature ID: WR-M-S017B
✓ Centerline	Re-Route
Date: 7/18/2015 2:	33:13 PM Client/Project Name: NED Milepost: 101592.3
Investigators: CN	M MN Latitude/Longitude: 42.496010, -73.01692
State: MA	County: Berkshire Quad Name: Peru
Logbook No.: 5N	M Logbook Pg.: 52 Tract No.: 1014
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
Direction of Flow:	
OHWM Width (ft.):	6.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	8.0 Water Surface (At Crossing Location)(ft.): 5.0
Stream Depth (in.):	1-3
OHWM Indicators:	WRACK LINE SEDIMENT SORTING SCOUR CLEAR NATURAL LINE ON BANK
Bank Height (ft.): (looking downstream	Left: 0-2 2-4 4-6 6-8 8+ Right: 0-2 2-4 4-6 6-8 8+
Bank Slope (%): (looking downstream	Left: 35 Right: 25
Qualitative Attribute	
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
Stream Substrate %	
	GRAVEL: 20%
Aquatic Habitats:	
☐ Sand Bar	✓ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	✓ Deep Pools ☐ In-stream Submerged Plants
☐ Mud Bar	☑ Bank Root Systems ☑ Fringing Wetlands¹
Undercut Bar	nks 🗹 Overhanging Trees/Shrubs 🔲 None
Aquatic Organisms	Observed: INVERTEBRATES, FROGS, BEAVER
Channel Condition:	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteris	tics, Aquatic and Terrestrial Diversity Description:
Stream Quality: Comments:	☐ High ☑ Moderate ☐ Low





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•	/ Data Form Feature ID: WR-M-S017C
	Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Transmission Line ☐ Other
Date: 7/18/2015 3:1	
Investigators: CM	
State: MA	County: Berkshire Quad Name: Peru
Logbook No.: 5M	
Waterbody Type:	✓ Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☑ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W □ NW ☑ S □ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	6.0 Water Surface (At Crossing Location)(ft.): 1.5
Stream Depth (in.):	1-3
OHWM Indicators:	SCOUR LITTER AND DEBRIS
Bank Height (ft.):	Left: ☐ 0-2 ☐ 2-4 ☑ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	1) Right: 0-2 2-4 🗹 4-6 🗍 6-8 🗍 8+
Bank Slope (%):	Left: 60
(looking downstream)	¹⁾ Right: 75
Qualitative Attributes	es
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	tly Turbid
Stream Substrate %:	6: COBBLES: 60% BEDROCK: 20% GRAVEL: 20%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
I I Giavei Dal	_ · · ·
-	☐ Bank Root Systems ☐ Fringing Wetlands¹
_	
☐ Mud Bar	nks ☐ Overhanging Trees/Shrubs ☑ None
☐ Mud Bar☐ Undercut Banl	onks Overhanging Trees/Shrubs I None GObserved: FROGS
☐ Mud Bar ☐ Undercut Bani Aquatic Organisms (onks Overhanging Trees/Shrubs I None S Observed: FROGS
Mud Bar Undercut Bank Aquatic Organisms (Channel Condition:	nks ☐ Overhanging Trees/Shrubs ☑ None s Observed: FROGS : ☐ Channelization/Braiding ☑ Unnatural Straightening ☐ Downcutting
Mud Bar Undercut Bank Aquatic Organisms (Channel Condition: Habitat Characteristi	Overhanging Trees/Shrubs None Gobserved: FROGS Channelization/Braiding Dikes/Berms Excessive Bank Erosion N/A Other Stics, Aquatic and Terrestrial Diversity Description:
Mud Bar Undercut Banl Aquatic Organisms (Channel Condition: Habitat Characteristi Stream Quality:	None S Observed: FROGS Channelization/Braiding
Mud Bar Undercut Bank Aquatic Organisms (Channel Condition: Habitat Characteristi	Overhanging Trees/Shrubs None Gobserved: FROGS Channelization/Braiding Dikes/Berms Excessive Bank Erosion N/A Other Stics, Aquatic and Terrestrial Diversity Description:
Mud Bar Undercut Banl Aquatic Organisms (Channel Condition: Habitat Characteristi Stream Quality:	Overhanging Trees/Shrubs None Gobserved: FROGS Channelization/Braiding Dikes/Berms Excessive Bank Erosion N/A Other Stics, Aquatic and Terrestrial Diversity Description:
Mud Bar Undercut Banl Aquatic Organisms (Channel Condition: Habitat Characteristi Stream Quality:	Overhanging Trees/Shrubs None Gobserved: FROGS Channelization/Braiding Dikes/Berms Excessive Bank Erosion N/A Other Stics, Aquatic and Terrestrial Diversity Description:
Mud Bar Undercut Banl Aquatic Organisms (Channel Condition: Habitat Characteristi Stream Quality:	Overhanging Trees/Shrubs None Gobserved: FROGS Channelization/Braiding Dikes/Berms Excessive Bank Erosion N/A Other Stics, Aquatic and Terrestrial Diversity Description:
Mud Bar Undercut Banl Aquatic Organisms (Channel Condition: Habitat Characteristi Stream Quality:	Overhanging Trees/Shrubs None Gobserved: FROGS Channelization/Braiding Dikes/Berms Excessive Bank Erosion N/A Other Stics, Aquatic and Terrestrial Diversity Description:
Mud Bar Undercut Banl Aquatic Organisms (Channel Condition: Habitat Characteristi Stream Quality:	Overhanging Trees/Shrubs None Gobserved: FROGS Channelization/Braiding Dikes/Berms Excessive Bank Erosion N/A Other Stics, Aquatic and Terrestrial Diversity Description:





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Waterbody	Data Form Feature ID: WR-M-S015
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 6/20/2015 9:4	40:32 AM Client/Project Name: NED Milepost: 109200.4
Investigators: CM	Latitude/Longitude: 42.502654, -72.99080
State: MA	County: Berkshire Quad Name: Plainfield
Logbook No.: 4M	Logbook Pg.: 28 Tract No.: 1003
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	Perennial (Flows year round) Intermittent (Flows <3 months) None Casesage (Casting our flows 3 months)
Direction of Flour	Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE ☑ E □ SE □ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	5.0 Water Surface (At Crossing Location)(ft.): 2.0
Stream Depth (in.):	1-3
OHWM Indicators:	LEAF LITTER DISTURBED
Bank Height (ft.): (looking downstream)	Left: 🔽 0-2 🔲 2-4 🔲 4-6 🔲 6-8 🔲 8+
(1001	Rigiti. V 0-2 2-4 4-0 0-0 0+
Bank Slope (%): (looking downstream)	Left: 3 Right: 3
Qualitative Attribute	S
Water Appearance: Slightly Stream Substrate %	Clear Turbid Sheen on Surface Floating Algal Mats No Flow y Turbid Very Turbid Greenish Color Obvious Surface Scum Other: SANDS: 50% SILTS: 40% COBBLES: 10%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
Mud Bar	✓ Bank Root Systems ✓ Fringing Wetlands¹
Undercut Ban	sks Overhanging Trees/Shrubs None
Aquatic Organisms	Observed: INVERTEBRATES, FROGS
Channel Condition:	✓ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
	ics, Aquatic and Terrestrial Diversity Description:
Stream Quality: Comments:	☐ High ☑ Moderate ☐ Low



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Waterbody	Data Form Feature ID: PL-E-S003
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 6/27/2015 11	:43:02 AM Client/Project Name: NED Milepost: 133581.7
Investigators: SW	Latitude/Longitude: 42.524216, -72.90854
State: MA	County: Hampshire Quad Name: Plainfield
Logbook No.: 1E	Logbook Pg.: 62 Tract No.: 891
Waterbody Type:	☑ Stream □ Pond □ Lake □ Borrow Pit □ Ag Ditch □ Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	 □ Perennial (Flows year round) □ Seasonal (Continuous flow >3 months) □ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	
OHWM Width (ft.):	2.0
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	3.0 Water Surface (At Crossing Location)(ft.): 2.0
Stream Depth (in.):	3-6
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE
Bank Height (ft.): (looking downstream)	Left:
	Right:
Bank Slope (%): (looking downstream)	Right: 65
Qualitative Attributes	S
Stream Substrate %:	
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
 ✓ Mud Bar	☐ Bank Root Systems ☐ Fringing Wetlands¹
✓ Undercut Ban	
Aquatic Organisms	Observed: INVERTEBRATES, FROGS
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Stream Quality: Comments:	ics, Aquatic and Terrestrial Diversity Description: High Moderate Low





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Waterbody	Data Form Feature ID: PL-E-S002
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 6/26/2015 3:4	16:59 PM Client/Project Name: NED Milepost: 134831.9
Investigators: SE	Latitude/Longitude: 42.524407, -72.90387
State: MA	County: Hampshire Quad Name: Plainfield
Logbook No.: 1E	Logbook Pg.: 58 Tract No.: 919
Waterbody Type:	✓ Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☑ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W □ NW ☑ S □ No Flow
OHWM Width (ft.):	12.0
Sinuosity:	
	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	14.0 Water Surface (At Crossing Location)(ft.): 8.0
Stream Depth (in.):	6-12
OHWM Indicators:	CLEAR NATURAL LINE ON BANK LITTER AND DEBRIS ABRUPT PLANT COMMUNITY CHANGE
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
Bank Slope (%):	Left: 50
(looking downstream)	Right: 50
Qualitative Attributes	5
Water Appearance: Slightly	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow Turbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:
Stream Substrate %:	GRAVEL: 15% SANDS: 15% COBBLES: 30% MUCK: 40%
Aquatic Habitats:	
☐ Sand Bar	✓ Gravel Riffles
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
☐ Mud Bar	✓ Bank Root Systems ✓ Fringing Wetlands¹
✓ Undercut Bank	
Aquatic Organisms (Observed: FROGS, FISH (JUVENILE), INVERTEBRATES, FISH (ADULT)
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characteristi	ics, Aquatic and Terrestrial Diversity Description:
Habitat Characteristi	ics, Aquatic and Terrestrial Diversity Description:
Stream Quality:	ics, Aquatic and Terrestrial Diversity Description: High
Stream Quality:	





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Centerline	
Investigators: SE	
Latitude/Longitude:	
State MA	
Waterbody Type: ☑ Stream Pond Lake Borrow Pit Ag Ditch Other: Stream Flow: Fast Moderate ☑ Slow Very Slow None Flow Type: Perennial (Flows year round) ☑ Intermittent (Flows <3 months)	
Fast	
Perennial (Flows year round)	
Seasonal (Continuous flow >3 months)	
Direction of Flow:	
Sinusity:	
Sinuosity: Braided Meandering Straight N/A	
Stream Width (ft.): 6.0 Water Surface (At Crossing Location)(ft.): 3.0	
Stream Depth (in.): 6-12	
CLEAR NATURAL LINE ON BANK ABRUPT PLANT COMMUNITY CHANGE	
Right: 0-2 2-4 4-6 6-8 8+	
Right:	
Clear Turbid Sheen on Surface Floating Algal Mats No Flow	
Qualitative Attributes Water Appearance: ✓ Clear Turbid Sheen on Surface Floating Algal Mats No Flow Slightly Turbid Very Turbid Greenish Color Obvious Surface Scum Other: Stream Substrate %: GRAVEL: 10% MUCK: 60% COBBLES: 20% SANDS: 10%	
Stream Substrate %: GRAVEL: 60% COBBLES: 20% SANDS: Obvious Surface Scum Other: Obvious Surface Scum Other:	
Stream Substrate %: GRAVEL: MUCK: 60% COBBLES: 20% SANDS: 10%	v
MUCK: 60% COBBLES: 20% SANDS: 10%	
Aquatic Habitats:	
Aquatio Habitato.	
☐ Sand Bar ☐ Gravel Riffles ☐ In-stream Emergent Plants	
☐ Gravel Bar ☑ Deep Pools ☐ In-stream Submerged Plants	
☐ Mud Bar ☑ Bank Root Systems ☑ Fringing Wetlands¹	
✓ Undercut Banks ✓ Overhanging Trees/Shrubs ☐ None	
Aquatic Organisms Observed: SALAMANDER, FROGS, INVERTEBRATES, FISH (JUVENILE)	
Channel Condition: ☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting	_
☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other	
Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality:	
Comments:	





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✓ Centerline	Re-Route
Date: 7/3/2015 4:04:0	6 PM Client/Project Name: NED Milepost: 141763.6
Investigators: CM	Latitude/Longitude: 42.527703, -72.87854
State: MA	County: Hampshire Quad Name: Plainfield
Logbook No.: 4	Logbook Pg.: 64 Tract No.: 898
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
	Perennial (Flows year round)
Direction of Flow:	N NE E
OHWM Width (ft.):	4.0
	4.0 ☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	4.5 Water Surface (At Crossing Location)(ft.): 4.0
Stream Depth (in.):	4.5 water Surface (At Crossing Location)(it.). 4.0
OHWM Indicators:	WRACK LINE ABRUPT PLANT COMMUNITY CHANGE SCOUR SEDIMENT SORTING
Bank Height (ft.): (looking downstream)	Left: ☑ 0-2 ☐ 2-4 ☐ 6-8 ☐ 8+ Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
Bank Slope (%): (looking downstream)	Left: 2 Right: 2
Qualitative Attributes	
Water Appearance: Slightly T Stream Substrate %:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow Turbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other: SILTS: 50% SANDS: 50%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
<u>_</u>	
☐ Gravel Bar ☐ Mud Bar	 □ Deep Pools □ In-stream Submerged Plants □ Bank Root Systems □ Fringing Wetlands¹
☐ Undercut Banks	
Aquatic Organisms Ob	pserved: FROGS, INVERTEBRATES
Channel Condition:	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristics Stream Quality:	s, Aquatic and Terrestrial Diversity Description: High Moderate Low
Comments:	





