

HARRISVILLE AQUIFER PROTECTION ORDINANCE

Proposed Zoning Ordinance

ARTICLE 29

29.1 AQUIFER PROTECTION ORDINANCE TOWN OF HARRISVILLE

29.2 PURPOSE: Pursuant to RSA 674:16-17, 674:21, the Town of Harrisville adopts an Aquifer Protection Ordinance and accompanying regulations to help insure a quality future for the people as set forth in the Master Plan. The Town believes that an adequate water supply is indispensable to the future well being, health, welfare, and safety of its citizens. Such an adequate supply of quality water is also essential to the maintenance of the existing natural environment of the Town, an environment the Town wishes to protect as essential to its overall goals and objectives. Since the water resources are under a constantly increasing demand for new and/or competing uses, and since the resources are under an ever increasing potential for contamination, the Town declares such water resources invaluable. These resources should be protected, conserved and managed in the interests of present and future generations. Therefore, the purposes of this Aquifer Protection Ordinance are:

29.2.1 To protect the public health and general welfare of the citizens of Harrisville.

29.2.2. To protect natural areas;

29.2.3 To protect, preserve and maintain the existing and potential groundwater supplies and aquifers from adverse development, contaminants or unwise land use practices.

a) To inventory and address Harrisville's drinking and non-drinking water resources, i.e., water tables, wetlands, springs, rivers, aquifers.

b) Ensure the effective and continuing functioning of the aquifers and the prevention of their contamination and pollution.

c) Protect the overburden aquifer from land uses that may contaminate it. Harrisville's Town Spring, fed by a glacial overburden aquifer, is not protected by an impermeable layer and thus is much more susceptible to contamination by land uses above it.

d) Harrisville has delineated the aquifer and recharge area for the Town Spring to enable more precise measures for protecting the quality and quantity of water. Harrisville should delineate its aquifers, recharge areas, and the condition and extent of any impermeable layer with the intent of protecting the aquifers.

e) The glacial overburden aquifer of the town spring, which is more susceptible to surface pollution, should be protected from land uses that may contaminate it by minimizing the number of septic systems placed on it.

- f) This ordinance would prevent activities from occurring on Nobis-identified recharge areas that could contaminate the aquifers.
- g) The town should limit the use of chemical pesticides, herbicides, and fertilizers on the aquifer.
- h) The quality of the town spring should be maintained by not allowing businesses that deal in hazardous materials such as junk yards, auto repair shops, and gas stations to be located on or near the aquifer.
- i) DES and Harrisville recommend testing wells periodically to guard against consumption of arsenic, radon, lead and other harmful materials. The town should undertake education about this need, as well as facilitating the testing process.
- j) Ensure protection of well water.
- k) The number of wells drilled through any impermeable layer and the activities around those wells should be minimized to ensure contaminants are not allowed to infiltrate the aquifer.
  - l) Preventing contamination or destruction of town wells should be a high priority.
- m) The town should create a no- or low-salt zone for roads that cross the aquifer.

29.2.3 To protect and preserve the location, character and extent of natural water courses;

29.2.4 To promote future growth and development of Harrisville, in accordance with the Master Plan, by insuring the future availability of clean water for drinking and all domestic uses, plus, having available water in quantity for the Town's commercial and/or industrial future requirements.

29.2.5. To ensure withdrawals from the aquifers do not exceed recharge.

29.2.6. To ensure the long-term viability of the Town Spring through protection of its recharge area.

### 29.3 LOCATION:

29.3.1 The Stratified Drift Aquifer Protection Zone is identified as those areas appearing in the NH GRANIT database with maps at <http://www.granit.unh.edu>) based on original information mapped by the Department of Interior, United States Geological Survey, with original reports available from <http://nh.water.usgs.gov> publications.

29.3.2 The Eastview Section of Harrisville as shown on the map: Harrisville NRI: Groundwater Resources.is characterized mainly by stratified drift aquifers.

