

**ARTICLE #            AMEND ZONING BYLAW – GROUNDWATER PROTECTION DISTRICT**  
(Two-thirds vote)

To see if the Town will vote to amend the Zoning Bylaw Section 4.3 – Groundwater Protection District, by amending various sections as follows:

- A. In section 4.3.1 - Purpose, in the first paragraph insert after the phrase “present and future residents of Acton” the following:

“to prevent temporary and permanent contamination of GROUNDWATER and SURFACE WATER.”.

And, insert the words “and quantity” after the “quality” near the end of the first paragraph.

*[The first paragraph of subsection 4.3.1 currently reads:*

*Purpose – GROUNDWATER is the sole source of drinking water available to the residents, businesses and industries of the Town of Acton. The purpose of the GROUNDWATER Protection District is to protect the public health, safety, and welfare by protecting the Town's limited present and future drinking water supply, to ensure a sufficient quantity of potable pure drinking water for the present and future residents of Acton, and to limit the adverse effects of the USE and development of land on the quality of the GROUNDWATER and SURFACE WATER resources of the Town of Acton.]*

- B. In section 4.3.2 - District Boundaries, amend various subsections as follows:

1. In subsection 4.3.2.1 - ZONE 1, in the section title insert “- Well Protection Area –“ after “ZONE 1”.
2. In subsection 4.3.2.2 - ZONE 2, delete the last sentence and replace it with:

“All ZONES 2 have been approved by the Massachusetts Department of Environmental Protection (DEP) as the State approved Zones II, and all ZONES 2 described and referred to herein shall be deemed identical to the DEP approved Zones II.”

*[The last sentence of subsection 4.3.2.2 currently reads:*

*All Zones 2 have been approved by the Massachusetts Department of Environmental Protection (DEP) as the State approved Zones 2.]*

3. In subsection 4.3.2.4 – Zone 4, in the 3<sup>rd</sup> sentence delete the words “lower lying” before the phrase “areas of ZONES 1, 2 and 3”;

and in the last sentence delete the word “possible” before the phrase “contamination of the GROUNDWATER”.

*[Section 4.3.2.4 currently reads:*

*ZONE 4 - The Watershed Protection Area – Consists of the entire TOWN including ZONES 1-3 and separates the TOWN into watershed areas along the existing GROUNDWATER divides. The areas of ZONE 4 outside from the boundaries of ZONES 1, 2 and 3 consist primarily of bedrock, glacial till and small isolated sand and gravel deposits. Water from these areas will eventually recharge into the lower lying areas of ZONES 1, 2 and 3, although at a rather slow rate. Recharge from these areas into ZONES 1, 2 and 3 occurs through movement of GROUNDWATER and SURFACE WATER. The purpose of ZONE 4 is to promote public awareness that all GROUNDWATER areas in the Town are interconnected and to prevent possible contamination of the GROUNDWATER from any source.]*

4. In subsection 4.3.2.5 - Boundary Determination, delete the words “as amended” in both occurrences and replace them with the words “as last amended”.

And, delete the last sentence and replace it with:

“Locating the boundary between ZONE 3 and ZONE 4 may be assisted through field investigations conducted by a Certified Professional Soil Scientist (CPSS) certified by the Soil Science Society of America (SSSA), by a soil scientist who is certified as a Professional Member of the Society of Soil Scientist of Southern New England (SSSSNE), by a Certified Professional Geologist (CPG) certified by the American Institute of Professional Geologists (AIPG), or by a Massachusetts Registered Professional Engineer versed in soil identification and classification.”

*[The last sentence of subsection 4.3.2.5 currently reads:*

*Locating the boundary between ZONE 3 and ZONE 4 may be assisted through field investigations conducted by a soil scientist who is certified under qualification class A (advanced qualifications) by the Society of Soil Scientist of Southern New England or by a Professional Engineer versed in soil identification and classification.]*

5. In subsection 4.3.2.6 - Split ZONE LOTS, add at the end the phrase “, subject to the provisions set forth in section 4.3.6.5”.

