

Language approved by the Planning Board at the January 27, 2016 meeting for vote at Town Meeting 2016.

Article XXII: Aquifer and Wellhead Protection Overlay District Ordinance – Revision History

Version 1.0	Initial version for Planning Board and Selectmen review
Version 1.1	Incorporating recommendations from the Planning Board and Selectmen
Version 1.2	Changed wording of Injection wells to match definition
Version 1.3	Updated per review by Nashua Regional Planning Commission
Version 1.4	Incorporating additional comments by the Selectmen
Version 1.5	Incorporating comments from public hearing on 30 December, 2015

Article XXII: Aquifer and Wellhead Protection Overlay District Ordinance

A. Authority

The Town of Mason hereby adopts this Aquifer and Wellhead Protection Overlay District Ordinance pursuant to the authority granted under RSA 674:16 and RSA 674:21.

B. Purpose

The Aquifer and Wellhead Protection (AWP) Overlay District Ordinance is established for the purpose of protecting the quality and quantity of Groundwater resources available to be used as current and/or future drinking water supplies. This Ordinance is intended to:

1. Maintain public health and welfare by protecting existing and potential sources of Groundwater and associated recharge areas.
2. Prevent land use practices and development that could reduce the volume of recharge available to Aquifers identified as current or potential sources of drinking water.
3. Prevent land use practices and development that could contaminate or adversely impair the quality of Groundwater within Aquifers identified as current or potential sources of drinking water.
4. Provide for future growth, in accordance with the Town’s Master Plan, by protecting the long-term availability of clean, safe potable water.
5. Identify land uses that can safely be sited in Aquifer recharge areas and in the proximity of water supply wells.

C. Definitions

1. **Animal Feedlot:** A lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising, or holding of animals and specifically designed as a confinement area in which manure may accumulate, or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure. Confined winter shelter areas are not considered feedlots.

2. **Aquifer:** A geologic formation composed of rock, sand, or gravel that contains significant amounts of potentially recoverable water.
3. **Bulk Petroleum Plant or Terminal:** That portion of a property where petroleum products are received by tank vessel, pipeline, tank car, or tank vehicle and are stored or blended in bulk for the purpose of distributing such liquids by tank vessel, pipeline, tank car, tank vehicle, portable tank, or container.
4. **Best Management Practices:** A method or technique that has consistently shown results superior to those achieved with other means, and that is used as a benchmark. In addition, a "best" practice can evolve to become better as improvements are discovered. BMP's derived from public agencies or other sources shall be utilized as guidelines, the Planning Board may approve an alternative method if it is found to achieve a similar result.

The most recent editions of the following publications are considered Best Management Practices:

- a. Best Management Practices for Erosion Control on Timber Harvesting Operations in New Hampshire, prepared by the New Hampshire Department of Resources and Economic Development;
 - b. Manual of Best Management Practices for Agriculture in New Hampshire, prepared by the Agricultural Best Management Practices Task Force and the USDA Natural Resources Conservation Service for the New Hampshire Department of Agriculture;
 - c. Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire, prepared by the New Hampshire Department of Environmental Services in conjunction with the Rockingham County Conservation District;
 - d. Manual of Best Management Practices to Control Nonpoint Source Pollution: A Guide for Citizens and Town Officials prepared by the New Hampshire Department of Environmental Services; and
 - e. Rock Blasting and Water Quality Measures That Can Be Taken to Protect Water Quality and Mitigate Impacts, prepared by Brandon Kernan, NHDES Drinking Water Source Protection Program.
5. **Community Water System:** A Public Water System having at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. The well serving the Mason Elementary School and the Mann House is designated as a community water facility.
 6. **Groundwater:** Subsurface water that occurs beneath the water table in soils and geologic formations.
 7. **Gasoline Station:** Means that portion of a property where petroleum products are received by tank vessel, pipeline, tank car, or tank vehicle and distributed for the purposes of retail sale.
 8. **Hazardous Waste:** Any solid, semisolid, liquid or contained gaseous waste, or any combination of these wastes, which:
 - a. May cause or contribute to an increase in irreversible or incapacitating reversible illness.