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Centerline	
Investigators: CM	ne
State: MA	
Logbook No.: 4 Logbook Pg.: 68 Tract No.: 898 Waterbody Type: ✓ Stream Pond Lake Borrow Pit Ag Ditch Other: Stream Flow: Fast Moderate Slow Very Slow None Flow Type: Perennial (Flows year round) Intermittent (Flows <3 months)	
Waterbody Type: Stream Pond Lake Borrow Pit Ag Ditch Other: Stream Flow: Fast Moderate Slow Very Slow None Flow Type: Perennial (Flows year round) Intermittent (Flows <3 months) None Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall) Direction of Flow: N	
Stream Flow: Fast Moderate Slow Very Slow None Flow Type: Perennial (Flows year round) Intermittent (Flows <3 months)	
Flow Type: Perennial (Flows year round) Intermittent (Flows <3 months) Non Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall) Direction of Flow: N NE SE SE SW WW NW NW SWO NO Flow OHWM Width (ft.): 15.0 Sinuosity: Braided Meandering Straight N/A Stream Width (ft.): 16.0 Water Surface (At Crossing Location)(ft.): 12.0 Stream Depth (in.): 1-3 OHWM Indicators: LITTER AND DEBRIS BENT, MATTED OR MISSING VEGETATION SCOUR Bank Height (ft.): (looking downstream) Left: V 0-2 2-4 4-6 6-8 8+ Right: 0-2 2-4 4-6 6-8 8+	
Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall) Direction of Flow:	
Direction of Flow: N NE E E SE SW W NW NW S NO Flow OHWM Width (ft.): 15.0 Sinuosity: Braided Meandering Straight N/A Stream Width (ft.): 16.0 Water Surface (At Crossing Location)(ft.): 12.0 Stream Depth (in.): 1-3 OHWM Indicators: LITTER AND DEBRIS BENT, MATTED OR MISSING VEGETATION SCOUR Bank Height (ft.): Left: Ø 0-2 2-4 4-6 6-8 8+ Right: Ø 0-2 2-4 4-6 6-8 8+	v
OHWM Width (ft.): 15.0 Sinuosity: ☑ Braided ☐ Meandering ☐ Straight ☐ N/A Stream Width (ft.): 16.0 Water Surface (At Crossing Location)(ft.): 12.0 Stream Depth (in.): 1-3 OHWM Indicators: LITTER AND DEBRIS BENT, MATTED OR MISSING VEGETATION SCOUR Bank Height (ft.): (looking downstream) ☐ 6-8 ☐ 8+ Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+	<u> </u>
Sinuosity: Image: Braided braid	
Stream Width (ft.): 16.0 Water Surface (At Crossing Location)(ft.): 12.0 Stream Depth (in.): 1-3 OHWM Indicators: LITTER AND DEBRIS BENT, MATTED OR MISSING VEGETATION SCOUR Bank Height (ft.): Left: ☑ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+ Right: ☑ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+	
Stream Depth (in.): 1-3 OHWM Indicators: LITTER AND DEBRIS BENT, MATTED OR MISSING VEGETATION SCOUR Bank Height (ft.): (looking downstream) Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+ Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+	
OHWM Indicators: LITTER AND DEBRIS BENT, MATTED OR MISSING VEGETATION SCOUR Bank Height (ft.): (looking downstream) Left:	
BENT, MATTED OR MISSING VEGETATION SCOUR Bank Height (ft.): (looking downstream) Left:	
(looking downstream) Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+	
Right: V 0-2	
Bank Sione (%): Left: 5	
(looking downstream) Right: 5	
Qualitative Attributes	
Water Appearance: ✓ Clear Turbid Sheen on Surface Floating Algal Mats	☐ No Flow
☐ Slightly Turbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:	:
Stream Substrate %: SILTS: 20% SANDS: 50% COBBLES: 30%	
Aquatic Habitats:	
☐ Sand Bar ☐ Gravel Riffles ☐ In-stream Emergent Plants	
☐ Gravel Bar ☐ Deep Pools ☐ In-stream Submerged Plants	
☐ Mud Bar ☑ Bank Root Systems ☐ Fringing Wetlands¹	
☐ Undercut Banks ☑ Overhanging Trees/Shrubs ☐ None	
Aquatic Organisms Observed: FROGS, INVERTEBRATES	
Channel Condition: ✓ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting	
☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Oth	ier
Habitat Characteristics, Aquatic and Terrestrial Diversity Description:	
Stream Quality: ☐ High ☐ Moderate ☑ Low	
Comments:	



BANKS - NORTH



DOWNSTREAM - EAST



UPSTREAM- WEST





	Data Form Feature ID: AS-M-S001 BILLINGS BROOK
☑ Centerline ☐ I	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/6/2015 6:14:5	56 PM Client/Project Name: NED Milepost: 143304.6
Investigators: CM	Latitude/Longitude: 42.528495, -72.87293
State: MA	County: Franklin Quad Name: Ashfield
Logbook No.: 4M	Logbook Pg.: 74 Tract No.: 339
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	
Flow Type:	Perennial (Flows year round)
[☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E ☑ SE □ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	25.0
Sinuosity:	☑ Braided ☐ Meandering ☐ Straight ☐ N/A
Stream Width (ft.):	27.0 Water Surface (At Crossing Location)(ft.): 25.0
Stream Depth (in.):	60+
OHWM Indicators:	SCOUR SHELVING ABRUPT PLANT COMMUNITY CHANGE
Bank Height (ft.):	Left: ☐ 0-2 ☑ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: 0-2 2-4 4-6 6-8 8+
Bank Slope (%):	Left: 80
(looking downstream)	Right: 80
Qualitative Attributes	
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly 1	
Stream Substrate %:	SILTS: 30%
	MUCK: 70%
Aquatic Habitats:	MUCK: 70%
•	
Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
Sand Bar Gravel Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants ☑ Deep Pools ☐ In-stream Submerged Plants
Sand Bar Gravel Bar Mud Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹
Sand Bar Gravel Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹
Sand Bar Gravel Bar Mud Bar Undercut Banks	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None
Sand Bar Gravel Bar Mud Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None
Sand Bar Gravel Bar Mud Bar Undercut Banks	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Diserved: FISH (JUVENILE), TURTLES, INVERTEBRATES, FISH (ADULT), BEAVER, WATERFOWL, FROGS
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Of Channel Condition:	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Deserved: FISH (JUVENILE), TURTLES, INVERTEBRATES, FISH (ADULT), BEAVER, WATERFOWL, FROGS ☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Of Channel Condition:	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Deep Pools ☐ In-stream Submerged Plants ☐ Pringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Deep Pools ☐ In-stream Emergent Plants ☐ None
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Of Channel Condition: Habitat Characteristic VERNAL POOL ADJAC	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Deep Pools ☐ In-stream Submerged Plants ☐ Pringing Wetlands¹ ☐ None Deep Pools ☐ In-stream Emergent Plants ☐ Plants ☐ In-stream Emergent Plants ☐ In-stream Submerged Plants ☐ Plants ☐ In-stream Submerged Plants ☐ None ☐ None ☐ Deap Pools ☐ In-stream Emergent Plants ☐ In-stream Submerged Plants ☐ In-stream
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Of Channel Condition: Habitat Characteristic VERNAL POOL ADJAC Stream Quality:	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Diserved: FISH (JUVENILE), TURTLES, INVERTEBRATES, FISH (ADULT), BEAVER, WATERFOWL, FROGS ☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting ☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other Street
Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Of Channel Condition: Habitat Characteristic VERNAL POOL ADJAC Stream Quality: Comments:	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Deep Pools ☐ In-stream Submerged Plants ☐ Pringing Wetlands¹ ☐ None Deep Pools ☐ In-stream Emergent Plants ☐ Plants ☐ In-stream Emergent Plants ☐ In-stream Submerged Plants ☐ Plants ☐ In-stream Submerged Plants ☐ None ☐ None ☐ Deap Pools ☐ In-stream Emergent Plants ☐ In-stream Submerged Plants ☐ In-stream
□ Sand Bar □ Gravel Bar □ Mud Bar □ Undercut Banks Aquatic Organisms Of Channel Condition: Habitat Characteristic VERNAL POOL ADJAC Stream Quality: Comments:	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Discovering Trees/Shrubs ☐ None
□ Sand Bar □ Gravel Bar □ Mud Bar □ Undercut Banks Aquatic Organisms Of Channel Condition: Habitat Characteristic VERNAL POOL ADJAC Stream Quality: Comments:	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Discovering Trees/Shrubs ☐ None
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Of Channel Condition: Habitat Characteristic VERNAL POOL ADJAC Stream Quality: Comments:	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☐ Fringing Wetlands¹ ☐ Overhanging Trees/Shrubs ☐ None Discovering Trees/Shrubs ☐ None





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Traisi bouy	Data Form Feature ID: AS-M-S002 SWIFT CREEK
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/6/2015 4:33	3:58 PM Client/Project Name: NED Milepost: 143837.6
Investigators: CM	M Latitude/Longitude: 42.528620, -72.87095
State: MA	County: Franklin Quad Name: Ashfield
Logbook No.: 4	Logbook Pg.: 72 Tract No.: 339
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	Fast Moderate Slow Very Slow None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE ☑ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	10.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	20.0 Water Surface (At Crossing Location)(ft.): 8.0
Stream Depth (in.):	18-24
OHWM Indicators:	WRACK LINE CLEAR NATURAL LINE ON BANK ABRUPT PLANT COMMUNITY CHANGE BENT, MATTED OR MISSING VEGETATION
Bank Height (ft.): (looking downstream)	Left: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+ Right: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+
Bank Slope (%): (looking downstream)	Left: 80 Right: 40
Qualitative Attributes	is a second of the second of t
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	y Turbid
Stream Substrate %:	: SILTS: 10% SANDS: 70%
Stream Substrate %:	: SILTS: 10% SANDS: 70%
Stream Substrate %:	: SILTS: 10% SANDS: 70% COBBLES: 20%
Stream Substrate %: Aquatic Habitats: Sand Bar	: SILTS: 10% SANDS: 70% COBBLES: 20% Gravel Riffles In-stream Emergent Plants
Stream Substrate %: Aquatic Habitats: Sand Bar Gravel Bar	SILTS: 10% SANDS: 70% COBBLES: 20% Gravel Riffles
Stream Substrate %: Aquatic Habitats: Sand Bar Gravel Bar Mud Bar	SILTS: 10% SANDS: 70% COBBLES: 20% Gravel Riffles
Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban	SILTS: 10% SANDS: 70% COBBLES: 20% Gravel Riffles
Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms (SILTS: 10% SANDS: 70% COBBLES: 20% Gravel Riffles



Stream Quality:	✓ High		☐ Low	
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Comments:

Photos



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AECOM 10 Orms Street, Suite 405 Providence, RI 02904





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	Pata Form Feature ID: AS-M-S003
✓ Centerline ☐ R	e-Route
Date: 7/8/2015 11:24:0	D5 AM Client/Project Name: NED Milepost: 145268.1
Investigators: CM	Latitude/Longitude: 42.529423, -72.86575
State: MA	County: Franklin Quad Name: Ashfield
Logbook No.: 4M	Logbook Pg.: 94 Tract No.: 11968
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	Fast ☑ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	Perennial (Flows year round) Intermittent (Flows <3 months) None
	Seasonal (Continuous flow >3 months)
Direction of Flow:	□ N □ NE □ E □ SE ☑ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	15.0
Sinuosity:	Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	18.0 Water Surface (At Crossing Location)(ft.): 5.0
Stream Depth (in.):	3-6
OHWM Indicators:	CLEAR NATURAL LINE ON BANK LEAF LITTER DISTURBED SCOUR ABRUPT PLANT COMMUNITY CHANGE
Bank Height (ft.):	Left: 0-2 🗹 2-4 🛘 4-6 🔲 6-8 🔲 8+
(looking downstream)	Right: 0-2 🗹 2-4 0 4-6 0 6-8 8+
Bank Slope (%): (looking downstream)	Left: 30 Right: 20
Qualitative Attributes	
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly Tu	urbid
Stream Substrate %:	
	SILTS: 10% COBBLES: 80% SANDS: 10%
Aquatic Habitats:	COBBLES: 80%
Aquatic Habitats:	COBBLES: 80%
•	COBBLES: 80% SANDS: 10%
☐ Sand Bar	COBBLES: 80% SANDS: 10% Gravel Riffles In-stream Emergent Plants
Sand Bar Gravel Bar	COBBLES: 80% SANDS: 10% Gravel Riffles
Sand Bar Gravel Bar Mud Bar	COBBLES: 80% SANDS: 10% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Banks	COBBLES: 80% SANDS: 10% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Obs	COBBLES: 80% SANDS: 10% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Obsection: Habitat Characteristics	COBBLES: 80% SANDS: 10% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Obsection: Habitat Characteristics	COBBLES: 80% SANDS: 10% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Banks Aquatic Organisms Obsection: Habitat Characteristics	COBBLES: 80% SANDS: 10% Gravel Riffles



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AECOM 10 Orms Street, Suite 405 Providence, RI 02904





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Waterbody [
	FORD POND Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Transmission Line ☐ Other
Date: 7/9/2015 9:33:0	
Investigators: CM	Latitude/Longitude: 42.530817, -72.85562
State: MA	County: Franklin Quad Name: Ashfield
Logbook No.: 4M	Logbook Pg.: 104 Tract No.: 26881
	☐ Stream ☐ Pond ☑ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None
Flow Type: [☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W □ NW □ S ☑ No Flow
OHWM Width (ft.):	420.0
Sinuosity:	☐ Braided ☐ Meandering ☐ Straight ☑ N/A
Stream Width (ft.):	420.0 Water Surface (At Crossing Location)(ft.): 420.0
Stream Depth (in.):	60+
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE CLEAR NATURAL LINE ON BANK
Bank Height (ft.): (looking downstream)	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downloadam)	Right: 🗹 0-2 🔲 2-4 🔲 4-6 🔲 6-8 🔲 8+
Bank Slope (%): (looking downstream)	Left: 10 Right: 1
Qualitative Attributes	
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly T	Turbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:
Stream Substrate %:	MUCK: 100%
Aquatic Habitats:	
Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	✓ Deep Pools ✓ In-stream Submerged Plants
■ Mud Bar	☑ Bank Root Systems ☑ Fringing Wetlands¹
☐ Undercut Banks	S Overhanging Trees/Shrubs None
Aquatic Organisms Ol	bserved: FROGS, FISH (JUVENILE), WATERFOWL, SALAMANDER, FISH (ADULT), INVERTEBRATES, TURTLES, SNAKES, BEAVER
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☑ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☑ Other
Habitat Characteristics	s, Aquatic and Terrestrial Diversity Description:
Stream Quality:	☑ High ☐ Moderate ☐ Low
	MANMADE POND
Comments:	
Comments:	
Comments:	





