DRAFT Aquifer Protection Regulation | Wendell Board of Health

MGL c. 111 s. 31 and s. 122 | [*date of adoption*]

Section I. SCOPE OF AUTHORITY

The Town of Wendell Board of Health adopts the following Aquifer Protection Regulation pursuant to authorization granted by MGL c. 111 s. 31 and 122. This regulation shall apply, as specified in Section III, to all applicable facilities within the Town of Wendell.

Section II. PURPOSE OF REGULATION

Whereas:

· siting of certain uses and activities has the potential to release hazardous waste, petroleum products and other pollutants into drinking water supply areas; and

· discharges of leachate, pathogens, and other pollutants have repeatedly threatened surface water and groundwater quality throughout Massachusetts; and

· surface water and groundwater resources contribute to the Town's private and potential public drinking water supplies;

The purpose of this regulation is to:

1. **Protect and preserve the aquifer's viability** as a potential future municipal water source by limiting land uses and practices within the Aquifer Protection District that risk groundwater contamination, including pollution from hazardous materials, waste, and industrial processes.
2. **Promote sustainable development** by ensuring that future growth does not compromise the Town's future water security.
3. **Foster public awareness** about the importance of the aquifer as the Town's most significant water resource.

Background: The aquifer within the designated Aquifer Protection District is a critical, potential future groundwater resource for the Town. Scientific assessments and hydrological studies have identified it as a sustainable and reliable source of drinking water, critical for the Town's growth and long-term water needs.

Rationale for Protection:

1. **Critical Water Source**: The aquifer is a non-renewable resource that, if compromised, could affect the health and safety of the entire town. Contamination or depletion of the aquifer could lead to significant public health risks and place an undue burden on future generations who will rely on it for drinking water.
2. **Preventing Contamination**: Industrial and commercial activities have the potential to introduce pollutants into the aquifer. These contaminants could include hazardous

chemicals, waste byproducts, and other materials that, once introduced into the groundwater system, are difficult, expensive, or impossible to remove or treat. By restricting such activities in the APD, the Town can significantly reduce the risk of contamination and preserve the aquifer's ability to provide clean water.

3. **Ensuring Future Water Security**: Safeguarding this aquifer now will help ensure that it remains viable and uncontaminated for future generations. By limiting potentially hazardous land development and monitoring activities within the APD, the Town can mitigate the risk of contamination and secure a reliable source of drinking water.
4. **Alignment with Long-Term Planning**: This regulation aligns with the Town's future goals for sustainable development. Protecting the aquifer now will safeguard against future events that might threaten the Town's water supply.
5. **Public Health and Safety**: The Town's primary responsibility is to protect the health, welfare, and well-being of its residents. By preventing industrial activities in the APD, the Town can protect its residents from potential water contamination, which is crucial for both public health and economic sustainability. The financial and social costs of addressing water contamination once it occurs far exceed the proactive costs of prevention.

Conclusion: This Aquifer Protection Regulation is a necessary measure to ensure that the Town's most critical water resource is preserved for future generations. By proactively restricting industrial development within the designated Aquifer Protection District, the Town is safeguarding its future water supply and promoting the health, welfare, and well-being of its residents. This regulation is an essential part of the Town's commitment to sustainable growth, environmental stewardship, and the long-term security of its drinking water resources.

The Wendell Board of Health adopts the following regulation, under its authority as specified in Section I, as a preventative measure for the purpose of preserving and protecting public drinking water quality and to minimize the risk to public health and the environment.

Section III. APPLICABILITY

The regulation shall apply to all applicable facilities within an Aquifer Protection District located within the Town of Wendell. This drinking water supply area is delineated as Draft Aquifer Protection District on the following map entitled Town of Wendell Board of Health Water Resources Map, dated 2025, and attached here as Exhibit A.

Section IV. DEFINITIONS

Automobile Graveyard: An establishment that is maintained, used, or operated for storing, keeping, buying, or selling wrecked, scrapped, ruined, or motor vehicle parts, as defined in MGL c.140B, s.1

Aquifer: A geologic formation composed of rock, sand or gravel that contains significant amounts of potentially recoverable water.

Aquifer Protection District: The area delineated as an overlay district on the Town of Wendell Board of Health Water Resources Map.

Battery Energy Storage Facility: A facility designed to store large quantities of energy using batteries or similar technologies, including but not limited to lithium-ion, sodium-sulfur, or other energy storage technologies. This term includes any associated infrastructure, such as charging equipment, management systems, and emergency containment systems.

CMR: Code of Massachusetts Regulations.

Commercial/Industrial Facility: A public or private establishment where the principal use is the supply, sale, and/or manufacture of services, products, or information, including but not limited to: manufacturing, processing, or other industrial operations; service or retail establishments; printing or publishing establishments; research and development facilities; small or large quantity generators of hazardous waste; laboratories; hospitals.

Commercial Fertilizer: Any substance containing one or more recognized plant nutrients which is used for its plant nutrient content, and which is designed for use, or claimed to have value in promoting plant growth, except un-manipulated animal and vegetable manures, marl, lime, limestone, wood ashes, and gypsum, and other products exempted by state regulation.