- b. Poses a present or potential threat to human health or the environment if improperly managed.
 - c. Has been identified as a hazardous waste by the New Hampshire Department of Environmental Services Waste Management Division.
- 9. **Impervious:** Not readily permitting the infiltration of water, including packed gravel surfaces such as parking areas, driveways or traveled ways.
- 10. **Impervious Surface:** A surface through which Regulated Substances cannot pass when spilled. Impervious Surfaces include concrete unless unsealed cracks or holes are present. Earthen, wooden, or gravel surfaces, or other surfaces which could react with or dissolve when in contact with substances stored on them, are not considered Impervious Surfaces.
- 11. **Injection Well:** A well where hazardous wastes are injected.
- 12. **Junkyard:** An establishment or place of business which is maintained, operated, or used for storing, keeping, buying, or selling junk, or for the maintenance or operation of an automotive recycling yard, as defined in RSA 236:112, as amended. The word does not include any motor vehicle dealers registered with the Director of Motor Vehicles under RSA 261:104 and controlled under RSA 236:126.
- 13. **Outdoor Storage:** Storage of materials not protected from the elements by a roof, walls, and a floor with an Impervious Surface.
- 14. **Positive Limiting Barrier:** A depression (e.g., groove) in the surface of an otherwise level impervious area designed to impede the flow of and contain spilled substances within the perimeter of the impervious area. These are typically constructed and maintained to contain small spills or releases (five to fifteen gallons).
- 15. **Regulated Substance:** Any of the following, with the exclusion of ammonia, sodium hypochlorite, sodium hydroxide, acetic acid, sulfuric acid, potassium hydroxide, potassium permanganate, propane or other liquefied fuels which exist as gases at normal atmospheric temperature and pressure:
 - a. Oil as defined in RSA 146-A:2, III;
 - b. Any substance that contains a regulated contaminant for which an ambient groundwater quality standard has been established pursuant to RSA 485-C:6; and
 - c. Any substance listed in 40 CFR 302, 7-1-05 edition, as amended.
- 16. **Sanitary Protective Radius:** The area around a public water supply well which must be maintained in its natural state as required by Env-Dw 301 or 302 (for community water systems); Env-Dw 373.12 and Env-Dw 372.14 (for other Community Water Systems), as amended.
- 17. **Seasonal High Water Table:** The depth from the mineral soil surface to the upper most soil horizon that contains 2% or more distinct or prominent redoximorphic features that increase in percentage with increasing depth as determined by a Licensed Hydrogeologist, Soil Scientist, Wetlands Scientist, Engineer or other qualified professional approved by the Planning Board.
- 18. **Secondary Containment:** A structure such as a berm or dike with an Impervious Surface which is adequate to hold at least 110 percent of the volume of the largest regulated-substance container stored within.

19. **Snow Dump:** For the purposes of this Ordinance, a location where snow, which is cleared from roadways and/or motor vehicle parking areas situated beyond the Aquifer and Wellhead Protection District, is placed for disposal.
20. **Stratified-Drift Aquifer:** A geologic formation of predominantly well-sorted sediment deposited by or in bodies of glacial meltwater, including gravel, sand, silt, or clay, which contains sufficient saturated permeable material to yield significant quantities of water to wells.
21. **Surface Water:** Streams, lakes, ponds and wetlands, including marshes, water-courses and other bodies of water, natural or artificial.
22. **Wellhead Protection Area:** The surface and subsurface area surrounding a water well or wellfield supplying a Community Water System, through which contaminants are likely to move toward and reach such water well or wellfield.

D. Applicability

This Ordinance shall apply to all uses of land situated within the Aquifer and Wellhead Protection Overlay District, except for those uses exempt under Section H of this Ordinance.

E. District Boundaries

1. Aquifer and Wellhead Protection (AWP) Overlay District boundaries are as identified on a map on file with the Town Clerk entitled "Aquifer and Wellhead Protection Overlay District Map".
2. The AWP is an Overlay District which is superimposed over all underlying Districts.
3. Data resources used to produce the map include:
 - a. Aquifer areas as delineated on a map prepared by the U.S. Geological Survey entitled: "Saturated Thickness, Transmissivity, and Materials of Stratified-Drift Aquifers in the Middle Merrimack Basin, South-Central New Hampshire". This map is found in a study entitled: "Geohydrology and Water Quality of Stratified-Drift Aquifers in the Middle Merrimack River Basin, South-Central New Hampshire", prepared Ayotte, J.D. and Toppin, H.W., 1995: U.S. Geological Survey Water-Resources Investigation Report 92-4192, and as may be amended or superseded by the U.S.G.S.
 - b. Wellhead Protection Areas associated with public water supply wells shown on the AWP District map and New Hampshire Department of Environmental Services.
4. Incorrectly Designated Zones. In instances where the actual boundary of the Aquifer and Wellhead Protection Overlay District are disputed, the Planning Board, at the Applicant's expense and authorization, may engage a qualified professional geologist or hydrogeologist to determine the precise location of the AWP District boundaries. A report of the professional's findings shall be submitted to the Planning Board, which shall include but not be limited to the following:
 - a. A revised soils map of the area in question along with a written report of on-site field inspection and test boring data.
5. If the information provided to the Planning Board is accepted by the Board, the boundary of the AWP District shall be adjusted based on the evidence provided. The Planning Board may

reserve the right to withhold action on any application pending the results of an on-site inspection by the Board or its appointed agent.

