



AYER BOARD OF HEALTH

Aquifer Protection District *Health* Regulations

Adopted May 24, 2000; Amended October 11, 2000

Section 1. Purpose of District

The purpose of this Aquifer protection district is to:

- a. promote the health, safety, and general welfare of the community by ensuring an adequate quality and quantity of water for the residents, institutions, and businesses of the Town of Ayer;
- b. preserve and protect existing and potential sources of drinking water supplies;
- c. conserve the natural resources of the Town of Ayer; and prevent temporary and permanent contamination of the environment.

Section 2. Scope of Authority

The Aquifer protection district is an overlay district superimposed on the zoning districts. This overlay district shall apply to all new construction, reconstruction, or expansion of existing buildings, change of use and new or expanded uses. Applicable activities or uses in a portion of one of the underlying zoning districts which fall within the Aquifer protection district must additionally comply with the requirements of this district. Uses prohibited in the underlying zoning districts shall not be permitted in the Aquifer protection district.

Section 3. Definitions

For the purposes of this section, the following terms are defined below:

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

Aquifer Protection District: The zoning district defined to overlay other zoning districts in the Town of Ayer. The aquifer protection district may include specifically designated recharge areas.

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

Interim Wellhead Protection Area (IWPA): For public water systems using wells or wellfields that lack a DEP-approved Zone II, DEP will apply an IWPA, which is defined as the one-half mile radius measured from the well or wellfield for sources whose approved pumping rate is 100,000 gpd or greater.

Mining: The removal or relocation of geologic materials such as topsoil, sand, gravel, metallic ores, or bedrock.

Potential Drinking Water Sources: Areas which could provide significant potable water in the future.

Recharge Areas: Areas that collect precipitation or surface water and carry it to aquifers. Recharge areas may include areas designated as Zone I, Zone II, Zone III or Interim Wellhead Protection Areas.

Special Permit Granting Authority (SPGA): The Special Permit Granting Authority under this regulation shall be the Board of Health.

Toxic or Hazardous Material: Any substance or mixture of physical, chemical, or infectious characteristics posing a significant, actual or potential hazard to water supplies or other hazards to human health if such substance or mixture were discharges to land or water in the Town of Ayer. Toxic or hazardous materials include, without limitation; synthetic organic chemicals, petroleum products, heavy metals, radioactive or infectious wastes, acids and alkalis, and all substances defined as Toxic or Hazardous under Massachusetts General Laws (M.G.L.) Chapter (c.) 21C and 21E and 310 CMR 30.00, and also include such products as solvents and thinners in quantities greater than normal household use.

Zone I: The DEP approved protective 400 foot radius surrounding a public water supply well that must be owned by the water supplier or controlled through a recorded conservation restriction.

Zone II: The area of an aquifer which contributes water to a well under the most severe recharge and pumping conditions that can be realistically anticipated (180 days of pumping safe yield with no recharge from precipitation), as defined in 310 CMR 22.00.

Zone III: The land area beyond the Zone II from which surface and groundwater drain into the Zone II, as defined in 310 CMR 22.00.

Section 4. Establishment and Delineation of Aquifer Protection District

The Aquifer Protection District is herein established to include all land mapped as a designated Zone II area surrounding a public water supply well, and certified by the Massachusetts Department of Environmental Protection or Interim Wellhead Protection Areas. The Aquifer Protection District shall be shown on a map at a scale of 1 inches to 800 feet, to be entitled "Aquifer Protection District" dated October 1999, which shall be considered to be superimposed over other zoning districts. This map, as it may be amended from time to time, shall be on file in the offices of the Town Clerk, Building Inspector and Planning Board, and with any explanatory material thereon, is hereby made a part of this health regulation. The Board of Health reserves the right to extend the provisions of this regulation to any future potential water supply sources.

Section 5. District Boundary Disputes

Where the bounds of the Aquifer Protection District, as delineated on the Aquifer Protection District map, are in doubt or in dispute, the burden of proof shall be upon the owner(s) of the land in question to show where they should properly be located. A special permit, in accordance with the provisions of Section 8 of this health regulation, may be granted to allow relief from the requirements of the Aquifer Protection District, subject to a finding by the Special Permit Granting Authority (SPGA) that the property in question in accordance with this paragraph is not located within a Zone II. If the applicant wishes to pursue the dispute regarding the boundaries, then at the discretion of the Town, the Town may engage a professional engineer (civil or sanitary), hydro geologist or soil scientist to determine more accurately the locations and extent of an aquifer or recharge area and shall charge the owner(s) for all of the cost of the investigation. For disputes which may arise related to Zone II areas, the determination of the location and extent of the Zone II shall be in conformance with the criteria set forth in 310 CMR 22.00 and in the DEP's Guidelines and Policies for Public Water Systems and approved by DEP.