Discharge: The accidental or intentional disposal, deposit, injection, dumping, spilling, leaking, pouring, or placing of toxic or hazardous material or hazardous waste upon or into any land or water such that it may enter the surface water or groundwater.

Dry Well: A subsurface pit with open-jointed lining or holes through which stormwater drainage from roofs, basement floors, foundations or other areas seeps into the surrounding soil.

Fire or Explosion Hazard: The risk of a fire or explosion that could result from thermal runaway events, malfunctioning equipment, or other accidents at battery energy storage facilities, with potential to release hazardous chemicals or substances into the environment.

Groundwater Protection Area: The drinking water supply area protected by this regulation.

Hazardous Material: Any substance in any form which because of its quantity, concentration, or its chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with one or more substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment, when improperly stored, treated, transported, disposed of, used, or otherwise managed. Hazardous materials include, without limitation, synthetic organic chemicals, petroleum products, heavy metals, radioactive or infectious materials, flammable electrolytes, and all substances defined as toxic or hazardous under MGL c. 21E. This term shall not include hazardous waste or oil.

Hazardous Waste: A substance or combination of substances, which because of quantity, concentration, or physical, chemical or infectious characteristics may cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating

reversible illness or pose a substantial present or potential hazard to human health, safety, or welfare or to the environment when improperly treated, stored, transported, used or disposed of, or otherwise managed. This term shall include all substances identified as hazardous pursuant to the Hazardous Waste Regulations, 310 CMR 30.000.

Historical High Groundwater Table: A groundwater elevation determined from monitoring wells and historical water table fluctuation data compiled by the United States Geological Survey.

Impervious Surface: Material or structure on, above, or below the ground that does not allow precipitation or surface water runoff to penetrate into the soil.

Interim Wellhead Protection Area (IWPA): The MassDEP designated protection radius around a public water well that lacks a Zone II.

Junkyard: An establishment that is maintained, operated, or used for storing, keeping, buying, or selling junk, or for the maintenance or operation of an automobile graveyard, as defined in MGL c.140B, s.1.

Landfill: A facility established in accordance with a valid site assignment for the purposes of disposing solid waste into or on the land, pursuant to the Solid Waste Regulations, 310 CMR 19.006.

MassDEP: Massachusetts Department of Environmental Protection.

MGL: Massachusetts General Law.

Non-Sanitary Wastewater: Discharges from industrial and commercial facilities containing waste from any activity other than collection of sanitary sewage.

Petroleum Product: Includes but is not limited to fuel oil; gasoline; diesel; kerosene; aviation jet fuel; aviation gasoline; lubricating oils; oily sludge; oil refuse; oil mixed with other wastes; crude oils; or other liquid hydrocarbons regardless of specific gravity. Petroleum product shall not include liquefied petroleum gas including, but not limited to, liquefied natural gas, propane, or butane.

Open Dump: A facility operated or maintained in violation of the Resource Conservation and Recovery Act 42 USC 4004(a)(b), or state regulations and criteria for solid waste disposal.

Recharge Areas: Land areas, such as Zone II and Interim Wellhead Protection Areas, where precipitation and surface water infiltrates into the ground to replenish groundwater and aquifers used for public drinking water supplies.

Septage: The liquid, solid, and semi-solid contents of privies, chemical toilets, cesspools, holding tanks, or other sewage waste receptacles. This term shall not include any material that is hazardous waste, as defined by the Hazardous Waste Regulations 310 CMR 30.000.

Sludge: The solid, semi-solid, and liquid residue that results from a process of wastewater treatment or drinking water treatment including wastewater residuals. This term shall not include grit, screening, or grease and oil which are removed at the headworks of a facility.

Thermal Runaway Event: A chain reaction within a battery where heat generated during charging or discharging causes an uncontrolled increase in temperature, potentially leading to the release of hazardous materials, fire, or explosion.

Treatment Works: All devices, processes and properties, real or personal, used in the collection, pumping, transmission, storage, treatment, disposal, recycling, reclamation, or reuse of waterborne pollutants, but not including any works receiving hazardous waste from the site of the works for the purpose of treatment, storage, or disposal.

Utility Works: Regulated activities providing public services, including roads, water, sewer, electricity, gas, telephone, transportation, and their associated maintenance activities. This term shall include the installation of detention and retention basins for the purpose of controlling stormwater.

Very Small Quantity Generator (VSQG): Any public or private entity, other than residential, which produces less than 27 gallons (100 kilograms) a month of hazardous waste or waste oil but not including any acutely hazardous waste as defined in 310 CMR 30.136.

Waste Oil Retention Facility: A waste oil collection facility for automobile service stations, retail outlets, and marinas which is sheltered and has adequate protection to contain a spill, seepage, or discharge of petroleum waste products in accordance with MGL c.21, s.52A.

Zone II: The delineated recharge area to a public drinking water well as approved by MassDEP and defined under the MA Drinking Water Regulations 310 CMR 22.00.