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Waterbody Data Form	Feature ID: AS-M-S006
✓ Centerline ☐ Re-Route ☐ Access Roa	ad Ancillary Facility Transmission Line Other
Date: 7/13/2015 11:17:28 AM Client/Project	t Name: NED Milepost: 153259.6
Investigators: CM MN La	titude/Longitude: 42.533507, -72.83662
	anklin Quad Name: Ashfield
Logbook No.: 4M Logbook Pg.: 144	Tract No.: 344
Waterbody Type: Stream Pond	☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow: Fast Moder	ate 🗹 Slow 🔲 Very Slow 🔲 None
Flow Type: Perennial (Flows year round) Seasonal (Continuous flows)	
Direction of Flow: N NE E	SE SW W NW S No Flow
OHWM Width (ft.): 3.0	
Sinuosity: ☐ Braided ☐ Meand	lering
· <u> </u>	urface (At Crossing Location)(ft.): 2.0
Stream Depth (in.): 1-3	unidoo (rit oroosing Eucation)(it.).
OHWM Indicators: CLEAR NATURAL LINE LEAF LITTER DISTURE	
	2-4
(looking downstream) Right: 🗹 0-2	
Bank Slope (%): (looking downstream) Right: 45	
Qualitative Attributes	
Water Appearance: ✓ Clear	Turbid Sheen on Surface Floating Algal Mats No Flow
Slightly Turbid Very Turbid	☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:
Stream Substrate %: GRAVEL: COBBLES: SANDS:	
Aquatic Habitats:	
☐ Sand Bar ☐ Gravel Riffles	☐ In-stream Emergent Plants
☐ Gravel Bar ☐ Deep Pools	☐ In-stream Submerged Plants
☐ Mud Bar ☐ Bank Root System	s ☑ Fringing Wetlands¹
✓ Undercut Banks ✓ Overhanging Trees	Shrubs None
Aquatic Organisms Observed: INVERTE	BRATES, SALAMANDER
Channel Condition: Channelization/B	raiding Unnatural Straightening Downcutting
☐ Dikes/Berms	☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characteristics, Aquatic and Terrestrial Di	versity Description:
Stream Quality: High Moderat	e ☑ Low
Comments:	





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	/ Data Form Feature ID: AS-M-S007
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/13/2015 1:0	:08:57 PM Client/Project Name: NED Milepost: 153676.2
Investigators: CM	M MN Latitude/Longitude: 42.533928, -72.83516
State: MA	County: Franklin Quad Name: Ashfield
Logbook No.: 5M	M Logbook Pg.: 10 Tract No.: 344
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W □ NW ☑ S □ No Flow
OHWM Width (ft.):	5.0 — Braided — Meandaring — A Straight — — N/A
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	15.0 Water Surface (At Crossing Location)(ft.): 2.0
Stream Depth (in.):	
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE CLEAR NATURAL LINE ON BANK
Bank Height (ft.): (looking downstream)	Left: 🔽 0-2 🔲 2-4 🔲 4-6 🗍 6-8 🗍 8+
(looking downstream)	Nigrit. 🗹 0-2 📋 2-4 📋 4-0 📋 0-0 📋 0+
Bank Slope (%): (looking downstream)	Left: 5 Right: 5
Qualitative Attributes	es
Water Appearance:	: 🔽 Clear 🔲 Turbid 🔲 Sheen on Surface 🔲 Floating Algal Mats 🔲 No Flow
☐ Slightly	tly Turbid
Stream Substrate %:	6: MUCK: 100%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
Gravel Bar Mud Bar	□ Deep Pools □ In-stream Submerged Plants □ Bank Root Systems □ Fringing Wetlands¹
_	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Mud Bar	Bank Root Systems
☐ Mud Bar ☑ Undercut Ban	Bank Root Systems Fringing Wetlands¹ Overhanging Trees/Shrubs None S Observed: INVERTEBRATES, SALAMANDER, FISH (ADULT), FISH (JUVENILE), FROGS, BEAVER
☐ Mud Bar ☑ Undercut Ban Aquatic Organisms	Bank Root Systems Fringing Wetlands¹ Overhanging Trees/Shrubs None S Observed: INVERTEBRATES, SALAMANDER, FISH (ADULT), FISH (JUVENILE), FROGS, BEAVER
Mud Bar ✓ Undercut Ban Aquatic Organisms (Channel Condition:	Bank Root Systems Fringing Wetlands¹ Overhanging Trees/Shrubs None S Observed: INVERTEBRATES, SALAMANDER, FISH (ADULT), FISH (JUVENILE), FROGS, BEAVER Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A Other
Mud Bar ✓ Undercut Ban Aquatic Organisms (Channel Condition:	Bank Root Systems Fringing Wetlands¹ Overhanging Trees/Shrubs None Sobserved: INVERTEBRATES, SALAMANDER, FISH (ADULT), FISH (JUVENILE), FROGS, BEAVER Channelization/Braiding Downcutting
Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characteristi	Bank Root Systems
Mud Bar ✓ Undercut Ban Aquatic Organisms (Channel Condition:	Bank Root Systems
Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characteristi	Bank Root Systems
Mud Bar Undercut Ban Aquatic Organisms (Channel Condition: Habitat Characteristi Stream Quality:	Bank Root Systems
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Mud Bar Undercut Ban Aquatic Organisms (Channel Condition: Habitat Characteristi Stream Quality:	Bank Root Systems





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Centerline	Waterbody Da	ta Form Feature ID: AS-M-S008
Investigators:	✓ Centerline ☐ Re-I	Route Access Road Ancillary Facility Transmission Line Other
State: MA	Date: 7/14/2015 10:08:09	O AM Client/Project Name: NED Milepost: 154226.2
Stream County:	Investigators: CM MN	Latitude/Longitude: 42.534025, -72.83311
Materbody Type: Stream		
Stream Flow:	Logbook No.: 5M	
Perennial (Flows year round)	Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Seasonal (Continuous flow > 3 months)	Stream Flow:	Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Direction of Flow:	_	
Sinusity		
Stream Width (ft.): 12.0 Water Surface (At Crossing Location)(ft.): 4.0		
Stream Width (ft.): 12.0		
Stream Depth (in.):		
ABRUPT PLANT COMMUNITY CHANGE LEAF LUTTER DISTURBED LEAF LUTTER DISTURBE		, , , , , , , , , , , , , , , , , , ,
Bank Height (ft.): (looking downstream)	· ` ` ´	ABRUPT PLANT COMMUNITY CHANGE
Right: 0 -2 2 -4 4 -6 6 -8 8 +		
Right:		
Clocking downstream Right: 10 Right: 10 Right: 1	(teeting demieneding	
Water Appearance:		
Stream Substrate %: SILTS: SANDS: SA	Qualitative Attributes	
Stream Substrate %: SILTS: 25% SANDS: 25% COBBLES: 10% GRAVEL: 40% Aquatic Habitats: Sand Bar Gravel Riffles In-stream Emergent Plants In-stream Submerged Plants In-stream Submerge	Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
SANDS: 25% COBBLES: 10% GRAVEL: 40% Aquatic Habitats: Sand Bar Gravel Riffles In-stream Emergent Plants In-stream Submerged Pla	☐ Slightly Turb	id
Gravel Bar	Stream Substrate %:	SANDS: 25% COBBLES: 10%
Gravel Bar Deep Pools In-stream Submerged Plants Mud Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: INVERTEBRATES, SALAMANDER, FROGS Channel Condition: Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description:	Aquatic Habitats:	
Mud Bar ✓ Bank Root Systems ✓ Fringing Wetlands¹ ✓ Undercut Banks ✓ Overhanging Trees/Shrubs None Aquatic Organisms Observed: INVERTEBRATES, SALAMANDER, FROGS Channel Condition: ✓ Channelization/Braiding Unnatural Straightening Downcutting ✓ Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Low	☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
Mud Bar ✓ Bank Root Systems ✓ Fringing Wetlands¹ ✓ Undercut Banks ✓ Overhanging Trees/Shrubs None Aquatic Organisms Observed: INVERTEBRATES, SALAMANDER, FROGS Channel Condition: ✓ Channelization/Braiding Unnatural Straightening Downcutting ✓ Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Low		_ ` ` `
Aquatic Organisms Observed: INVERTEBRATES, SALAMANDER, FROGS Channel Condition: Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Low	_	- · · · · · · · · · · · · · · · · · · ·
Channel Condition: Channel ization/Braiding		
Dikes/Berms	Aquatic Organisms Obse	rved: INVERTEBRATES, SALAMANDER, FROGS
Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality:	Channel Condition:	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
Stream Quality:		☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Comments.	_	





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Waterbody Da	ata Form Feature ID: AS-M-S009B SMITH BROOK
✓ Centerline ☐ Re	Route Access Road Ancillary Facility Transmission Line Other
Date: 7/15/2015 3:26:58	PM Client/Project Name: NED Milepost: 155992.4
Investigators: CM SB	MN Latitude/Longitude: 42.535252, -72.82675
State: MA	County: Franklin Quad Name: Ashfield
Logbook No.: 5M	Logbook Pg.: 28 Tract No.: 358
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch V Other: IMPOUNDED BEAVER POND WITH ENGINEERING CONTROLS
Stream Flow:	Fast Moderate Slow Very Slow Mone
Flow Type:	Perennial (Flows year round)
	Seasonal (Continuous flow >3 months)
Direction of Flow:	☑ N □ NE □ E □ SE □ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	60.0
Sinuosity:	Braided ☐ Meandering ☐ Straight ☑ N/A
	75.0 Water Surface (At Crossing Location)(ft.): 60.0
Stream Depth (in.):	60+
OHWM Indicators:	CLEAR NATURAL LINE ON BANK ABRUPT PLANT COMMUNITY CHANGE
Bank Height (ft.): (looking downstream)	Left: □ 0-2 □ 2-4 ☑ 4-6 □ 6-8 □ 8+ Right: □ 0-2 □ 2-4 ☑ 4-6 □ 6-8 □ 8+
Bank Slope (%): (looking downstream)	Left: 15 Right: 25
Qualitative Attributes	
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly Tur	bid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:
Stream Substrate %:	COBBLES: 15% GRAVEL: 60% SILTS: 25%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	✓ Deep Pools ✓ In-stream Submerged Plants
	☑ Bank Root Systems ☑ Fringing Wetlands¹
☐ Undercut Banks	☐ Overhanging Trees/Shrubs ☐ None
Aquatic Organisms Obse	erved: INVERTEBRATES, FISH (ADULT), TURTLES, FROGS, BEAVER, SNAKES, SALAMANDER, WATERFOWL, FISH (JUVENILE)
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☑ Other
Habitat Characteristics	Aquatic and Terrestrial Diversity Description:
BEAVER DAM IMPOUND	ED STREAM WITH ACTIVE ENGINEERING CONTROLS IN PLACE. POND FLOWS OUT THROUGH A CULVERT IN A BEAVER CAGED DRAIN IN THE POND. SHORELINE FLAGGED BASED ON OBSERVED INUNDATION & PRESENCE OF SUBMERGED



Comments: STREAM FLOWS INTO ASHFIELD RESERVOIR (PUBLIC DRINKING WATER SUPPLY FOR TOWN OF ASHFIELD)



SOUTH



EAST

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NORTH EAST

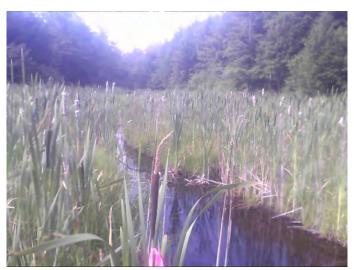


	Data Form Feature ID: AS-M-S009A
	Smith Brook Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Transmission Line ☐ Other
Date: 7/15/2015 3:5	
Investigators: CM	
State: MA Logbook No.: 5M	County: Franklin Quad Name: Ashfield Logbook Pg.: 26 Tract No.: 358
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	☑ N ☐ NE ☐ E ☐ SE ☐ SW ☐ W ☐ NW ☐ S ☐ No Flow
OHWM Width (ft.):	7.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	8.0 Water Surface (At Crossing Location)(ft.): 7.0
Stream Depth (in.):	48-60
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE SHELVING
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
Bank Slope (%): (looking downstream)	Left: 1 Right: 1
Qualitative Attribute	·
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	
Stream Substrate %:	
Aquatic Habitats:	
Aquatic Habitats:	☐ Gravel Riffles ☑ In-stream Emergent Plants
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants
Sand Bar Gravel Bar	✓ Deep Pools ✓ In-stream Submerged Plants
Sand Bar Gravel Bar Mud Bar	✓ Deep Pools ✓ In-stream Submerged Plants ☐ Bank Root Systems ✓ Fringing Wetlands¹
Sand Bar Gravel Bar	Deep Pools In-stream Submerged Plants Bank Root Systems Fringing Wetlands¹ None
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms (Channel Condition:	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms (Channel Condition:	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms (Channel Condition:	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms (Channel Condition: Habitat Characteristi	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms of Channel Condition: Habitat Characteristics Stream Quality:	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms of Channel Condition: Habitat Characteristic	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms of Channel Condition: Habitat Characteristic	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms of Channel Condition: Habitat Characteristic	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms of Channel Condition: Habitat Characteristic	Deep Pools
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms of Channel Condition: Habitat Characteristic	Deep Pools





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Waterbody	Data Form Feature ID: AS-M-S010
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/21/2015 2:5	i9:16 PM Client/Project Name: NED Milepost: 157800.7
Investigators: CM	
State: MA	County: Franklin Quad Name: Ashfield
Logbook No.: 5M	•
Waterbody Type:	Stream Pond Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	N NE E SE SW W NW S No Flow
OHWM Width (ft.):	2.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	4.0 Water Surface (At Crossing Location)(ft.): 0.5
Stream Depth (in.):	1-3
OHWM Indicators:	LEAF LITTER DISTURBED LITTER AND DEBRIS SCOUR SEDIMENT DEPOSITION
Bank Height (ft.): (looking downstream)	Left: ✓ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+ Right: □ 0-2 ✓ 2-4 □ 4-6 □ 6-8 □ 8+
Bank Slope (%): (looking downstream)	Left: 5 Right: 15
Qualitative Attribute	S
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	Turbid Uery Turbid Greenish Color Obvious Surface Scum Other:
Stream Substrate %	COBBLES: 10% SANDS: 70% GRAVEL: 10% SILTS: 10%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
■ Mud Bar	☐ Bank Root Systems ☑ Fringing Wetlands¹
☐ Undercut Ban	ks 🗹 Overhanging Trees/Shrubs 🔲 None
Aquatic Organisms	Observed: FROGS
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characterist	ics, Aquatic and Terrestrial Diversity Description:



Stream Quality:	☐ High	✓ Low
Comments:		



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Waterbody D	Oata Form Feature ID: AS-M-S011
	Re-Route
<u> </u>	
Investigators: CM State: MA	Latitude/Longitude: 42.538876, -72.78390 County: Franklin Quad Name: Ashfield
Logbook No.: 5M	Logbook Pg.: 120 Tract No.: 11973
LOGDOOK IVO OW	Logbook Fg 120 Hack No 11975
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	Fast Moderate Slow Very Slow None
Flow Type:	Perennial (Flows year round) Intermittent (Flows <3 months) None
	Seasonal (Continuous flow >3 months)
Direction of Flow:	N NE E SE SW W NW S No Flow
OHWM Width (ft.):	2.5
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	4.0 Water Surface (At Crossing Location)(ft.): 1.5
Stream Depth (in.):	3-6
OHWM Indicators:	SCOUR BENT, MATTED OR MISSING VEGETATION ABRUPT PLANT COMMUNITY CHANGE
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: 0-2 2-4 4-6 6-8 8+
Bank Slope (%):	Left: 50
(looking downstream)	Right: 40
Qualitative Attributes	
Water Appearance:	✓ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly T	urbid
Stream Substrate %:	SANDS: 50% SILTS: 30% COBBLES: 20%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☑ Deep Pools ☐ In-stream Submerged Plants
	☑ Bank Root Systems ☑ Fringing Wetlands¹
☐ Undercut Banks	☐ Overhanging Trees/Shrubs ☐ None
Agustia Organisms Ot	
Aquatic Organisms Ob	
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☑ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristics	s, Aquatic and Terrestrial Diversity Description:
Stream Quality:	☐ High ☐ Moderate ☑ Low
Comments:	





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Waterbody	Data Form Feature ID: CN-M-S005
✓ Centerline	Re-Route
Date: 7/27/2015 11	:31:55 AM Client/Project Name: NED Milepost: 22127.6
Investigators: CM	Latitude/Longitude: 42.549960, -72.68747
State: MA	County: Franklin Quad Name: Shelburne Falls
Logbook No.: 6M	Logbook Pg.: 12 Tract No.: 26954
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
Direction of Flow:	
OHWM Width (ft.):	3.5
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	5.0 Water Surface (At Crossing Location)(ft.): 3.0
Stream Depth (in.):	3-6
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE LEAF LITTER DISTURBED BENT, MATTED OR MISSING VEGETATION
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: 🗹 0-2 🔲 2-4 🔲 4-6 🔲 6-8 🔲 8+
Bank Slope (%): (looking downstream)	Left: 20 Right: 10
Qualitative Attribute	S
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	
Stream Substrate %:	
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
Mud Bar	☐ Bank Root Systems ☑ Fringing Wetlands¹
☐ Undercut Ban	ks
Aquatic Organisms	Observed: INVERTEBRATES
Channel Condition:	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characterist	ics, Aquatic and Terrestrial Diversity Description:
Stream Quality: Comments:	☐ High ☑ Moderate ☐ Low



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Waterbody	Data Form Feature ID: CN-M-S003
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/26/2015 11:	05:28 AM Client/Project Name: NED Milepost: 24285.7
Investigators: CM	Latitude/Longitude: 42.552298, -72.68012
State: MA	County: Franklin Quad Name: Shelburne Falls
Logbook No.: 5M	Logbook Pg.: 140 Tract No.: 26954
Waterbody Type:	Stream Pond Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None
Flow Type:	☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E ☑ SE □ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	7.0 Water Surface (At Crossing Location)(ft.): 0.0
Stream Depth (in.):	0
OHWM Indicators:	SEDIMENT SORTING SCOUR BENT, MATTED OR MISSING VEGETATION LITTER AND DEBRIS
Bank Height (ft.): (looking downstream)	Left: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+ Right: ☑ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+
Bank Slope (%): (looking downstream)	Left: 5 Right: 25
Qualitative Attributes	
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☑ No Flow
☐ Slightly	Turbid
Stream Substrate %:	GRAVEL: 10% SANDS: 20% COBBLES: 60% SILTS: 10%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
■ Mud Bar	☐ Bank Root Systems ☑ Fringing Wetlands¹
☐ Undercut Ban	S Overhanging Trees/Shrubs None
Aquatic Organisms (Observed: NONE
Channel Condition:	☑ Channelization/Braiding ☑ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristi	cs, Aquatic and Terrestrial Diversity Description:



Stream Quality:	☐ High	✓ Low
Comments:		

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Waterbody	Data Form Feature ID: CN-M-S004
✓ Centerline	Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Transmission Line ☐ Other
Date: 7/26/2015 1	1:25:02 AM Client/Project Name: NED Milepost: 24339.0
Investigators: CN	M Latitude/Longitude: 42.552153, -72.67982
State: MA	County: Franklin Quad Name: Shelburne Falls
Logbook No.: 5N	M Logbook Pg.: 142 Tract No.: 26954
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	✓ Fast
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
Direction of Flow:	□ N ☑ NE □ E □ SE □ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	10.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	13.5 Water Surface (At Crossing Location)(ft.): 2.5
Stream Depth (in.):	
OHWM Indicators:	WRACK LINE SEDIMENT SORTING SCOUR BENT, MATTED OR MISSING VEGETATION
Bank Height (ft.): (looking downstream	Left:
Bank Slope (%): (looking downstream	Left: 30 Right: 55
0 - 111-11 - 111-11	
Qualitative Attribute	
Water Appearance: Slight	
Stream Substrate %	
Stream Substrate /	GRAVEL: 25% SILTS: 25% SANDS: 25%
Aquatic Habitats:	
✓ Sand Bar	✓ Gravel Riffles
П ОID	
Gravel Bar	✓ Deep Pools
☐ Gravel Bar ☐ Mud Bar	 ✓ Deep Pools ✓ Bank Root Systems ✓ Fringing Wetlands¹
_	✓ Bank Root Systems ✓ Fringing Wetlands¹
☐ Mud Bar	Bank Root Systems
☐ Mud Bar ☑ Undercut Bar	Bank Root Systems Fringing Wetlands¹ nks Overhanging Trees/Shrubs None S Observed: INVERTEBRATES, FISH (ADULT), FROGS
☐ Mud Bar ☑ Undercut Bar Aquatic Organisms	Bank Root Systems Fringing Wetlands¹ nks Overhanging Trees/Shrubs None S Observed: INVERTEBRATES, FISH (ADULT), FROGS



Stream Quality: High Moderate Low

Comments:

Photos



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Waterbody D	Data Form Feature ID: MO-M-S002
☑ Centerline ☐ R	Re-Route
Date: 7/30/2015 12:46	S:53 PM Client/Project Name: NED Milepost: 83123.0
Investigators: CM	Latitude/Longitude: 42.575754, -72.48650
State: MA	County: Franklin Quad Name: Millers Falls
Logbook No.: 6M	Logbook Pg.: 38 Tract No.: 866
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None
Flow Type:	Perennial (Flows year round) ☑ Intermittent (Flows <3 months) ☐ None
	Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)
Direction of Flow:	☑ N ☐ NE ☐ E ☐ SE ☐ SW ☐ W ☐ NW ☐ S ☐ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	6.0 Water Surface (At Crossing Location)(ft.): 0.0
Stream Depth (in.):	0
OHWM Indicators:	WRACK LINE LEAF LITTER DISTURBED SEDIMENT SORTING SCOUR
Bank Height (ft.): (looking downstream)	Left: □ 0-2 □ 2-4 ☑ 4-6 □ 6-8 □ 8+ Right: □ 0-2 □ 2-4 ☑ 4-6 □ 6-8 □ 8+
Bank Slope (%): (looking downstream)	Left: 45 Right: 45
Qualitative Attributes	
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☑ No Flow
☐ Slightly To	urbid
Stream Substrate %:	SANDS: 10% GRAVEL: 10% COBBLES: 80%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	✓ Overhanging Trees/Shrubs
	served: NONE
Aquatic Organisms Ob	
	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	✓ Channelization/Braiding☐ Unnatural Straightening☐ Dikes/Berms✓ Excessive Bank Erosion☐ N/A☐ Other





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water body b	Data Form Feature ID: MO-M-S002A	
☑ Centerline ☐ R	Re-Route	
Date: 7/30/2015 12:41	1:59 PM Client/Project Name: NED Milepost: 83148.8	
Investigators: CM	Latitude/Longitude: 42.575662, -72.48624	
State: MA	County: Franklin Quad Name: Millers Falls	
Logbook No.: 6M	Logbook Pg.: 40 Tract No.: 866	
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:	
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None	
Flow Type:	Perennial (Flows year round) Intermittent (Flows <3 months) None	
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)	
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W ☑ NW □ S □ No Flow	
OHWM Width (ft.):	3.0	
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A	
Stream Width (ft.):	5.0 Water Surface (At Crossing Location)(ft.): 0.0	
Stream Depth (in.):	0	
OHWM Indicators:	SEDIMENT SORTING CLEAR NATURAL LINE ON BANK SCOUR	
Bank Height (ft.):	Left: ☐ 0-2 ☑ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+	
(looking downstream)	Right: 0-2 2-4 2 4-6 6-8 8+	
Bank Slope (%):	Left: 30	
(looking downstream)	Right: 45	
Qualitative Attributes		
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☑ No Flow	
☐ Slightly Tu	Turbid	
Stream Substrate %:	COBBLES: 60% GRAVEL: 10% SANDS: 30%	
Aquatic Habitats:		
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants	
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants	
☐ Mud Bar	☐ Bank Root Systems ☐ Fringing Wetlands¹	
✓ Undercut Banks	-	
Aquatic Organisms Ob	oserved: SNAKES, FROGS	
Channel Condition:	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting	
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other	
Habitat Characteristics	s, Aquatic and Terrestrial Diversity Description:	
Stream Quality:	☐ High ☐ Moderate ☑ Low	
Comments:		
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Waterbody	Data Form Feature ID: ER-M-S001 MILLERS RIVER
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 5/19/2015 12:0	08:28 AM Client/Project Name: NED Milepost: 84982.2
Investigators: CM	SH Latitude/Longitude: 42.579237, -72.48145
State: MA	County: Franklin Quad Name: Millers Falls
Logbook No.: 2	Logbook Pg.: 44 Tract No.: 9154
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	Fast Moderate Slow Very Slow None
Flow Type:	Perennial (Flows year round)
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE □ SW ☑ W □ NW □ S □ No Flow
OHWM Width (ft.):	140.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	142.0 Water Surface (At Crossing Location)(ft.): 130.0
Stream Depth (in.):	18-24
OHWM Indicators:	BENT, MATTED OR MISSING VEGETATION WRACK LINE SCOUR
Bank Height (ft.):	Left: □ 0-2 □ 2-4 ☑ 4-6 □ 6-8 □ 8+
(looking downstream)	Right: 0-2 2-4 2 4-6 6-8 8+
Bank Slope (%):	Left: 55
(looking downstream)	Right: 55
Qualitative Attributes	
Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
Slightly	
Stream Substrate %:	COBBLES: 100%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	✓ Deep Pools
■ Mud Bar	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Bank	s 🗹 Overhanging Trees/Shrubs 🔲 None
Aquatic Organisms O	Dbserved: INVERTEBRATES, FISH (ADULT)
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☑ Other
Habitat Characteristic	cs, Aquatic and Terrestrial Diversity Description:
TROUT HABITAT	
Stream Quality:	
Comments:	



UPSTREAM - E



BTOB-S



DOWNSTREAM - W





Waterbody Da	ata Form Feature ID: ER-M-S002
✓ Centerline ☐ Re	Route Access Road Ancillary Facility Transmission Line Other
Date: 7/31/2015 12:34:4	0 PM
Investigators: CM MN	Latitude/Longitude: 42.582601, -72.47675
State: MA	County: Franklin Quad Name: Millers Falls
Logbook No.: 6M	Logbook Pg.: 48 Tract No.: 8453
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None
Flow Type:	Perennial (Flows year round) Intermittent (Flows <3 months) None Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)
	□ N □ NE □ E □ SE □ SW □ W □ NW ☑ S □ No Flow
OHWM Width (ft.):	3.0
Sinuosity:	Braided ☐ Meandering ☐ Straight ☐ N/A
	5.0 Water Surface (At Crossing Location)(ft.): 0.0
Stream Depth (in.):	0 water Surface (At Crossing Location)(it.).
OHWM Indicators:	SEDIMENT DEPOSITION WRACK LINE LEAF LITTER DISTURBED SCOUR
Bank Height (ft.): (looking downstream)	Left: ✓ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+ Right: ✓ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+
Bank Slope (%): (looking downstream)	Left: 10 Right: 20
Qualitative Attributes	
Water Appearance: Slightly Tur	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☑ No Flow Did ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:
Stream Substrate %:	COBBLES: 70% SANDS: 10% GRAVEL: 20%
Aquatic Habitats:	
Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
☐ Mud Bar	☑ Bank Root Systems ☑ Fringing Wetlands¹
✓ Undercut Banks	✓ Overhanging Trees/Shrubs
Aquatic Organisms Obse	erved: NONE
Channel Condition:	✓ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristics,	Aquatic and Terrestrial Diversity Description:
_	☐ High ☐ Moderate ☑ Low HEMERAL SECTION OF STREAM LOCATED UPSTREAM OF PLOT POINT