Section 6. Use Regulations

In the Aquifer protection district the following regulations shall apply:

A. Permitted Uses

The following uses are permitted within the Aquifer protection district, provided that all necessary permits, orders, or approvals required by local, state, or federal law are also obtained:

1. conservation of soil, water, plants, and wildlife;
2. outdoor recreation, nature study, boating, fishing, and hunting where otherwise legally permitted;
3. foot, bicycle and/or horse paths, and bridges;
4. normal operation and maintenance of existing water bodies and dams, splash boards, and other water control, supply and conservation devices;
5. maintenance, repair, and enlargement of any existing structure, subject to Section B (prohibited uses) and Section C (special permitted uses);
6. residential and commercial/industrial development, subject to Section B (prohibited uses) and Section C (special permitted uses);
7. farming, gardening, nursery, conservation, forestry, harvesting, and grazing, subject to Section B (prohibited uses) and Section C (special permitted uses);

8. construction, maintenance, repair and enlargement of drinking water supply related facilities such as, but not limited to, wells, pipelines, aqueducts, tunnels, filtration plants, municipal water and wastewater pumping stations, and water storage facilities.

B. Prohibited Uses

The following uses, including any use that is not expressly permitted under Section 6A or Section 6C of this bylaw, shall be deemed to be prohibited:

1. landfills and open dumps as defined in 310 CMR 19.006;
2. automobile graveyards and junkyards, as defined in M.G.L. c. 140B Section 1;
3. landfills for sludge and septic only;
4. storage of sludge and septage, unless such storage is in compliance with 310 CMR 32.30 and 310 CMR 32.31;
5. facilities that generate, use, treat, store, or dispose of hazardous waste that are subject to M.G.L. c. 21C and 310 CMR 30.00 including but not limited to metal plating, chemical manufacturing, wood carving, furniture stripping, dry cleaning and auto body shops, except for the following:
 - a. very small quantity generators as defined under 310 CMR 30.000;
 - b. water remediation treatment works approved by DEP for the treatment of contaminated ground or surface waters;
6. storage of hazardous materials, as defined in M.G.L. c. 21E.,
7. storage of liquid hazardous materials, as defined in MGL. c. 21E, and/or liquid petroleum products unless such storage is:
 - a. above ground level, and
 - b. on an impervious surface, and
 - c. either
 - i. in container(s) or above ground tank(s) within a building, or
 - ii. outdoors in covered container(s) or above ground tank(s) in an area that has a containment system 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 keeping, dispensing or storing of gasoline provided the replacement is performed in a manner consistent with state and local requirements.
8. petroleum, fuel oil and heating oil bulk stations and terminals, including but not limited to, those listed under Standard Industrial Classification (SIC) Codes 5171 and 5983. SIC Codes are established by the U.S. Office of Management and Budget and may be

determined by referring to the publication, Standard Industrial Classification Manual and any subsequent amendments thereto.

9. storage of deicing chemicals, including but not limited to sodium chloride and calcium chloride;
10. stockpiling and disposal of snow or ice containing sodium chloride, calcium chloride, chemically treated abrasive or other chemicals used for the removal of snow or ice on roads which has been removed from highways and street located outside of Zone II.
11. storage of animal manure unless covered or contained in accordance with the specifications of the United State Soil Conservation Service;
12. earth removal, consisting of the removal of soil, loam, sand, gravel, or any other earth material (including mining activities) to within 6 feet of historical high groundwater as determined from monitoring wells and historical water table fluctuation data compiled by the United States Geological Survey, except for excavations for building foundations, roads, or utility works;
13. treatment or disposal works for non-sanitary wastewater that are subject to 314 CMR 4.00, except:
 - a. the replacement or repair of an existing treatment works that will not result in a design capacity greater than the design capacity of the existing treatment works;
 - b. the replacement or repair of an existing subsurface sewage disposal system(s) that will not result in a design capacity greater than the design capacity of the existing system(s);
 - c. treatment works approved by the Department of Environmental Protection designed for the treatment of contaminated groundwater;
 - d. sewage treatment facilities in those areas with existing water quality problems when it has been demonstrated to the Department of Environmental Protection's and the Special Permit Granting Authority's satisfaction both that these problems are attributable to current septic problems and that there will be a net improvement in water quality.
14. storage of commercial fertilizers and soil conditioners, as defined in MGL Chapter 128, Sec. 64 unless stored in a building;
15. the use of septic system cleaners which contain toxic chemicals, including but not limited to, methylene chloride and 1-1-1 trichlorethane.
16. individual sewage disposal systems that are designed in accordance with 310 CMR 15.00 to receive more than 110 gallons of sewage per quarter acre under one ownership per day or 440 gallons of sewage on anyone acre under one ownership per day, whichever is greater provided that:

- a. the replacement or repair of a system, which will not result in an increase in design capacity over the original design, or the design capacity of 310 CMR 15.00, whichever is greater, shall be exempted;
 - b. in cluster subdivisions the total sewage flow allowed shall be calculated based on the number of perkable lots in the entire parcel;
- 17. underground storage and-or transmission of non-liquid petroleum products including liquefied petroleum gas, unless all requirements for secondary containment specified in 310 CMR 30.693 and the Town of Ayer's 1985 Underground Storage Tank Bylaw are met. The local enforcement authority is the Ayer Fire Department, as specified in Massachusetts State Law (527 CMR 9.00).
- 18. medical, testing and research laboratories that dispose of biological or chemical wastes, except such laboratories associated with a medical group or office consisting of less than three (3) doctors.
- 19. car washes, except when connected on public water and sewer.
- 20. trucking or bus terminals, motor vehicle gasoline sales, heliports and airports.
- 21. any floor drainage systems in existing facilities, in industrial or commercial process areas or hazardous material and/or hazardous waste storage areas, which discharge to the ground without a DEP 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 2.00), 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 DEP regulations and policies.

C. Uses and Activities Requiring a Special Permit

The following uses and activities are permitted only upon the issuance of a Special Permit by the Special Permit Granting Authority (SPGA) under such conditions as they may require:

- 1. enlargement or alteration of existing uses that do not conform to the Aquifer Protection District;
- 2. those activities that involve the handling of toxic or hazardous materials in quantities greater than those associated with normal household use, unless previously permitted to do so, and the activity is in full compliance with state regulations at the time of the passage of this regulation, permitted in the underlying zoning (except as prohibited under Section B). Such activities shall require a special permit to prevent contamination of groundwater;
- 3. the application of pesticides, including herbicide, insecticides, fungicides, and rodenticides, for non-domestic or non-agricultural uses in accordance with state and federal standards. The special permit shall be granted if such standards are met. If

applicable, the applicant should provide documentation of compliance with a Yearly Operation Plan (yap) for vegetation management operations under 333 CMR 11.00 or a Department of Food and Agriculture approved Pesticide Management Plan or Integrated Pest Management (IPM) program under 333 CMR 12.00;

4. the application of fertilizers for non-domestic or non-agricultural uses. Such applications shall be made in a manner so as to minimize adverse impacts on groundwater due to nutrient transport, deposition, and sedimentation;
5. the construction of dams or other water control devices, ponds, pools or other changes in water bodies or courses, created for swimming, fishing or other recreational uses, agricultural uses, or drainage improvements. Such activities shall not adversely affect water quality or quantity;
6. any use that will render impervious more than 15% or 2,500 square feet of any lot, whichever is greater. A system for groundwater recharge must be provided which does not degrade groundwater quality. For non-residential uses, recharge shall be by storm water infiltration basins or similar system covered with natural vegetation, and dry wells shall be used only where other methods are infeasible. For all non-residential uses, all such basins and wells shall be preceded by oil, grease, and sedimentation traps to facilitate removal of contamination. Any and all recharge areas shall be permanently maintained in full working order by the owner.