Section V. PROHIBITIONS

A. The following land uses and activities are prohibited in the Groundwater Protection Area:

1. Landfills and open dumps;

2. Landfills (monofills) receiving only wastewater residuals and/or septage, including those approved by MassDEP pursuant to MGL c. 21 s.26 through s.53, MGL c.111 s.17, and MGL c.83 s.6 and s.7;

3. Automobile graveyards and junkyards;

4. Disposal or stockpiling of chemically treated snow and ice that have been removed from highways and roadways from outside the Groundwater Protection Area;

5. Petroleum, fuel oil, and heating oil bulk stations and terminals including, but not limited to, those listed under North American Industry Classification System (NAICS) Codes 424710 and 454311, except for liquefied petroleum gas;

6. Treatment or disposal works, subject to 314 CMR 5.00, for non-sanitary wastewater, including those activities listed under 310 CMR 15.004(6), except for:

a. replacement or repair of existing treatment works that will not result in a design capacity greater than the design capacity of the existing treatment works;

b. treatment works approved by MassDEP designed for the treatment of contaminated ground or surface water and operating in compliance with 314 CMR 5.05(3) or 5.05(13); and

c. publicly owned treatment works.

7. Facilities that generate, treat, store, or dispose of hazardous waste subject to MGL. c. 21C and 310 CMR 30.000, except for:

a. very small quantity generators (VSQGs);

b. household hazardous waste collection centers or collection events;

c. waste oil retention facilities; and

d. treatment works for the restoration of contaminated groundwater or surface water in compliance with MGL. c.21E and 310 CMR 40.000.

8. Existing floor drain systems located in a hazardous material or hazardous waste process area or storage area within a commercial or industrial facility and which discharges to the ground without a MassDEP permit or authorization. Any existing facility with such a drainage system shall be required to either seal the floor drain in accordance with the state plumbing code, 248 CMR 10.00, connect the drain to a municipal sewer system (with all appropriate permits and pre-treatment), or connect the drain to a holding tank meeting the requirements of all appropriate MassDEP regulations and policies.

9. Facilities, including large-scale battery energy storage facilities, that have the potential to release toxic chemicals, flammable electrolytes, or other hazardous materials into the environment in the event of a thermal runaway event or fire. This includes any facility using or storing batteries or materials that may pose a risk of contamination of groundwater resources due to failure or hazardous release during such incidents.

B. The following land uses and activities are prohibited unless designed in accordance with the specified performance standards:

1. Storage of liquid hazardous materials and/or liquid petroleum products, unless such materials are stored above ground and on an impervious surface, and in containers (or above ground tanks) within a building, or outdoors in covered containers (or above ground tanks) designed and operated to hold either 10% of the total possible storage capacity of all containers, or 110% of the largest container’s storage capacity, whichever is greater. However, these storage requirements shall not apply to the replacement of existing tanks or systems for the keeping, dispensing, or storing of gasoline provided the replacement is performed in a manner consistent with state and local requirements;

2. Rendering impervious more than 15% or 2,500 square feet of any lot or parcel, whichever is greater, unless artificial recharge, that will not degrade water quality, is provided using methods demonstrated to be capable of removing contaminants from stormwater and which are consistent with methods and best management practices described in MassDEP's 'Stormwater Handbook', Volumes I,II,III, as amended;

3. Removal of soil, loam, sand, gravel, or any other mineral substances within four feet of the historical high groundwater table, unless the substances removed are re-deposited within 45 days of removal on site to achieve a final grading greater than four feet above the historical high water mark, and except for excavations for the construction of building foundations, the installation of utility works, or wetland restoration work conducted in accordance with a valid Order of Condition issued pursuant to MGL. c. 131, s.40;

4. Storage of sludge and septage, unless such storage is in compliance with 310 CMR 32.30 and 310 CMR 32.31;

5. Storage of de-icing chemicals including sodium chloride and chemically treated abrasives, unless such storage is within a structure designed to prevent the generation and release of contaminated leachate and runoff;

6. Storage of animal manure, unless such storage is within a structure designed to prevent the generation and release of contaminated leachate and runoff; and

7. Storage of commercial fertilizers, unless such storage is within a structure designed to prevent the generation and release of contaminated leachate and runoff.

Section VI. EFFECTIVE DATES FOR ALL FACILITIES

A. The effective date of this regulation is the date posted on the front page of the regulation, which shall be identical to the date of adoption of the regulation.

B. Certification of conformance with the provisions of this regulation by the Board of Health shall be required prior to issuance of construction and occupancy permits.

C. As of the effective date all new construction and/or applicable change of use within the Town of Wendell shall comply with the provisions of this regulation.

Section VII. PENALTIES

Any person who violates any provision of this regulation, or who fails to comply with any Order by the Board of Health, for which a penalty is not otherwise provided in any of the general laws, shall be subject to a fine of not less than $200.00 but no more than $1000.00. Each day's failure to comply with an Order may constitute a separate violation.

Section VIII. SEVERABILITY

If any provision of this regulation is declared invalid by a court of competent jurisdiction, such invalidity shall not affect any remaining provisions of this regulation. Any part of this regulation subsequently invalidated by a new state law or modification of an existing state law shall automatically be brought into conformity with the new or amended law and shall be deemed to be effective immediately.

Exhibit A. Town of Wendell Board of Health Water Resources Map