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Waterbody I	Data Form Feature ID: NO-L-S002
☐ Centerline ☐	Re-Route ☐ Access Road ☑ Ancillary Facility ☐ Transmission Line ☐ Other
Date: 5/28/2015 2:44	4:35 PM Client/Project Name: NED Milepost: 125310.8
Investigators: BH A	AK Latitude/Longitude: 42.664918, -72.41900
State: MA	County: Franklin Quad Name: Northfield
Logbook No.: 2	Logbook Pg.: 128 Tract No.: 21115
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None
!	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	5.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	6.0 Water Surface (At Crossing Location)(ft.): 2.0
Stream Depth (in.):	1-3
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE
Bank Height (ft.): (looking downstream)	Left: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+
(looking downstream)	Right: 🗹 0-2 🔲 2-4 🔲 4-6 🔲 6-8 🔲 8+
Bank Slope (%): (looking downstream)	Left: 30 Right: 2
Qualitative Attributes	
Water Appearance:	✓ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	Turbid
Stream Substrate %:	MUCK: 100%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
☐ Mud Bar	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	s 🗹 Overhanging Trees/Shrubs 🔲 None
Aquatic Organisms O	bserved: FROGS, SALAMANDER, INVERTEBRATES
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characteristic	cs, Aquatic and Terrestrial Diversity Description:
Stream Quality:	☐ High ☐ Moderate ☐ Low
_	
Comments:	





NW DOWNSTREAM



NE BANK TO BANK



SE UPSTREAM

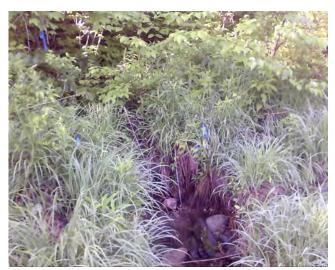




Waterbody Da	ta Form Feature ID: NO-G-S002
☐ Centerline ☐ Re-I	Route ☐ Access Road ☑ Ancillary Facility ☐ Transmission Line ☐ Other
Date: 5/29/2015 8:23:07	AM Client/Project Name: NED Milepost: 125876.7
Investigators: NF CM	Latitude/Longitude: 42.666358, -72.41815
State: MA	County: Franklin Quad Name: Northfield
Logbook No.: 2015-3	Logbook Pg.: 108 Tract No.: 21115
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	Fast Moderate Slow Very Slow None
Flow Type:	Perennial (Flows year round)
	Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)
Direction of Flow:	N NE DE DSE DSW DW MONW DS No Flow
OHWM Width (ft.):	3.0
Sinuosity:	Braided Meandering Straight N/A
Stream Width (ft.): 3	Water Surface (At Crossing Location)(ft.): 2.0
Stream Depth (in.):	
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE
Bank Height (ft.): (looking downstream)	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: 0-2 2-4 4-6 6-8 8+
Bank Slope (%): (looking downstream)	Left: 20
Qualitative Attributes	
Water Appearance:	☐ Clear ☑ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
✓ Slightly Turb	oid
Stream Substrate %:	GRAVEL: 30% COBBLES: 40% SANDS: 30%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	✓ Overhanging Trees/Shrubs □ None
Aquatic Organisms Obse	erved: SALAMANDER, INVERTEBRATES, FROGS
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☑ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristics, A	Aquatic and Terrestrial Diversity Description:
Stream Quality:] High ☑ Moderate ☐ Low
Comments:	



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	Data Form Feature ID: DR-E-S006
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/9/2015 12:3	39:58 PM Client/Project Name: NED Milepost: 8971.6
Investigators: SE	JW Latitude/Longitude: 42.686509, -71.26548
State: MA	County: Middlesex Quad Name: Lowell
Logbook No.: 20°	15-1 Logbook Pg.: 74 Tract No.: 5357
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W ☑ NW □ S □ No Flow
OHWM Width (ft.):	5.0
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	6.0 Water Surface (At Crossing Location)(ft.): 4.0
Stream Depth (in.):	3-6
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE SOIL CHARACTER CHANGES WRESTED VEGETATION
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: 0-2 7 2-4 4-6 6-8 8+
Bank Slope (%): (looking downstream)	Left: 30 Right: 45
Qualitative Attribute	S
Water Appearance:	✓ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	r Turbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:
Stream Substrate %	MUOV. CODY
	: MUCK: 60% COBBLES: 40%
Aquatic Habitats:	
Aquatic Habitats:	
	COBBLES: 40%
☐ Sand Bar	COBBLES: 40% ☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Sand Bar☐ Gravel Bar	COBBLES: 40% ☐ Gravel Riffles ☑ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants ☐ Bank Root Systems ☑ Fringing Wetlands¹
Sand Bar Gravel Bar Mud Bar	COBBLES: 40% Gravel Riffles In-stream Emergent Plants Deep Pools In-stream Submerged Plants Bank Root Systems Fringing Wetlands¹ None
Sand Bar Gravel Bar Mud Bar Undercut Ban	COBBLES: 40% Gravel Riffles In-stream Emergent Plants Deep Pools In-stream Submerged Plants Bank Root Systems Fringing Wetlands¹ None
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms	COBBLES: 40% Gravel Riffles Deep Pools In-stream Emergent Plants In-stream Submerged Plants Bank Root Systems Fringing Wetlands¹ None Observed: FROGS
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition:	COBBLES: 40% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist	COBBLES: 40% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	COBBLES: 40% Gravel Riffles Deep Pools In-stream Emergent Plants In-stream Submerged Plants Bank Root Systems Fringing Wetlands¹ None Observed: FROGS Channelization/Braiding Dikes/Berms Excessive Bank Erosion N/A Other
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist	COBBLES: 40% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	COBBLES: 40% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	COBBLES: 40% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	COBBLES: 40% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	COBBLES: 40% Gravel Riffles
Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	COBBLES: 40% Gravel Riffles



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Date: 7/9/2015 12:16: Investigators: SE JW State: MA Logbook No.: 2015- Waterbody Type: Stream Flow:	N Latitude/Longitude: 42.686434, -71.26549 County: Middlesex Quad Name: Lowell
Investigators: SE JW State: MA Logbook No.: 2015- Waterbody Type: Stream Flow:	N Latitude/Longitude: 42.686434, -71.26549 County: Middlesex Quad Name: Lowell
State: MA Logbook No.: 2015- Waterbody Type: Stream Flow:	County: Middlesex Quad Name: Lowell
State: MA Logbook No.: 2015- Waterbody Type: 5 Stream Flow: 5	
Waterbody Type: Stream Flow:	1 Leghani Day 74 Treat No. 5257
Stream Flow:	-1 Logbook Pg.: 74 Tract No.: 5357
	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Flow Type:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
Direction of Flow:	N
OHWM Width (ft.):	3.0
	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	4.0 Water Surface (At Crossing Location)(ft.): 2.0
Stream Depth (in.):	3-6
OHWM Indicators:	WRESTED VEGETATION ABRUPT PLANT COMMUNITY CHANGE SOIL CHARACTER CHANGES
Bank Height (ft.): (looking downstream)	Left: ✓ 0-2 2-4 4-6 6-8 8+ Right: ✓ 0-2 2-4 4-6 6-8 8+
Bank Slope (%): (looking downstream)	Left: 90 Right: 60
Qualitative Attributes	
Water Appearance: Slightly To	✓ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow Turbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:
Stream Substrate %:	MUCK: 60% COBBLES: 40%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
Mud Bar	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	
Aquatic Organisms Ob	pserved: FROGS
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
	s, Aquatic and Terrestrial Diversity Description:
Stream Quality: Comments:	☐ High ☑ Moderate ☐ Low



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Centerline	Waterbody Da	ta Form Feature ID: AN-K-S001A
	✓ Centerline ☐ Re-	Route
State: MA	Date: 7/29/2015 9:22:08	AM Client/Project Name: NED Milepost: 22645.9
State MA	Investigators: CG JW	Latitude/Longitude: 42.645147, -71.22807
Materbody Type: Stream	State: MA	
Stream Flow:	Logbook No.: 2015-1	Logbook Pg.: 34 Tract No.: 9040
Perennial (Flows year round)	Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Seasonal (Continuous flow >3 months)	Stream Flow:	Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None
Direction of Flow:		
OHWM Width (ht.): 2.5	Direction of Flow:	· · · · · · · · · · · · · · · · · · ·
Sinuosity:		
Stream Width (ft.):		
Stream Depth (in.):		
OHWM Indicators: BENT, MATTED OR MISSING VEGETATION SOIL CHARACTER CHANGES Bank Height (ft.): (looking downstream) Left: 0-2 2-4 4-6 6-8 8+	. ,	
Right: 0-2 2-4 4-6 6-8 8+		BENT, MATTED OR MISSING VEGETATION
Right:	Bank Height (ft.):	Left: 🗹 0-2 🔲 2-4 🔲 4-6 🔲 6-8 🔲 8+
Right: 20 Righ	(looking downstream)	Right: 🗹 0-2 🔲 2-4 🔲 4-6 🔲 6-8 🔲 8+
Water Appearance:		
Stream Substrate %: SILTS: COBBLES: 10% SANDS: 60% GRAVEL: 10% Aquatic Habitats: Sand Bar Gravel Riffles In-stream Emergent Plants Gravel Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: NONE Channel Condition: Dikes/Berms Description: Stream Quality: High Moderate Low	Qualitative Attributes	
Stream Substrate %: SILTS: COBBLES: 10% SANDS: 60% GRAVEL: 10% Aquatic Habitats: Sand Bar Gravel Riffles In-stream Emergent Plants Gravel Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: NONE Channel Condition: Dikes/Berms Description: Stream Quality: High Moderate Low	Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☑ No Flow
COBBLES: 10% SANDS: 60% GRAVEL: 10% Aquatic Habitats: Sand Bar Gravel Riffles In-stream Emergent Plants Gravel Bar Deep Pools In-stream Submerged Plants Mud Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: NONE Channel Condition: Channelization/Braiding Moderate Excessive Bank Erosion N/A Other Bank Root Systems Fringing Wetlands¹ None Aquatic Organisms Observed: NONE Channel Condition: Shear Serms Excessive Bank Erosion N/A Other Babitat Characteristics, Aquatic and Terrestrial Diversity Description:	☐ Slightly Tur	oid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:
Sand Bar	Stream Substrate %:	COBBLES: 10% SANDS: 60%
Gravel Bar Deep Pools In-stream Submerged Plants Mud Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: NONE Channel Condition: Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description:	Aquatic Habitats:	
Mud Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: NONE Channel Condition: Channelization/Braiding Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Low	☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Undercut Banks ☑ Overhanging Trees/Shrubs ☐ None Aquatic Organisms Observed: NONE Channel Condition: ☐ Channelization/Braiding ☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: ☐ High ☐ Moderate ☑ Low	☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
Aquatic Organisms Observed: NONE Channel Condition: Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Downcutting Excessive Bank Erosion N/A Other	_	
Channel Condition: Channelization/Braiding Dikes/Berms Diversity Description:	☐ Undercut Banks	
Dikes/Berms	Aquatic Organisms Obse	erved: NONE
Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Low	Channel Condition:	☐ Channelization/Braiding ☑ Unnatural Straightening ☐ Downcutting
Stream Quality: High Moderate Low		☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Comments:	•	
	Comments:	





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Waterbody D	Data Form Feature ID: TK-K-S001
☑ Centerline ☐ F	Re-Route
Date: 7/30/2015 12:10	0:03 PM Client/Project Name: NED Milepost: 24628.7
Investigators: CG J	W Latitude/Longitude: 42.641415, -71.22327
State: MA	County: Essex Quad Name: Lawrence
Logbook No.: 2015-	.1 Logbook Pg.: 56 Tract No.: 4314
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow: [☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None
Flow Type:	Perennial (Flows year round) Intermittent (Flows <3 months) None
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE ☑ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	5.5 Water Surface (At Crossing Location)(ft.): 0.0
Stream Depth (in.):	0
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE BENT, MATTED OR MISSING VEGETATION
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: ☑ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+
Bank Slope (%):	Left: 10
(looking downstream)	Right: 10
Qualitative Attributes	
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☑ No Flow
Stream Substrate %:	urbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other: SANDS: 10%
otream oubstrate 76.	SILTS: 20% MUCK: 70%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	✓ Overhanging Trees/Shrubs □ None
Aquatic Organisms Ob	served: NONE
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characteristics	s, Aquatic and Terrestrial Diversity Description:
	☐ High ☑ Moderate ☐ Low
Stream Quality:	
Stream Quality: Comments:	
-	
-	
-	
-	





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Waterbody	Data Form Feature ID: TK-K-S002
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/31/2015 12	:23:54 PM Client/Project Name: NED Milepost: 30542.6
Investigators: CG	JW Latitude/Longitude: 42.632946, -71.20590
State: MA	County: Middlesex Quad Name: Lawrence
Logbook No.: 201	5-1 Logbook Pg.: 63 Tract No.: 7845
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE ☑ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	7.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	8.0 Water Surface (At Crossing Location)(ft.): 5.0
Stream Depth (in.):	1-3
OHWM Indicators:	BENT, MATTED OR MISSING VEGETATION SOIL CHARACTER CHANGES SEDIMENT DEPOSITION
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
Bank Slope (%):	Left: 70
(looking downstream)	Right: 60
Qualitative Attributes	
Water Appearance: ☐ Slightly	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow 'Turbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:
Stream Substrate %:	SANDS: 65% MUCK: 30% SILTS: 5%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
✓ Mud Bar	☐ Bank Root Systems ☐ Fringing Wetlands¹
✓ Undercut Ban	ks 🗹 Overhanging Trees/Shrubs 🔲 None
Aquatic Organisms	
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characteristi Stream Quality: Comments:	ics, Aquatic and Terrestrial Diversity Description: High Moderate Low
Comments:	