F. Permitted Uses

All uses permitted in the underlying Zoning District are permitted in the Aquifer and Wellhead Protection Overlay District unless identified as Prohibited Use or Conditional Use under this Ordinance. All uses within the AWP District shall comply with Performance Standards specified in Section K unless specifically exempt under Section H of this Ordinance.

G. Prohibited Uses

1. The following uses are prohibited in the Aquifer and Wellhead Protection Overlay District:
 - a. Development or operation of a Hazardous Waste Disposal Facility, as defined under RSA 147-A, as amended;
 - b. Development or operation of a Solid Waste Landfill, as defined under RSA 149-M, as amended;
 - c. Outdoor Storage of road salt or other deicing compounds;
 - d. Development or operation of a Junkyard;
 - e. Development or operation of a Snow Dump;
 - f. Development or operation of a wastewater or septage lagoon;
 - g. Subsurface storage of regulated substances, including gasoline, diesel fuel, oil and other refined petroleum products, and the subsurface transmission of regulated substances, including gasoline, diesel fuel, oil, natural gas and other refined petroleum products through pipelines.
 - h. Development or operation of Gasoline Stations;
 - i. Development or operation of Injection Wells;
 - j. Development or operation of an Animal Feedlot;
 - k. Development or operation of a dry cleaning facility, using or storing dry cleaning chemicals on site;
 - l. Non-municipal wells that may result in an aquifer volume reduction that exceeds the recharge rate.

H. Exempted Uses

1. The following uses shall be exempt from the provisions of this Ordinance provided they remain in compliance with all applicable local, state, and federal requirements:
 - a. Any single family dwelling, including a single family dwelling with an Accessory Dwelling Unit;

- b. Any business or facility where Regulated Substances are stored in containers having a capacity of not more than five gallons per container;
- c. Storage of heating fuels for onsite use, or fuels for emergency electric power generation, provided that storage tanks are indoors on a concrete floor or have corrosion control and leak detection, and Secondary Containment accommodations;
- d. Storage of motor fuel in tanks attached to vehicles fitted with permanent fuel lines to enable the fuel to be used by that vehicle;
- e. Storage and use of office supplies;
- f. Temporary storage of construction materials on a site where they are intended to be used;
- g. The transportation and storage of pesticides, as defined in RSA 430:29 XXVI, as amended;
- h. Household hazardous waste collection projects regulated under NH Code of Administrative Rules Env-Wm 401.03(b)(1) and 501.01(b);
- i. Agricultural uses as defined under RSA 21:34-a, as amended, provided such uses do not meet the criteria of an Animal Feedlot operation.

I. Conditional Uses

1. Any use not Prohibited under Section G, but which will require one or more of the following conditions, shall only be permitted by a conditional use permit issued by the planning board in accordance with the following sections. A conditional use permit under this section shall be required for any of the following:
 - a. Storage, handling, and use of Regulated Substances in quantities exceeding 55 gallons or 660 pounds dry weight at any one time, provided an adequate Spill Prevention Control and Countermeasure (SPCC) Plan, prepared in accordance with Section J of this Ordinance, and is approved by the Fire Department;
 - b. Any activities that involve blasting of bedrock;
 - c. Truck and automotive repair facilities; or
 - d. Expansion of existing non-conforming uses or structures shall be allowed when demonstrated that the expansion will result in a more conforming site or use with greater protection for groundwater resources.
2. In granting such approval the Planning Board shall find such use or uses will remain in compliance with the Performance Standards in Section K of this Ordinance as well as all applicable local, state and federal requirements. The Planning Board may, at its discretion, require a performance guarantee or bond in an amount and form acceptable to the Board, be posted to insure compliance with terms and conditions of the Conditional Use Permit.