Section 7. Procedures for Issuance Special Permit

- A. The Special Permit Granting Authority (SPGA) under this regulation shall be the Board of Health. Such special permit shall be granted if the SPGA determines that the intent of this regulation, as well as its specific criteria are met. The SPGA shall not grant a special permit under this section unless the petitioner's application materials include, in the SPGA's opinion, sufficiently detailed, definite and credible information to support positive findings in relation to the standards given in this section.
- B. The applicant shall file 6 copies of a site plan and attachments. The site plan shall be drawn at a proper scale as determined by the SPGA and be stamped by a professional engineer. All additional submittals shall be prepared by qualified professionals. The site plan and its attachments shall at a minimum include the following information where pertinent:
 1. a complete list of chemicals, pesticides, herbicides, fertilizers, fuels, and other potentially hazardous materials to be used or stored on the premises in quantities greater than those associated with normal household use;
 2. for those activities using or storing such hazardous materials, a hazardous materials management plan shall be prepared and filed with the Hazardous Materials Coordinator, Fire Chief, and Board of Health. The plan shall include:

- a. provisions to protect against the discharge of hazardous materials or wastes to the environment due to spillage, accidental damage, corrosion, leakage, or vandalism, including spill containment and cleanup procedures;
 - b. provisions for indoor, secured storage of hazardous materials and wastes with impervious floor surfaces;
 - c. evidence of compliance with the Regulations of the Massachusetts Hazardous Waste, Management Act 310 CMR 30, including obtaining an EPA identification number from the Massachusetts Department of Environmental Protection.
 3. proposed down-gradient locations(s) for groundwater monitoring well(s), should the SPGA deem the activity a potential groundwater threat.
- C. Upon receipt of the special permit application, the SPGA shall transmit one copy to the Planning Board, the Conservation Commission, and Town Engineer/Department of Public Works for their written recommendations. Failure to respond in writing within 35 days of receipt by the Board shall indicate approval or no desire to comment by said agency. Six copies of the application shall be furnished by the applicant. One (1) copy of the application materials must be transmitted to and retained by the Town Clerk for viewing by the public during office hours. The material shall be transmitted to the Town Clerk by the SPGA.
- D. The SPGA may grant the required special permit only upon finding that the proposed use meets the following standards, those specified in Section 6 of this regulation, and any regulations adopted by the SPGA. The proposed use must:
1. in no way, during construction or thereafter, adversely affect the existing, or potential quality of quantity of water that is available in the Aquifer protection district; and
 2. be designed to avoid substantial disturbance of the soils, topography, drainage, vegetation, and other water-related natural characteristics of the site to be developed.
- E. The SPGA may adopt regulations to govern design features of projects. Such regulations shall be consistent with subdivision regulations adopted by the municipality.
- F. The SPGA shall hold a hearing, in conformity with the provision of M.G.L. Chapter 40A, Section 9, within 65 days after the filing of the application and after the review by the Town Boards, Departments and Commissions.

Notice of the public hearing, shall be given by publication and posting and by first-class mailings to "parties of interest" as defined in M.G.L. Chapter 40A Sec. 11. The decision of the SPGA and any extension, modification, or renewal thereof shall be filed with the SPGA and Town Clerk within 90 days following the closing of the public hearing. Failure of the SPGA to act within 90 days shall be deemed as a granting of the permit. However, no work shall commence until a certification is recorded as required by said Section 11.

- G. Written notice of any violations of this Aquifer Protection District Health Regulation shall be given by the Board of Health to the responsible person as soon as possible after detection of a violation or a continuing violation. Notice to the assessed owner of the property shall be deemed notice to the responsible person. Such notice shall specify the requirement or restriction violated and the nature of the violation, and may also identify the actions necessary to remove or remedy the violations and preventive measures required for avoiding, future violations and a schedule of compliance. A copy of such notice shall be submitted to the Building Inspector, the Board of Health, Conservation Commission and Town Engineer/Department of Public Works. The cost of containment, clean up or other action of compliance shall be borne by the owner and operator of the premises.