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EAST



Waterbody D	Data Form Feature ID: TK-K-S003
✓ Centerline ☐ F	te-Route
Date: 8/4/2015 10:46:	24 AM Client/Project Name: NED Milepost: 39640.5
Investigators: PF JV	
State: MA	County: Middlesex Quad Name: Wilmington
Logbook No.: 2015-	1 Logbook Pg.: 118 Tract No.: 7428
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow: [Fast Moderate Slow Very Slow Mone
Flow Type:	Perennial (Flows year round) ☑ Intermittent (Flows <3 months) ☐ None
[Seasonal (Continuous flow >3 months) □ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE ☑ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	3.0
Sinuosity: [☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	4.0 Water Surface (At Crossing Location)(ft.): 0.0
Stream Depth (in.):	0
OHWM Indicators:	SOIL CHARACTER CHANGES ABRUPT PLANT COMMUNITY CHANGE
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
Bank Slope (%): (looking downstream)	Left: 10 Right: 10
Qualitative Attributes	
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☑ No Flow
☐ Slightly T	urbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:
Stream Substrate %:	MUCK: 10% SANDS: 90%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
■ Mud Bar	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	✓ Overhanging Trees/Shrubs □ None
Aquatic Organisms Ob	served: NONE
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characteristics Stream Quality:	Aquatic and Terrestrial Diversity Description: ☐ High ☐ Moderate ☐ Low
Comments:	





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. Tatol body	Data Forn	n			F	eature ID: Th	K-K-S004A
☑ Centerline ☐	Re-Route	Access Road	☐ Ancillary F	acility 🔲 Tra	nsmission Line	Other	
Date: 8/5/2015 11:	6:11 AM	Client/Project Nam	ne: NED			Milepost:	40806.5
Investigators: CG	JW	Latitude	e/Longitude:	42.617533, -	71.17719	'	
State: MA	County:	Middlese	эх		Quad Name:	Wilmington	
Logbook No.: 20°	5-1 Logbook	Pg.: 89	Tract No.:	7800			
Waterbody Type:	✓ Stream	Pond	☐ Lake	☐ Borrow Pit	☐ Ag Ditch	Other:	
Stream Flow:	☐ Fast		☑ Slow	☐ Very Slow	☐ None		
Flow Type:	Perennial (F	lows year round)		☐ Intermittent (Flo	ows <3 months)	☐ Nor	ne
	☐ Seasonal (C	Continuous flow >3 r	months)	☐ Ephemeral (Flo	ws only in respor	se to rainfall)	
Direction of Flow:	□ N □	NE DE C	SE S	w 🗆 w 🗅	NW 🗹 S	☐ No Flow	ı
OHWM Width (ft.):	6.5						
Sinuosity:	□ Braided		✓ Straight	□ N/A			
Stream Width (ft.):	6.5	Water Surface	(At Crossing Lo	ocation)(ft.):	6.0		
Stream Depth (in.):	18-24						
OHWM Indicators:		ND DEBRIS TTED OR MISSING	S VEGETATION				
Bank Height (ft.):	Left:	0-2 🗹 2-4	4-6	6-8 🔲 8+			
(looking downstream)	Right:	0-2 🗹 2-4	4-6	6-8 🔲 8+			
Bank Slope (%):	Left: 70						
(looking downstream)	Diaht. 00						
· · ·	Right: 80						
Qualitative Attribute	G ✓ Clea	ar 🔲 Turb Very Turbid 🗀	_	heen on Surface	☐ Floating	Algal Mats	□ No Flow
Qualitative Attribute Water Appearance:	G ✓ Clea	Very Turbid	_			-	_
Qualitative Attribute Water Appearance: Slightly Stream Substrate %	G	Very Turbid	Greenish Colo			-	_
Qualitative Attribute Water Appearance: Slightly Stream Substrate %	Turbid	Very Turbid	Greenish Colo		us Surface Scum	-	_
Qualitative Attribute Water Appearance: Slightly Stream Substrate %	Turbid	Very Turbid	Greenish Colo	or 🔲 Obvio	us Surface Scum	-	_
Qualitative Attribute Water Appearance: Slightly Stream Substrate % Aquatic Habitats: Sand Bar	Turbid	Very Turbid	Greenish Colo	or Obvio	us Surface Scum	-	_
Qualitative Attribute Water Appearance: Slightly Stream Substrate %: Aquatic Habitats: Sand Bar Gravel Bar	Turbid	Very Turbid	Greenish Colo	In-stream Emergent	us Surface Scum	-	_
Qualitative Attribute Water Appearance: Slightly Stream Substrate % Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban	Turbid	Very Turbid el Riffles Pools Root Systems	Greenish Colo	In-stream Emergent In-stream Submerge Fringing Wetlands ¹	us Surface Scum	-	_
Qualitative Attribute Water Appearance: Slightly Stream Substrate %: Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms	Turbid	Very Turbid el Riffles Pools Root Systems hanging Trees/Shru	Greenish Colo	In-stream Emergent In-stream Submerge Fringing Wetlands ¹	us Surface Scum Plants ed Plants	-	_
Qualitative Attribute Water Appearance: Slightly Stream Substrate %: Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms	MUCK: SANDS: Grave Deep Bank SS Overf	Very Turbid el Riffles Pools Root Systems hanging Trees/Shru	Greenish Colorova 30%	In-stream Emergent In-stream Submerge Fringing Wetlands¹ None	Plants ed Plants	Other:	
Qualitative Attribute Water Appearance: Slightly Stream Substrate % Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition:	Turbid	Very Turbid el Riffles Pools Root Systems hanging Trees/Shru INVERTEBRAT annelization/Braiding	Greenish Colorous Greenish Colo	In-stream Emergent In-stream Submerge Fringing Wetlands¹ None	Plants ed Plants	Other	
Qualitative Attribute Water Appearance: Slightly Stream Substrate %: Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist	Turbid	Very Turbid el Riffles Pools Root Systems hanging Trees/Shru INVERTEBRAT annelization/Braiding	Greenish Colorous Greenish Colo	In-stream Emergent In-stream Submerge Fringing Wetlands¹ None	Plants ed Plants	Other	
Qualitative Attribute Water Appearance: Slightly Stream Substrate % Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist	Grave Grave Bank San Overt Cos, Aquatic and	Very Turbid el Riffles Pools Root Systems hanging Trees/Shru INVERTEBRAT annelization/Braiding es/Berms Terrestrial Diversit	Greenish Colorous Greenish Colo	In-stream Emergent In-stream Submerge Fringing Wetlands¹ None	Plants ed Plants	Other	
Qualitative Attribute Water Appearance: Slightly Stream Substrate %: Aquatic Habitats: Sand Bar Gravel Bar Mud Bar	Grave Grave Bank San Overt Cos, Aquatic and	Very Turbid el Riffles Pools Root Systems hanging Trees/Shru INVERTEBRAT annelization/Braiding es/Berms Terrestrial Diversit	Greenish Colorous Greenish Colo	In-stream Emergent In-stream Submerge Fringing Wetlands¹ None	Plants ed Plants	Other	
Qualitative Attribute Water Appearance: Slightly Stream Substrate % Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Grave Grave Bank San Overt Cos, Aquatic and	Very Turbid el Riffles Pools Root Systems hanging Trees/Shru INVERTEBRAT annelization/Braiding es/Berms Terrestrial Diversit	Greenish Colorous Greenish Colo	In-stream Emergent In-stream Submerge Fringing Wetlands¹ None	Plants ed Plants	Other	
Qualitative Attribute Water Appearance: Slightly Stream Substrate % Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Grave Grave Bank San Overt Cos, Aquatic and	Very Turbid el Riffles Pools Root Systems hanging Trees/Shru INVERTEBRAT annelization/Braiding es/Berms Terrestrial Diversit	Greenish Colorous Greenish Colo	In-stream Emergent In-stream Submerge Fringing Wetlands¹ None	Plants ed Plants	Other	
Qualitative Attribute Water Appearance: Slightly Stream Substrate % Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist	Grave Grave Bank San Overt Cos, Aquatic and	Very Turbid el Riffles Pools Root Systems hanging Trees/Shru INVERTEBRAT annelization/Braiding es/Berms Terrestrial Diversit	Greenish Colorous Greenish Colo	In-stream Emergent In-stream Submerge Fringing Wetlands¹ None	Plants ed Plants	Other	
Qualitative Attribute Water Appearance: Slightly Stream Substrate % Aquatic Habitats: Sand Bar Gravel Bar Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist	Grave Grave Bank San Overt Cos, Aquatic and	Very Turbid el Riffles Pools Root Systems hanging Trees/Shru INVERTEBRAT annelization/Braiding es/Berms Terrestrial Diversit	Greenish Colorous Greenish Colo	In-stream Emergent In-stream Submerge Fringing Wetlands¹ None	Plants ed Plants	Other	





SOUTH



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WEST



Waterbody	Data Form Feature ID: TK-K-S005 SHAWSHEEN RIV
☑ Centerline □	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 8/6/2015 12:5	4:47 PM Client/Project Name: NED Milepost: 42307.8
Investigators: CG	JW Latitude/Longitude: 42.614896, -71.17433
State: MA	County: Middlesex Quad Name: Wilmington
Logbook No.: 201	5-1 Logbook Pg.: 98 Tract No.: 9263
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE ☑ E □ SE □ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	40.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	45.0 Water Surface (At Crossing Location)(ft.): 40.0
Stream Depth (in.):	24-36
OHWM Indicators:	CLEAR NATURAL LINE ON BANK BENT, MATTED OR MISSING VEGETATION
Bank Height (ft.):	Left: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+
(looking downstream)	Right: □ 0-2 □ 2-4 ☑ 4-6 □ 6-8 □ 8+
Bank Slope (%):	Left: 35
(looking downstream)	Right: 85
Qualitative Attributes	
Slightly Stream Substrate %:	
Aquatic Habitats:	SANDO. 0070
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
Gravel Bar	□ Deep Pools □ In-stream Submerged Plants
☐ Mud Bar	☐ Bank Root Systems ☐ Fringing Wetlands¹
✓ Undercut Bank	
Aquatic Organisms (Dbserved: INVERTEBRATES, FROGS
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characteristi	cs, Aquatic and Terrestrial Diversity Description:
Stream Quality: Comments:	☐ High ☑ Moderate ☐ Low





EAST



SOUTH



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WEST



Waterbody	Data Form Feature ID: AN-P-S001
✓ Centerline	Re-Route ☐ Access Road ☐ Ancillary Facility ☐ Transmission Line ☐ Other
Date: 12/5/2014 11	1:32:05 AM Client/Project Name: NED Milepost: 43316.6
Investigators: AF	F CV Latitude/Longitude: 42.612304, -71.17286
State: MA	County: Essex Quad Name: Wilmington
Logbook No.: 20	014P3 Logbook Pg.: 35 Tract No.: 4321
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None
Flow Type:	Perennial (Flows year round) Intermittent (Flows <3 months) None
Direction of Flow:	Seasonal (Continuous flow >3 months)
OHWM Width (ft.):	250.0
Sinuosity:	☐ Braided ☐ Meandering ☐ Straight ☑ N/A
Stream Width (ft.):	250.0 Water Surface (At Crossing Location)(ft.): 200.0
Stream Depth (in.):	64+
OHWM Indicators:	CLEAR NATURAL LINE ON BANK
Bank Height (ft.): (looking downstream)	Left: 0-2 2-4 4-6 6-8 8+
(Right 0-2 2-4 4-6 6-6 6+
Bank Slope (%): (looking downstream)	Left: 45 Right: 45
Qualitative Attribute	es es
Stream Substrate %	
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	✓ Deep Pools
	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Bar	nks
Aquatic Organisms	Observed: FISH (ADULT)
Channel Condition:	Channelization/Braiding Unnatural Straightening Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Stream Quality: Comments:	tics, Aquatic and Terrestrial Diversity Description: ☐ High ☑ Moderate ☐ Low





NW



Waterbody D	Oata Form Feature ID: AN-K-S004
✓ Centerline ☐ R	te-Route
Date: 8/12/2015 9:40:	56 AM Client/Project Name: NED Milepost: 48159.2
Investigators: CG JV	N Latitude/Longitude: 42.600342, -71.16729
State: MA	County: Essex Quad Name: Wilmington
Logbook No.: 2015-	1 Logbook Pg.: 135 Tract No.: 4143
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	Perennial (Flows year round)
	Seasonal (Continuous flow >3 months) □ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W □ NW ☑ S □ No Flow
OHWM Width (ft.):	6.0
Sinuosity:	Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	10.0 Water Surface (At Crossing Location)(ft.): 5.0
Stream Depth (in.):	12-18
OHWM Indicators:	BENT, MATTED OR MISSING VEGETATION LITTER AND DEBRIS
Bank Height (ft.):	Left: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+
(looking downstream)	Right: 0-2 2-4 4-6 6-8 8+
Bank Slope (%): (looking downstream)	Left: 65 Right: 50
Qualitative Attributes	
Water Appearance:	✓ Clear
☐ Slightly To	urbid
Stream Substrate %:	SANDS: 25% MUCK: 65% SILTS: 10%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	✓ Overhanging Trees/Shrubs ☐ None
Aquatic Organisms Ob	served: FROGS, INVERTEBRATES
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characteristics	s, Aquatic and Terrestrial Diversity Description:
Stream Quality:	☐ High ☑ Moderate ☐ Low
Comments:	





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SOUTH



Waterbody D	Data Form Feature ID: AN-G-S003
✓ Centerline ☐ R	Re-Route
Date: 4/23/2015 1:05:0	04 PM Client/Project Name: NED Milepost: 49612.8
Investigators: NF CN	M Latitude/Longitude: 42.597727, -71.16323
State: MA	County: Middlesex Quad Name: Wilmington
Logbook No.: 2015-	1 Logbook Pg.: 124 Tract No.: 28570
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	Perennial (Flows year round)
	Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE □ SW ☑ W □ NW □ S □ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	6.0 Water Surface (At Crossing Location)(ft.): 4.0
Stream Depth (in.):	1-3
OHWM Indicators:	CLEAR NATURAL LINE ON BANK
Bank Height (ft.):	Left: □ 0-2 □ 2-4 ☑ 4-6 □ 6-8 □ 8+
(looking downstream)	Right: 0-2 2-4 2 4-6 6-8 8+
Bank Slope (%): (looking downstream)	Left: 75 Right: 75
Qualitative Attributes	
Water Appearance:	☐ Clear ☑ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly To	
Stream Substrate %:	SANDS: 100%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
☐ Mud Bar	☑ Bank Root Systems ☐ Fringing Wetlands¹
✓ Undercut Banks	-
	INVESTED ATES
Aquatic Organisms Ob	
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristics	s, Aquatic and Terrestrial Diversity Description:
Stream Quality:	☐ High ☐ Moderate ☑ Low
Comments:	