29.3.3 The Town Spring, an aspect of the Beech Hill - Skatutakee Lake aquifer is characterized mainly by glacial overburden. The map is based on the hydrogeological analyses performed by the ENSR Corporation in 2007 and updated by Nobis Engineering in July, 2014.

29.3.4 Bedrock aquifers.

**29.4 RECHARGE AREAS:**

**29.4.1 STRATIFIED DRIFT RECHARGE AREAS:** For the purpose of this Ordinance, the Direct Recharge area for the U.S.G.S. identified aquifers are considered to be those soils over and in the immediate vicinity of soils directly over the aquifer. These have not been mapped.

**29.4.2 TOWN SPRING OVERBURDEN AQUIFER RECHARGE AREA:** Any land surface within the boundaries of the on the map provided by Nobis Engineering entitled “Aquifer Protection Zone, Skatutakee Lake Spring, Harrisville, NH, July 2014’ within the boundaries described as ‘175 Foot Buffer Around Recharge Area’ surrounding the area described as ‘Skatutekee Lake Spring Direct Recharge Area’.

**29.5 DEFINITIONS**

**AQUIFER:** A geologic formation, group of formations, or part of a formation that is capable of yielding quantities of groundwater usable for municipal or private water supplies. These may include stratified drift aquifers and glacial overburden aquifers as well as bedrock aquifers. In Harrisville, a warrant article adopted in 2007 reads: “It is the intent of the residents of Harrisville to protect aquifers, which serve as existing or potential water supplies, and the aquifer recharge system so as to maintain high water quality and to prevent the degradation of water quality.” This sets a high standard in Harrisville and firmly establishes a clear obligation and responsibility on the part of policy makers.

**BULK SALE:** Removal and sale of groundwater. Harrisville adopted this warrant article for water rights protection in 2012:

“The residents of Harrisville declare that all of our water is held in the public trust as a common resource for the benefit of Harrisville residents and the natural water systems, such as wetlands, springs, streams, rivers, lakes, and aquifers.

No corporation shall engage in water withdrawals in the Town of Harrisville for sale elsewhere. The term ‘corporation’ means any corporation organized under the laws of any state of the United States or any country, or any limited partnership, limited liability partnership, business trust, or Limited Liability Company organized under the laws of any state of the United States or any country. The term ‘engage’ shall include, but not be limited to, the physical extraction of water, and the buying and/or selling (leasing, licensing, etc.) of water extracted within the Town of Harrisville.”

**GROUNDWATER:** All the water below the land surface in sediments of sand, gravel and mixtures, or in rock fractures, capable of yielding water to a well or emerging from a spring.

**GROUND AND SURFACE WATER MINING:** Water being withdrawn or extracted at a rate exceeding the rate of recharge.

**GROUNDWATER RECHARGE AREAS:** Those primary, direct and indirect areas from which water is added to the aquifers by the natural processes of infiltration and precipitation.

**LEACHABLE WASTES:** Waste materials, including solid wastes, sludge and agricultural wastes that are capable of releasing contaminants to the surrounding environment.

**MINING:** The removal of geologic materials such as topsoil, sand and gravel, metallic ores, or bedrock to be crushed or used as building stone.

**NON-CONFORMING USES:** Any lawful use of building, structures, premises, land or parts thereof existing as of the effective date of this Ordinance, or amendment thereto, and not in conformance with the provisions of this Ordinance, shall be considered to be a non-conforming use.

**RECHARGE AREAS:** Any land surface from which groundwater recharge occurs.

**SOLID WASTE:** Any discarded or abandoned material including refuse, putrescible materials, septage, or sludge, as defined by New Hampshire Solid Waste Rules HE-P 1901.03. Solid waste includes solids, liquids, semi-solids, or waste containing gaseous material resulting from residential, industrial, commercial, mining, or agricultural operations, or waste from households, community and institution activities.

**STRUCTURE:** Anything constructed or erected, except a boundary wall or fence, the use of which requires location on the ground or attachment to something on the ground. For the purposes of this Ordinance, buildings are structures.