Section 8. Special Requirements and Restrictions

The following special requirements and restrictions shall apply to the Aquifer protection district:

- A. Access road(s) to extractive operation sites shall include a gate or other secure mechanism to restrict unauthorized public access to the site.
- B. The use of sodium chloride for ice control shall be minimized consistent with the public highway safety requirements.
- C. No surface or groundwater withdrawal of more than 25,000 gallons per day will be permitted without the approval of the Town of Ayer Conservation Commission, Board of Health, Water Commissioners, and Superintendent of Public Works. Withdrawals exceeding 100,000 gallons per day will be required to obtain approval from the Commonwealth of Massachusetts Department of Environmental Protection. The proponent requesting permission to withdraw more than 25,000 gallons per day must reimburse the Town of Ayer for consultants and/or engineers and/or any services deemed necessary by any of the Town's Boards or Agencies to determine if the usage would be detrimental to the water quality and quantity.
- D. All residential subdivision housing projects, new industrial and commercial development within the Zone II must be serviced by the municipal sewage systems. In residential A-1 not served by the municipal sewer system, a single family dwelling unit may be constructed on a lot within the district and within a residential zone provided that said lot within has a minimum lot size of 20,000 sq. ft. for a single family dwelling unit and an additional 20,000 sq. ft. for each conversion dwelling unit. If said lot is connected to municipal sewage, then the original zoning requirements may be followed. The Zoning Board of Appeals (ZBA) may grant a Special Permit within Zone II area for the particular area as listed in Article V, Section 1 of the Town of Ayer Zoning Bylaw XIX. In an area not served by municipal sewage, an existing and conforming business or industry may continue to operate and expand until such time as municipal sewage is available at their site, provided that the Town of Ayer Board of Health and the Nashoba Associated Boards of Health regulations are met for on-site sanitary sewage disposal.

At such time as municipal sewage is brought to within 400 feet of an existing business or industry, that business or industry must connect to the municipal sewage system within a two (2) year period from the time the Town accepts the sewage system.

Section 9. Non-conforming Use

Non-conforming uses which were lawfully existing, begun or in receipt of a building or special permit, prior to the first publication of notice of public hearing for this regulation may be continued. Such non-conforming uses may be changed, extended or altered, as specified in M.G.L. c. 40A, s 6 provided that there is a finding by the SPGA that such change, extension or alteration does not increase the danger of groundwater pollution from such use and that such change, extension or alteration shall not be substantially more detrimental than the existing non-conforming use.

Section 10. Enforcement

The enforcement agent shall be the Board of Health.

For situations that require remedial action to prevent adverse impact to the water resources within the Aquifer protection district, the Town of Ayer, the Building Inspector, the Board of Health, or any of their agents may order the owner or operator of the premises to remedy the violation. If said owner and/or operator does not comply with said order, the Town of Ayer, the Building Inspector, the Board of Health, or any of their agents, if authorized to enter upon such premises under the terms of the special permit or otherwise, may act to remedy the violation. The remediation cost shall be the responsibility of the owner and operator of the premises.

Section 11. Violation Fee Schedule

- A. If a property owner is found to be in violation of any part(s) of this regulation, he/she will receive a cease and desist order from the enforcement officer delineating the violations. The property owner will be given twenty-one (21) days from the time the notice is served in which to comply with this cease and desist order.
- B. If, after twenty-one (21) days the property owner does not comply with the cease and desist order, a fine of three hundred dollars (\$300.00) per day will be assessed upon the owner until such time as the violation has been corrected.

Section 12. Reciprocity

Any Zone II delineation and/or Interim Wellhead Protection Zone which has been approved by the Massachusetts Department of Environmental Protection Water Supply Division under M.G.L. Chapter 40A for municipal wells serving abutting communities which are located in part or in whole within the Town of Ayer's jurisdiction will be protected under this regulation with the same restrictions as the Town of Ayer's protection zones, provided, that the abutting town adopts a Water Protection District regulation which will include as part of it the Town of Ayer's

DEP approved Zone II and/or Interim Wellhead Protection Zone, which is located in part or in whole within the jurisdiction of the abutting community, take any action thereon or in relation thereto.

Section 13. Severability

A determination that any portion of provision of this overlay protection district is invalid shall not invalidate any other portion or provision thereof, nor shall it invalidate any special permit previously issued thereunder.

Ayer Board of Health

(signed)

Margaret Kidder
Chairman

(signed)

C. Jane Witherow
Clerk

(signed)

Laurie Rosas
Member

* * * * *

These regulations were passed on 5-24-00

These regulations went into effect on 5-24-00

These regulations were amended on 10-11-00

Reviewed with no changes (reformatted only) on _____

Mary Spinner, Chair, Ayer Board of Health

Margaret M. Kidder, Clerk, Ayer Board of Health

Marilyn McMillan, Member, Ayer Board of Health