WEST



NORTH



EAST





Waterbody D	ata Form Feature ID: WL-K-S001
✓ Centerline ☐ R	e-Route
Date: 8/7/2015 10:16:0	06 AM Client/Project Name: NED Milepost: 50097.5
Investigators: CG JV	Latitude/Longitude: 42.596698, -71.16209
State: MA	County: Middlesex Quad Name: Wilmington
Logbook No.: 2015-	Logbook Pg.: 109 Tract No.: 28631
Waterbody Type:	☐ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	Perennial (Flows year round)
	Seasonal (Continuous flow >3 months)
Direction of Flow:	☑ N □ NE □ E □ SE □ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	6.0
Sinuosity:	Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	15.0 Water Surface (At Crossing Location)(ft.): 12.0
Stream Depth (in.):	1-3
OHWM Indicators:	LITTER AND DEBRIS
Bank Height (ft.): (looking downstream)	Left: □ 0-2 □ 2-4 ☑ 4-6 □ 6-8 □ 8+
(looking downstream)	Right: 0-2 2-4 4-6 7 6-8 8+
Bank Slope (%): (looking downstream)	Left: 45 Right: 50
Qualitative Attributes	
Water Appearance: Slightly To Stream Substrate %:	SILTS: 30% SANDS: 50% GRAVEL: 10%
Aguatia Habitata	COBBLES: 10%
Aquatic Habitats: Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
Gravel Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants ☐ Deep Pools ☐ In-stream Submerged Plants
☐ Mud Bar	☐ Bank Root Systems ☑ Fringing Wetlands¹
☐ Undercut Banks	✓ Overhanging Trees/Shrubs
Aquatic Organisms Ob	served: NONE
Channel Condition:	☐ Channelization/Braiding ☑ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristics	Aquatic and Terrestrial Diversity Description:
Stream Quality:	☐ High ☑ Moderate ☐ Low
Comments:	



WEST



SOUTH



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Waterbody	Data Form Feature ID: WL-P-S002
✓ Centerline	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 12/8/2014 2:16	6:09 PM Client/Project Name: NED Milepost: 53642.3
Investigators: AF (
State: MA	County: Middlesex Quad Name: Wilmington
Logbook No.: 2014	4P3 Logbook Pg.: 59 Tract No.: 8628
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:
Stream Flow:	Fast Moderate Slow Very Slow None
Flow Type:	☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☑ None ☐ Capacital (Caption year flows = 3 months) ☐ Folksmand (Flows and visited))
Direction of Flow:	Seasonal (Continuous flow >3 months)
OHWM Width (ft.):	470.0
Sinuosity:	□ Braided □ Meandering □ Straight ☑ N/A
Stream Width (ft.):	470.0 Water Surface (At Crossing Location)(ft.): 470.0
Stream Depth (in.):	60+
OHWM Indicators:	CLEAR NATURAL LINE ON BANK
Bank Height (ft.): (looking downstream)	Left: □ 0-2 □ 2-4 □ 4-6 ☑ 6-8 □ 8+ Right: □ 0-2 □ 2-4 □ 4-6 □ 6-8 ☑ 8+
Bank Slope (%): (looking downstream)	Left: 45 Right: 90
Qualitative Attributes	
Stream Substrate %:	SANDS: 25% BEDROCK: 25% SILTS: 25% MUCK: 25%
Aquatic Habitats:	1,001% 20,0
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
 ☐ Mud Bar	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Bank	
Aquatic Organisms O	Observed: BEAVER
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Stream Quality: Comments:	cs, Aquatic and Terrestrial Diversity Description: High





SW



Waterbody	Data Form Feature ID: ME-P-S004
✓ Centerline	Re-Route
Date: 12/4/2014 11	:33:20 AM Client/Project Name: NED Milepost: 27977.8
Investigators: AF	CV Latitude/Longitude: 42.742706, -71.21150
State: MA	County: Essex Quad Name: Lawrence
Logbook No.: 20	14P3 Logbook Pg.: 26 Tract No.: 6838
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	✓ Perennial (Flows year round) ☐ Intermittent (Flows <3 months)
Direction of Flow:	
OHWM Width (ft.):	35.0 - Regided Meandering Straight N/A
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	35.0 Water Surface (At Crossing Location)(ft.): 25.0
Stream Depth (in.):	24-36
OHWM Indicators:	CLEAR NATURAL LINE ON BANK
Bank Height (ft.): (looking downstream)	Left: 0-2 7 2-4 4-6 6-8 8+
	' Right: ☐ 0-2 ☑ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+ Left: 85
Bank Slope (%): (looking downstream)	
Qualitative Attribute	es e
Stream Substrate %	y Turbid
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	✓ Deep Pools ☐ In-stream Submerged Plants
	☑ Bank Root Systems ☑ Fringing Wetlands¹
☐ Undercut Bar	nks 🗹 Overhanging Trees/Shrubs 🔲 None
Aquatic Organisms	Observed:
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Stream Quality: Comments:	tics, Aquatic and Terrestrial Diversity Description: High Moderate Low





Ε







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N



Waterbody	Data Form Feature ID: ME-P-S007B
☑ Centerline □	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/8/2015 2:10:	240 PM Client/Project Name: NED Milepost: 21289.6
Investigators: PF J	JW Latitude/Longitude: 42.730833, -71.22635
State: MA	County: Essex Quad Name: Lawrence
Logbook No.: 2015	5-1 Logbook Pg.: 62 Tract No.: 6440
Waterbody Type:	Stream Pond Borrow Pit Ag Ditch Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None
	Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W ☑ NW □ S □ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	5.0 Water Surface (At Crossing Location)(ft.): 3.0
Stream Depth (in.):	1-3
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE SOIL CHARACTER CHANGES
Bank Height (ft.):	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Right: 🗹 0-2 🔲 2-4 🔲 4-6 🔲 6-8 🔲 8+
Bank Slope (%): (looking downstream)	Left: 10 Right: 10
Qualitative Attributes	
Water Appearance:	✓ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	Turbid Very Turbid Greenish Color Obvious Surface Scum Other:
Stream Substrate %:	MUCK: 100%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
☐ Mud Bar	☐ Bank Root Systems ☑ Fringing Wetlands¹
☐ Undercut Bank	ss 🔽 Overhanging Trees/Shrubs 🔲 None
Aquatic Organisms O	Dbserved: FROGS
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characteristic	cs, Aquatic and Terrestrial Diversity Description:
	The state of the s
Stream Quality:	☐ High ☐ Moderate ☑ Low
Comments:	





NW



SE



NE





Waterbody	Data Form Feature ID: ME-P-S007
☑ Centerline □	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/8/2015 9:48	3:46 AM Client/Project Name: NED Milepost: 20727.0
Investigators: PF	JW Latitude/Longitude: 42.729263, -71.22635
State: MA	County: Essex Quad Name: Lawrence
Logbook No.: 201	15-1 Logbook Pg.: 60 Tract No.: 6440
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type:	□ Perennial (Flows year round) □ Intermittent (Flows <3 months) □ None □ Seasonal (Continuous flows <3 months) □ None
Direction of Flour	Seasonal (Continuous flow >3 months) Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W □ NW □ S ☑ No Flow
OHWM Width (ft.):	8.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	10.0 Water Surface (At Crossing Location)(ft.): 6.0
Stream Depth (in.):	3-6
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE SOIL CHARACTER CHANGES
Bank Height (ft.): (looking downstream)	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
(looking downstream)	Ngiii. 💌 0-2 📋 2-4 📋 4-6 📋 0-6 📋 0+
Bank Slope (%): (looking downstream)	Left: 100 Right: 100
Qualitative Attributes	S
Water Appearance:	✓ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly	y Turbid
Stream Substrate %:	: MUCK: 100%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	☐ Bank Root Systems ☑ Fringing Wetlands¹
☐ Undercut Bank	ks 🗹 Overhanging Trees/Shrubs 🔲 None
Aquatic Organisms (Observed: FROGS
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
Habitat Characteristi	ics, Aquatic and Terrestrial Diversity Description:
Streem Overliter	El High Et Madagata El Lou
Stream Quality:	☐ High ☑ Moderate ☐ Low
Commenter	
Comments:	





NORTH



SOUTH



EAST





State: MA	Waterbody [Data Form Feature ID: ME-P-S005
	✓ Centerline □	Re-Route Access Road Ancillary Facility Transmission Line Other
Strate: MA	Date: 7/7/2015 10:23	:54 AM Client/Project Name: NED Milepost: 16774.8
Logbook No.: 2015-1 Logbook Pg.: 48	Investigators: PF J	N Latitude/Longitude: 42.718597, -71.22967
Waterbody Type:	State: MA	County: Essex Quad Name: Lawrence
Stream Flow:	Logbook No.: 2015	-1 Logbook Pg.: 48 Tract No.: 6915
Flow Type:	Waterbody Type:	☐ Stream ☑ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Seasonal (Continuous flow >3 months)	Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None
Direction of Flow:	Flow Type: [☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None
OHWM Width (ft.): 20.0 Meandering Straight	1	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Sinuosity:	Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W □ NW □ S ☑ No Flow
Stream Width (ft.):	OHWM Width (ft.):	20.0
Stream Depth (in.): 12-18	Sinuosity:	☐ Braided ☐ Meandering ☐ Straight ☑ N/A
OHWM Indicators: CLEAR NATURAL LINE ON BANK ABRUPT PLANT COMMUNITY CHANGE SOUL CHARACTER CHANGES Bank Height (ft.): (looking downstream)	Stream Width (ft.):	20.0 Water Surface (At Crossing Location)(ft.): 20.0
ABRUPT PLANT COMMUNITY CHANGE	Stream Depth (in.):	12-18
Right: 0-2 2-4 4-6 6-8 8+	OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE
Right:	Bank Height (ft.):	
Right: 20 Righ	(looking downstream)	Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
Qualitative Attributes Water Appearance:	Bank Slope (%):	Left: 100
Water Appearance:	(looking downstream)	Right: 20
Stream Substrate %: MUCK: COBBLES: 40% SILTS: 30% Aquatic Habitats: Sand Bar Deep Pools In-stream Submerged Plants Mud Bar Mud Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: FROGS Channel Condition: Dikes/Berms Deep Rods Dikes/Berms Deep Rods D	Qualitative Attributes	
Stream Substrate %: MUCK: 30% COBBLES: 40% SILTS: 30% Aquatic Habitats: Sand Bar Gravel Riffles In-stream Emergent Plants Gravel Bar Deep Pools In-stream Submerged Plants Mud Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: FROGS Channel Condition: Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description:	Water Appearance:	☑ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
Aquatic Habitats: Sand Bar Gravel Riffles In-stream Emergent Plants Gravel Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: FROGS Channel Condition: Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description:	☐ Slightly 7	Turbid
Sand Bar Gravel Riffles In-stream Emergent Plants Gravel Bar Deep Pools In-stream Submerged Plants Mud Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: FROGS Channel Condition: Channelization/Braiding Indication/Braiding Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Low	Stream Substrate %:	COBBLES: 40%
Sand Bar Gravel Riffles In-stream Emergent Plants Gravel Bar Deep Pools In-stream Submerged Plants Mud Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: FROGS Channel Condition: Channelization/Braiding Indication/Braiding Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Low	Aquatic Habitats:	
Gravel Bar Deep Pools In-stream Submerged Plants Mud Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: FROGS Channel Condition: Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description:	-	☐ Gravel Riffles ☐ In-stream Emergent Plants
Mud Bar Bank Root Systems Fringing Wetlands¹ Undercut Banks Overhanging Trees/Shrubs None Aquatic Organisms Observed: FROGS Channel Condition: Channelization/Braiding Dikes/Berms Excessive Bank Erosion N/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Low Downcutting N/A Other Downcutting N/A Other Low Channelization/Braiding Downcutting Downcutting Downcutting N/A Downcutting Downcut	_	
Quatic Organisms Observed: FROGS Channel Condition: Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion N/A Other High Moderate Low Lo		
Channel Condition: Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion M/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Low		
Channel Condition: Channelization/Braiding Unnatural Straightening Downcutting Dikes/Berms Excessive Bank Erosion M/A Other Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality: High Moderate Low		
Dikes/Berms		
Habitat Characteristics, Aquatic and Terrestrial Diversity Description: Stream Quality:	Channel Condition:	
Stream Quality: High Moderate Low		☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other
	Habitat Characteristic	s, Aquatic and Terrestrial Diversity Description:
Comments:	Stream Quality:	☐ High ☑ Moderate ☐ Low
	Comments:	





EAST



Waterbody [Data Form
waterbody L	Jata Form Feature ID: LU-K-S001
☑ Centerline ☐ I	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/23/2015 2:23	:10 PM Client/Project Name: NED Milepost: 70763.3
Investigators: CG	Latitude/Longitude: 42.593550, -71.75598
State: MA	County: Worcester Quad Name: Fitchburg
Logbook No.: TEAN BK1	M K Logbook Pg.: 10 Tract No.: 6405
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☑ Slow ☐ Very Slow ☐ None
Flow Type: [☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None
[☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE ☑ SW □ W □ NW □ S □ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	☐ Braided ☐ Meandering ☑ Straight ☐ N/A
Stream Width (ft.):	6.0 Water Surface (At Crossing Location)(ft.): 1.5
Stream Depth (in.):	1-3
OHWM Indicators:	SEDIMENT DEPOSITION
	LITTER AND DEBRIS
Bank Height (ft.): (looking downstream)	Left: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+ Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
Bank Slope (%): (looking downstream)	Left: 2 Right: 2
Qualitative Attributes	
Water Appearance:	☐ Clear ☑ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
✓ Slightly 1	
Stream Substrate %:	MUCK: 50% SILTS: 35% COBBLES: 15%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	Overhanging Trees/Shrubs None
Aquatic Organisms Ol	oserved:
Channel Condition:	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristic	s, Aquatic and Terrestrial Diversity Description:
Stream Quality: Comments:	☐ High ☐ Moderate ☑ Low