**TOXIC OR HAZARDOUS MATERIALS:** Any substance or mixture of such physical, chemical, or infectious characteristics as to pose a significant, actual or potential hazard to water supplies, or other hazard to human health, if such substance or mixture were discharged to land or waters of this Town. Toxic or hazardous materials include, without limitation, volatile organic chemicals, petroleum products, heavy metals, radioactive or infectious wastes, acids and alkalies, asphalt and roofing tars, and include products such as pesticides, herbicides, solvents and thinners, and such other substances as defined in New Hampshire Water Supply and Pollution Control Rules., Section Ws 410.04(1), in New Hampshire Solid Waste Rules He-P 1901.03(v), and in the Code of Federal Regulations 40 CFR 261. Wastes generated by the following commercial activities are presumed to be toxic or hazardous, unless and except to the extent that anyone engaging in such an activity can demonstrate the contrary to the satisfaction of the Planning Board:

- Chemical and bacteriological. laboratory operation, including laboratory operations in educational institutions.
- Dry cleaning and laundries.
- Electronic circuit manufacturing.
- Metal plating, finishing and polishing.
- Painting, wood preserving and furniture stripping.
- Pesticide and herbicide application.
- Photographic and printing processes.

**29.6 APPEALS:** Where bounds of the identified aquifer areas, as delineated, are in doubt or in dispute, any landowner aggrieved by such delineation may appeal the boundary location to the Planning Board. Upon receipt of such appeal, the Planning Board shall suspend further action on development plans related to the area under appeal and shall engage, at the landowner's expense, a qualified hydrogeologist to prepare a report determining the proper location and extent of the aquifer area(s) relative to the property in question. The aquifer map shall be modified, if need be, by such determination subject to review and approval by the Planning Board.

**29.7 USE REGULATIONS**

29.7.1 **MINIMUM LOT SIZE:** refer to lot sizes for Residential, Lake Front, Rural Agricultural, Commercial and Industrial zones.

29.7.2 **MAXIMUM LOT COVERAGE:** Within the Aquifer Protection Zone, no more than 10% of a single lot, including the portion of any new street abutting the lot, may be rendered impervious to infiltration. Maximum lot coverage may be increased if upon site plan review, drainage requirements are properly engineered.

29.8 **PROHIBITED USES:** The following uses are prohibited in the Aquifer Protection Zone except where permitted to continue as a non-conforming use.

29.8.1 Disposal of solid waste other than brush.

29.8.2 Disposal of hazardous waste.

29.8.3 Subsurface storage of petroleum and other refined petroleum products.

29.8.4 Industrial uses which discharge processed waters.

29.8.5 Storage of road salt or other de-icing chemicals.

29.8.6 Dumping of snow from off-site whether or not containing de-icing chemicals.

29.8.7 Storage of unregistered automobile, junk and salvage yards.

29.8.8 Waste injection wells.

29.8.9 Mining of ground and surface water resources such that more water is extracted than is replaced by recharge.

29.8.10 The withdrawal of ground and surface water resources for sale outside of Harrisville

29.9 **PERMITTED USES:** The following activities may be permitted provided they are conducted in accordance with the purpose and intent of this Ordinance:

29.9.1 Single and two-family residential development with no increase in impermeable areas above 10%.

29.9.2 Activities designed for conservation of soil, water, plants and wildlife.

29.9.3 Outdoor recreation, nature study, boating, fishing and hunting and other activities directly associated with the conservation of wildlife.

29.9.4 Normal operation and maintenance of existing water bodies and dams, splash boards and other water control, supply and conservation devices.

29.9.5 Foot, bicycle, horse paths, ski trails and bridges.

29.9.6 Farming, gardening, nursery, forestry, harvesting and grazing provided that fertilizers, herbicides, pesticides, manure and other leachables are used appropriately at levels that will not cause groundwater contamination. Materials will be stored under shelter.