J. Conditional Use Permit Application Procedures

1. Application for a Conditional Use Permit shall be made on forms supplied by the Planning Board and shall include a narrative and/or site plan containing the following information on one or more pages at a scale suitable to illustrate relevant details of the project, as well as a report

demonstrating compliance with applicable requirements of Section I of this Ordinance. As a minimum, each application shall depict or identify:

- a. North arrow and date of site plan preparation;
 - b. Property boundaries and total parcel area;
 - c. Location of Aquifer and Wellhead Protection Overlay District boundaries;
 - d. Names and addresses of applicant, owners, abutters and holders of conservation restrictions and easements on abutting properties;
 - e. Location of Wetland Conservation District boundaries;
 - f. Soil mapping units;
 - g. Topographic contours at intervals not more than 2 feet;
 - h. Existing and proposed development, including removal of vegetation and alteration of terrain;
 - i. Stormwater management accommodations, both existing and proposed. The applicant shall demonstrate:
 - 1) Post development peak stormwater discharge volumes exiting the site are less than or equal to predevelopment discharge volumes for the 10-year return frequency design storm;
 - 2) Volume of site generated stormwater to be infiltrated on site under post-development conditions is greater than or equal to the volume infiltrated under the predevelopment condition based on evaluation of the 2 year return frequency design storm;
 - 3) Stormwater management facilities shall provide for the removal of sediment;
 - j. Identification of potential risks to the District anticipated as a result of proposed site development together with proposals for mitigation;
 - k. Identification of hazardous materials to be stored or used on site together with a plan for proper management of the same;
 - l. If required by the Planning Board, provisions for monitoring of Groundwater and/or Surface Water quality.
2. Proposals for Conditional Uses, which involve Regulated Substances, shall also be required to submit a Spill Prevention Control and Countermeasure (SPCC) Plan to the Fire Department for review and approval. A SPCC Plan shall include:
- a. A description of the physical layout and a facility diagram, including all surrounding Surface Waters, Wellhead Protection Areas and all water supply facilities on the property or within 100 feet of the property boundaries;
 - b. A contact list with telephone numbers (including cell phone) and email addresses of the facility response coordinator, cleanup contractors, and all appropriate federal, state, and local agencies who must be contacted upon release to the environment;
 - c. A list of all Regulated Substances to be stored on the premise;

- d. A description of containment and/or diversionary structures or equipment to prevent Regulated Substances from infiltrating into the ground.
3. The Planning Board shall: Consider all relevant facts and information prior to making a decision on any application for a Conditional Use Permit; find the proposal is consistent with the stated Purpose of this Ordinance; and find that to the extent possible, the project avoids and minimizes impacts to land situated within the District, including but not limited to the following:
 - a. The proposed activity minimizes degradation of land situated within the District.
 - b. The proposed activity will have no significant negative environmental impact to abutting or downstream properties and/or hydrologically connected water resources.
 - c. The proposed activity incorporates the use of those Best Management Practices recommended by the New Hampshire Department of Environmental Services and/or other State Agencies having jurisdiction.
 - d. All applicable Federal and/or State Permit(s) have been received for the proposed activity in accordance with New Hampshire Code of Administrative Rules – Part Env-Wt 100-800 and Section 404 of the Federal Clean Water Act, as amended.
 - e. Prior to making a decision in regard to the possible approval of any Conditional Use Permit application, the Planning Board shall afford the Conservation Commission an opportunity to review and comment on the application. The Conservation Commission, after consideration and review of an application for a Conditional Use Permit, may recommend the Planning Board impose conditions of approval, if deemed necessary, to mitigate the potential for adverse effects caused by the proposed activity or use.
4. All costs associated with the Conditional Use Permit application and review will be at the Applicant's expense.

K. Performance Standards

The following Performance Standards shall apply to all uses of land in the Aquifer and Wellhead Protection Overlay District unless such use or uses enjoy an exemption under Section H of this Ordinance:

1. For any use that will render more than 15 percent of the total parcel area Impervious, a stormwater management plan consistent with New Hampshire Stormwater Manual Volumes 1-3, December 2008, as amended; published by NH Department of Environmental Services, shall be prepared and submitted to the Planning Board.
2. Conditional uses, as defined under Section I, shall develop stormwater management and pollution prevention plans and include information consistent with *Developing Your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators* (US EPA, Feb 2009, as amended). The plan shall:
 - a. Meet minimum stormwater discharge setbacks between water supply wells and constructed stormwater practices as found within the *Innovative Land Use Planning Techniques: A Handbook for Sustainable Development*, Section 2.1 Permanent (Post-Construction) Stormwater Management, (NHDES 2008, as amended);