NE



Ν



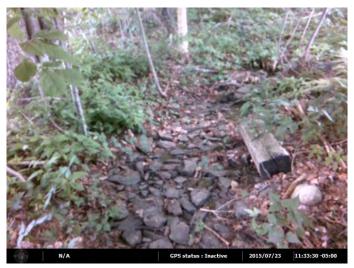
A=COM

SW



Watarbads I	Data Form
Waterbody I	Jata Form Feature ID: LU-A-S001A
☑ Centerline ☐	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 7/23/2015 11:2	5:31 AM Client/Project Name: NED Milepost: 72048.4
Investigators: CG	Latitude/Longitude: 42.590336, -71.75457
State: MA	County: Worcester Quad Name: Fitchburg
Logbook No.: TEA BK1	M K Logbook Pg.: 5 Tract No.: 6405
Waterbody Type:	☑ Stream ☐ Pond ☐ Lake ☐ Borrow Pit ☐ Ag Ditch ☐ Other:
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None
Flow Type:	☐ Perennial (Flows year round) ☐ Intermittent (Flows <3 months) ☐ None
	☐ Seasonal (Continuous flow >3 months) ☐ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	□ N □ NE □ E □ SE □ SW □ W □ NW □ S ☑ No Flow
OHWM Width (ft.):	2.5
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	5.0 Water Surface (At Crossing Location)(ft.): 0
Stream Depth (in.):	0
OHWM Indicators:	ABRUPT PLANT COMMUNITY CHANGE BENT, MATTED OR MISSING VEGETATION
Bank Height (ft.): (looking downstream)	Left: □ 0-2 ☑ 2-4 □ 4-6 □ 6-8 □ 8+ Right: ☑ 0-2 □ 2-4 □ 4-6 □ 6-8 □ 8+
Bank Slope (%): (looking downstream)	Left: 5 Right: 2
Qualitative Attributes	
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☑ No Flow
Slightly	
Stream Substrate %:	COBBLES: 80% SILTS: 10% GRAVEL: 10%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Bank	S Overhanging Trees/Shrubs
Aquatic Organisms O	bserved: NONE
Channel Condition:	☑ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristic	s, Aquatic and Terrestrial Diversity Description:
Stream Quality: Comments:	☐ High ☐ Moderate ☑ Low





SW







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NE



Waterbody	Data Form Feature ID: LU-A-S001E	3
✓ Centerline □	Re-Route	
Date: 7/23/2015 9:4	41:56 AM Client/Project Name: NED Milepost: 72081.7	
Investigators: CG	Latitude/Longitude: 42.590316, -71.75478	
State: MA	County: Worcester Quad Name: Fitchburg	
Logbook No.: TE/ BK	AM K Logbook Pg.: 7 Tract No.: 6405	
Waterbody Type:	Stream Pond Lake Borrow Pit Ag Ditch Other:	
Stream Flow:	☐ Fast ☐ Moderate ☐ Slow ☐ Very Slow ☑ None	
Flow Type:	Perennial (Flows year round) Intermittent (Flows <3 months) None	
	Seasonal (Continuous flow >3 months)	
Direction of Flow:	N NE E SE SW W NW S No Flow	
OHWM Width (ft.):	1.5	
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A	
Stream Width (ft.):	10.0 Water Surface (At Crossing Location)(ft.): 0.0	
Stream Depth (in.):	0	
OHWM Indicators:	BENT, MATTED OR MISSING VEGETATION	
Bank Height (ft.): (looking downstream)	Left:	
	Right: 🗹 0-2 🔲 2-4 🔲 4-6 🔲 6-8 🔲 8+	
Bank Slope (%): (looking downstream)	Left: 2 Right: 2	
Qualitative Attributes		
Water Appearance:	☐ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☑ No F	-low
	y Turbid ☐ Very Turbid ☐ Greenish Color ☐ Obvious Surface Scum ☐ Other:	
Stream Substrate %:	: COBBLES: 10% VEGETATION: 90%	
Aquatic Habitats:		
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants	
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants	
■ Mud Bar	☐ Bank Root Systems ☐ Fringing Wetlands¹	
☐ Undercut Ban	ks	
Aquatic Organisms (Observed: NONE	
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☐ Downcutting	
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☑ N/A ☐ Other	
Habitat Characteristi	ics, Aquatic and Terrestrial Diversity Description:	
Stream Quality: Comments:	☐ High ☐ Moderate ☑ Low	





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NE





SW



Waterbody D	Data Form Feature ID: NO-G-S001
☐ Centerline ☐ F	Re-Route Access Road Ancillary Facility Transmission Line Other
Date: 5/20/2015 8:50:	47 AM Client/Project Name: NED Milepost: 0
Investigators: NF C	M Latitude/Longitude: 42.665279, -72.42205
State: MA	County: Franklin Quad Name: Northfield
Logbook No.: 2015-	3 Logbook Pg.: 32 Tract No.: 21115
Waterbody Type:	✓ Stream
Stream Flow:	☐ Fast ☑ Moderate ☐ Slow ☐ Very Slow ☐ None
Flow Type:	Perennial (Flows year round)
Γ	Seasonal (Continuous flow >3 months) □ Ephemeral (Flows only in response to rainfall)
Direction of Flow:	☑ N ☐ NE ☐ E ☐ SE ☐ SW ☐ W ☐ NW ☐ S ☐ No Flow
OHWM Width (ft.):	4.0
Sinuosity:	□ Braided □ Meandering ☑ Straight □ N/A
Stream Width (ft.):	6.0 Water Surface (At Crossing Location)(ft.): 3.5
Stream Depth (in.):	3-6
OHWM Indicators:	CLEAR NATURAL LINE ON BANK
Bank Height (ft.): (looking downstream)	Left: □ 0-2 □ 2-4 □ 4-6 ☑ 6-8 □ 8+
(looking downstream)	Right: ☑ 0-2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8+
Bank Slope (%): (looking downstream)	Left: 45 Right: 45
Qualitative Attributes	
Water Appearance:	✓ Clear ☐ Turbid ☐ Sheen on Surface ☐ Floating Algal Mats ☐ No Flow
☐ Slightly T	
Stream Substrate %:	COBBLES: 75% GRAVEL: 15% SANDS: 10%
Aquatic Habitats:	
☐ Sand Bar	☐ Gravel Riffles ☐ In-stream Emergent Plants
☐ Gravel Bar	☐ Deep Pools ☐ In-stream Submerged Plants
	☐ Bank Root Systems ☐ Fringing Wetlands¹
☐ Undercut Banks	✓ Overhanging Trees/Shrubs
Aquatic Organisms Ob	oserved: SALAMANDER, INVERTEBRATES, FROGS
Channel Condition:	☐ Channelization/Braiding ☐ Unnatural Straightening ☑ Downcutting
	☐ Dikes/Berms ☐ Excessive Bank Erosion ☐ N/A ☐ Other
Habitat Characteristics	s, Aquatic and Terrestrial Diversity Description:
Stream Quality:	☐ High Moderate ☐ Low
Comments:	





NORTH



WEST



A=COM

SOUTH



	Data	Form						Fe	eature ID): DR-A-S00	1
☐ Centerline ☐	Re-Route	e 🔲 Acc	cess Road	✓ Ancil	llary Facil	ity 🗀	Transmi	ssion Line	☐ Othe	r	
Date: 11/14/2014 1	2:51:21 PI	M Clier	nt/Project Nar	me: NF	ED				Milep	oost: 0	
Investigators: PM	ЛL		Latitud	de/Longitud	de:	42.681	286, -71.28	3516	ı		
State: MA		County:	Middles	ex			Qua	d Name:	Lowell		
Logbook No.: 20°	14-2 L	_ogbook Pg.:	20	Tract N	lo.: 53	331	I				
Waterbody Type:	☑ Stre	am 🔲	Pond	☐ Lake	e	☐ Borro	w Pit	Ag Ditch	☐ Ot	her:	
Stream Flow:	☐ Fast	t 🗖	Moderate	☑ Slov	N	☐ Very	Slow [None			
Flow Type:	_	ennial (Flows		months)	☑		-	3 months) only in respon	se to rainfa		
Direction of Flow:		•			□ SW	D W	N		D No	<u> </u>	
						Ш "		<u>v</u>			
OHWM Width (ft.):	6.0		Maandarine		ura i alat	- N	^				
Sinuosity:	Brai					□ N/					
Stream Width (ft.):	6.0		Water Surface	e (At Cross	ing Locati	ion)(ft.):	4.0				
Stream Depth (in.): OHWM Indicators:	1-3	3 BRUPT PLANT	T COMMUNIT	TV CHANC	·						
Onwiw maicators.	SH	ELVING EDIMENT DEF		TT CHANG	_						
Bank Height (ft.):	Left:	: 🗹 0-2	2-4	4-6	□ 6-	-8 🔲	3+				
(looking downstream)	Righ	ht: 🗹 0-2	2-4	4-6	□ 6-	-8 🔲	3+				
Bank Slope (%): (looking downstream)	Left:										
Qualitative Attribute	es										
Water Appearance:		7 Clear	☐ Turk	bid [☐ Shee	n on Surfa	:е Г	☐ Floating /	Algal Mats	□ No	Flow
☐ Slightly	_	☐ Very	_		sh Color		_	urface Scum	_	Other:	
Stream Substrate %	: S	SANDS: SILTS:		95% 5%							
Aquatic Habitats:											
☐ Sand Bar		Gravel Riffl									
			les		☐ In-s	stream Em	ergent Plar	nts			
Gravel Bar		Deep Pools			_	stream Eme stream Sub	_				
_	_		S		☐ In-s	stream Sub	merged Pl				
Gravel Bar Mud Bar Undercut Ban		Bank Root	S	ubs	☐ In-s	stream Sub	merged Pl				
☐ Mud Bar	nks 🗹	Bank Root Overhangir	s Systems	ubs 	☐ In-s	stream Sub	merged Pl				
☐ Mud Bar☐ Undercut Ban	nks 🗹	Bank Root Overhangir	s Systems		☐ In-s ☑ Frir ☐ Nor	stream Sub	merged Pl	ants	ncutting		
☐ Mud Bar ☐ Undercut Bar Aquatic Organisms	nks ☑ Observed	Bank Root Overhangir	s Systems ng Trees/Shru zation/Braidin		☐ In-s ☑ Frir ☐ Nor ☐ Unnatu	stream Sub nging Wetla	merged Pl inds ¹ tening	ants	· ·	Other	
☐ Mud Bar ☐ Undercut Bar Aquatic Organisms	Observed	Bank Root Overhangir Channeliz Dikes/Ber	s Systems ng Trees/Shru zation/Braidin	ng 🗆	☐ In-s ☑ Frir ☐ Nor ☐ Unnatu	stream Sub nging Wetla ne ural Straigh	merged Pl inds ¹ tening	ants Dow	· ·	Other	
Mud Bar Undercut Ban Aquatic Organisms Channel Condition: Habitat Characterist	Observed Country Co	Bank Root Overhangir Channeliz Dikes/Ber tic and Terre	s Systems ng Trees/Shru zation/Braidin rms	ng	☐ In-s ☑ Frir ☐ Nor ☐ Unnatu	stream Sub nging Wetla ne ural Straigh	merged Pl inds ¹ tening	ants Dow	· ·	Other	
Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Observed	Bank Root Overhangir Channeliz Dikes/Ber tic and Terre	s Systems ng Trees/Shru zation/Braidin	ng 🗆	☐ In-s ☑ Frir ☐ Nor ☐ Unnatu	stream Sub nging Wetla ne ural Straigh	merged Pl inds ¹ tening	ants Dow	· ·	Other	
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Mud Bar Undercut Bar Aquatic Organisms Channel Condition: Habitat Characterist Stream Quality:	Observed Country Co	Bank Root Overhangir Channeliz Dikes/Ber tic and Terre	s Systems ng Trees/Shru zation/Braidin rms	ng	☐ In-s ☑ Frir ☐ Nor ☐ Unnatu	stream Sub nging Wetla ne ural Straigh	merged Pl inds ¹ tening	ants Dow	· ·	Other	





NORTH



EAST



A=COM

SOUTH



Waterbody Data Form		Feature ID: DR-A-S001B
☐ Centerline ☐ Re-Route ☐	Access Road ☑ Ancillary Facility ☐ Transmissio	on Line
Date: 11/18/2014 10:28:20 AM	Client/Project Name: NED	Milepost: 1062.9
Investigators: RSE	Latitude/Longitude: 42.679276, -71.28650)
State: MA County:	Middlesex Quad Na	ame: Lowell
Logbook No.: BOOK 1 Logbook F	rg.: 45 Tract No.: 5330	
Waterbody Type: Stream	Pond Lake Borrow Pit A	Ag Ditch
Stream Flow:	☐ Moderate ☑ Slow ☐ Very Slow ☐ N	None
	ows year round) Intermittent (Flows <3 m ntinuous flow >3 months)	<u> </u>
Direction of Flow: NNN	E DE SE SW DW NW	☐ S ☐ No Flow
OHWM Width (ft.): 6.0		
Sinuosity: Braided		
Stream Width (ft.): 7.0	Water Surface (At Crossing Location)(ft.): 5.0	
Stream Depth (in.): 3-6	255555 (2.1.2.2.2.2.3.3.4.4.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5	
OHWM Indicators: CLEAR NAT	URAL LINE ON BANK ANT COMMUNITY CHANGE	
(looking downstream)	0-2	
Bank Slope (%): Left: 30 (looking downstream) Right: 30		
Qualitative Attributes		
Water Appearance: ☐ Slightly Turbid ☐ V	☐ Turbid ☐ Sheen on Surface ☐ ery Turbid ☐ Greenish Color ☐ Obvious Surfa	Floating Algal Mats
Stream Substrate %: SILTS: COBBLES	50% 50%	
Aquatic Habitats:		
☐ Sand Bar ☐ Gravel	Riffles	
☐ Gravel Bar ☐ Deep F	Pools In-stream Submerged Plants	3
☐ Mud Bar ☑ Bank R	oot Systems Fringing Wetlands ¹	
	inging Trees/Shrubs	
Aquatic Organisms Observed:		
Channel Condition:	nelization/Braiding Unnatural Straightening	Downcutting
Dikes	/Berms	□ N/A □ Other
Habitat Characteristics, Aquatic and To	errestrial Diversity Description:	
MA NATURAL HERITAGE MAPPED HA	BITAT	
Stream Quality: High	Moderate Low	
Comments: MANHESP MAPP	ED HABITAT	



NE



NW



A=COM

SE