29.9.7 Maintenance and repair of any existing structure.

29.10 SPECIAL EXCEPTIONS: There shall be no special exceptions related to the Town Spring recharge area.

The Zoning Board of Adjustment may grant a Special Exception for those uses otherwise permitted in the underlying zoning district, keeping in mind the threats outlined in the memo From James H. Vernon to the Board of Selectmen of 20 December 2007, Results of Task 6, Contaminant Threats Assessment, only if written findings of fact are made that all of the following are true:

29.10.1 The proposed use will not detrimentally affect the quality of the groundwater contained in any aquifer by directly contributing to pollution or by increasing the long-term susceptibility of any aquifer to potential pollutants.

29.10.2 The proposed use will not cause a significant reduction in the long-term volume of water contained in any aquifer or in the storage capacity of any aquifer.

29.10.3 The proposed use will discharge no waste water on site other than that typically discharged by domestic waste water disposal system and will not involve onsite disposal of toxic or hazardous wastes as here defined.

29.10.4 The proposed use complies with all other applicable sections of this Ordinance.

29.10.5 The Zoning Board of Adjustment may require that the applicant provide data or reports prepared by a registered professional engineer or qualified groundwater consultant to assess any potential damage to the aquifer that may result from the proposed use. The Zoning Board of Adjustment shall engage such professional assistance as it requires to adequately evaluate such reports and to evaluate, in general, the proposed use in light of the above criteria.

#### 29.11 CONDITIONAL USES

29.11.1 The excavation of earth products providing such excavation does not go lower than four (4) feet above the water table.

29.11.2 Construction of ponds subject to site plan review.

29.11.3 There shall be no conditional uses within the Town Spring Recharge Area.

29.12 SEPTIC SYSTEM DESIGN AND INSTALLATION: In addition to meeting all local and state septic system siting requirements, all new waste water disposal systems installed or existing waste water disposal systems that are being repaired or replaced in the Aquifer Zone and the Town Spring Overburden Aquifer Recharge Area shall be designed by a registered professional engineer licensed in New Hampshire and approved by the Planning Board. Waste water disposal systems within the Town Spring Overburden Aquifer Recharge Area shall be designed to reflect the special sensitivity of this zone to discharges that might harm the aquifer.

29.13 ADDITIONAL GUIDELINES: Except for single family and two-family dwellings, the following guidelines shall be observed within the Aquifer Protection Zones:

29.13.1 Safeguards: Provision shall be made to protect against toxic or hazardous materials discharge or loss resulting from corrosion, accidental damage, spillage, or vandalism through measures such as: spill control provisions in the vicinity of chemical or fuel delivery points, secured storage areas for toxic or hazardous materials, and indoor storage provisions for corrodible or dissolvable materials. For operations which allow the evaporation of toxic or hazardous materials into the interiors of any structure, a closed vapor recovery system shall be provided for each such structure to prevent discharge of contaminated condensate into the groundwater.

29.13.2 Uses: there shall be no withdrawals of aquifer waters for sale outside of Harrisville; nor shall there be any uses of such waters that exceed the recharge capacity of the aquifer. Nor shall there be any rendering of the recharge area insufficient to maintain the recharge capacity for the aquifer.

29.13.2 Location: Where the premises are partially outside the Aquifer Protection Overlay Zone, potential pollution sources such as on-site waste disposal systems shall be located outside the Zone.

29.13.3 Drainage: Runoff from impervious surfaces shall be recharged on the site, and diverted toward areas covered with vegetation for surface infiltration to the extent possible. Commercial and Industrial dry wells shall be used only where other methods are not feasible, and shall be preceded by oil, grease, and sediment traps to facilitate removal of contaminants.

29.13.4 Inspection: All uses granted under Section 29.10 may be subject to annual inspections by the Building Inspector or if another agent, that agent must be approved by both the Board of Selectmen and the Planning Board. The purpose of these inspections is to ensure continued compliance with the conditions under which approvals were granted. A fee for inspection shall be charged to the owner according to a fee schedule determined by the Selectmen.