- b. Minimize, through a source control plan that identifies pollution prevention measures, the release of Regulated Substances into stormwater;
 - c. Stipulate that expansion or redevelopment activities shall require an amended stormwater plan and may not infiltrate stormwater through areas containing contaminated soils without completing a Phase I Environmental Site Assessment in conformance with ASTM E 1527-05; and
 - d. Maintain a vertical separation of not less than four feet between the bottom of a stormwater management facility which infiltrates or filters and the seasonal high water table elevation as determined by a Licensed Hydrogeologist, Soil Scientist, Engineer or other qualified professional as determined by the Planning Board.
3. The proposed use, either alone or on a cumulative basis, will not cause a significant reduction in the long-term volume of water contained in the underlying aquifer or in the storage capacity of the aquifer.
4. Animal manures, fertilizers, and compost must be stored in accordance with Manual of Best Management Practices for Agriculture in New Hampshire, NH Department of Agriculture, Markets, and Food, June 2011 or as updated;
5. All Regulated Substances stored in containers with a capacity of more than five gallons must be stored in product-tight containers on an Impervious surface designed and maintained to prevent flow to exposed soils, floor drains, and the out-of-doors;
6. Facilities where Regulated Substances are stored must be secured against unauthorized entry by means of a door and/or gate that is locked when authorized personnel are not present and must be inspected weekly by the facility owner;
7. Outdoor Storage areas for Regulated Substances, associated material or waste must be protected from exposure to precipitation and must be located at least 50 feet from Surface Water or storm drains; and outside of protective radii of wells;
8. Secondary Containment must be provided for Outdoor Storage of Regulated Substances in regulated containers and the containment structure must include a cover to minimize accumulation of water in the containment area and contact between precipitation and storage container(s);
9. Containers in which Regulated Substances are stored must be clearly and visibly labeled and must be kept closed and sealed when material is not being transferred from one container to another;
10. Prior to any land clearing or alteration of terrain, any inactive wells on the property shall be identified and must be decommissioned in accordance with Part We 604 Abandonment of Wells of the New Hampshire Water Well Board Rules, as amended. Proposed site activity shall not impact the integrity of any well located on the property.
11. Blasting activities shall be planned and conducted in a manner consistent with best management practices published by the NHDES to minimize Groundwater contamination.
12. All transfers of petroleum products from delivery trucks and storage containers over five gallons in capacity shall be conducted over an Impervious Surface having a Positive Limiting Barrier at its perimeter.

13. At the option of the Planning Board, monitoring wells may be established for all industrial and commercial uses utilizing or storing hazardous or toxic materials. The number and location of monitoring wells shall be determined by the Planning Board. The required frequency and protocol for sampling and testing of Groundwater shall be specified by the Planning Board.
14. Storage of pesticides, herbicides, fertilizers, manure, and other potentially dangerous leachable substances shall be setback from water supply wells in accordance with state regulations including Chapter PES 500, managed in accordance with NH Best Management Practices for Agriculture, and controlled in a manner determined by the Planning Board. Appropriate and applicable Best Practices shall be implemented as recommended by the New Hampshire Department of Environmental Services.
15. When an industrial or commercial use within the AWP District changes to one which involves the use, storage, or disposal of hazardous or toxic materials (Regulated Substances), a Site Plan Review shall be required.
16. Not more than 35% of the total area of any lot or parcel shall be rendered Impervious.
17. Sodium chloride salt stored and used for deicing activities shall be properly managed and applied in accordance with accepted best management practices as published by NHDES to minimize impacts to groundwater and reduce the amount necessary for public safety. Alternatives such as calcium magnesium acetate (CMA) and/or potassium acetate (KA) are encouraged.
18. Floor drains are prohibited unless drain is directed to a dry well used to temporarily store fluids until such time they are legally removed.
19. An impermeable barrier membrane (minimum 20 mil) shall be installed beneath slab floors to prevent the infiltration of any spilled liquids within the building from percolating into the ground. The Planning Board has the discretion to impose any other requirements as necessary to achieve the stated purpose.

L. Existing Nonconforming Uses

Existing nonconforming uses may continue to operate without complying with the terms of this Ordinance provided that any expansion of said use shall require that a Conditional Use Permit be obtained as provided for herein. Existing non-conforming uses must be in compliance with all applicable state and federal requirements, including Env-Wq 401, Best Management Practices Rules.

M. Administration and Enforcement

See Article VII, Section E, "Enforcement".