*[Subsection 4.3.2.6 currently reads:*

*Split ZONE LOTS – Notwithstanding any other provisions of this Bylaw, whenever a GROUNDWATER Protection District ZONE boundary line divides a LOT, each portion of the LOT shall comply with the requirements of this Bylaw applicable to its respective ZONE.]*

C. In section 4.3.3 - Definitions, amend various subsections as follows:

1. In the section lead paragraph numbered 4.3.3, insert the word “District” after “GROUNDWATER Protection” so that the paragraph correctly refers to the GROUNDWATER Protection District.
2. Delete subsection 4.3.3.1 – AQUIFER, and replace it with:

4.3.3.1 AQUIFER – A geologic formation composed of FRACTURED BEDROCK, sand or gravel that contains significant amounts of potentially recoverable groundwater.

*[Subsection 4.3.3.1 currently reads:*

*AQUIFER – An area of permeable deposits of rock or soil, containing significant amounts of potentially recoverable water.]*

3. Insert a new subsection 4.3.3.5 as follows:

4.3.3.5. FRACTURED BEDROCK – is a geological formation (e.g. crystalline rock, marble, schist) where groundwater flows through cracks and fractures. Flow through fractures is typically relatively fast. FRACTURED BEDROCK is an alternative AQUIFER to STRATIFIED DRIFT AQUIFERS. FRACTURED BEDROCK typically underlies the overlying sand and gravel and glacial till deposits. Recharge to the FRACTURED BEDROCK is typically from these overlying deposits. Although the Town of Acton has not yet utilized FRACTURED BEDROCK AQUIFERS as a source of drinking water,

protection of them is vital as GROUNDWATER from a FRACTURED BEDROCK AQUIFER can recharge the overlying sand and gravel deposits and other surface water bodies.

And, renumber the follow subsequent subsections of section 4.3.3 in the proper sequential order.

4. In subsection 4.3.3.5 (as renumbered) - GENERATOR OF HAZARDOUS MATERIALS OR WASTE, delete the unnecessary section references “pursuant to Section 4.3.3.14” and “as defined in Section 4.3.3.7”.

5. Delete subsection 4.3.3.6 (as renumbered) - GROUNDWATER, and replace it with:

4.3.3.7 GROUNDWATER – Water beneath the ground surface in the zone of saturation where every pore space between sediment particles or all open fractures in FRACTURED BEDROCK is saturated with water.

*[Subsection 4.3.3.6 currently reads:*

*GROUNDWATER – Water beneath the ground surface in the zone of saturation where every pore space between rock and soil particles is saturated with water.]*

6. In subsection 4.3.3.7 (as renumbered) - HAZARDOUS MATERIAL OR WASTE, delete the phrase “petroleum or derivatives thereof” beginning on the first line, and replace it with “PETROLEUM PRODUCTS, coal, or derivatives thereof”.

7. Insert a new subsection 4.3.3.10 as follows:

4.3.3.10 LEACHABLE WASTES – Waste materials including SOLID WASTE, sludge, agricultural wastes, and composts that are capable of releasing water borne contaminants to the surrounding environment including the AQUIFERS of the Town.

And, renumber the subsequent subsections of section 4.3.3 in the proper sequential order.

8. In subsection 4.3.3.9 (as renumbered) - MAXIMUM GROUNDWATER ELEVATION, third sentence, delete the phrase “as determined by the United States Geological Survey (USGS)” and replace it with “as most recently determined by the United States Geological Survey (USGS)”.

9. Insert a new subsection 4.3.3.12 as follows:

4.3.3.12 PETROLEUM PRODUCT – PETROLEUM PRODCT means oils of any kind or origin or in any form (M.G.L. c. 21E, § 2) and includes, but is not limited to, fuel oil; gasoline; diesel fuel; kerosene; aviation jet fuel; aviation gasoline; lubricating oils; oily sludge; oil refuse; oil mixed with other wastes; crude oils; coal tar emulsions, driveway sealers, 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.

And, renumber the subsequent subsections of section 4.3.3 in the proper sequential order.

10. Relocate into the proper alphabetical order, and renumber accordingly, the current subsection 4.3.3.10 - UNDISTURBED OPEN SPACE, to be located after subsection 4.3.3.15 (as renumbered) - SURFACE WATER.
  11. In subsection 4.3.3.11 (as renumbered) - SOLID WASTE, correct the Code of Massachusetts Regulation reference from 310 C.M.R. 18 to 310 C.M.R. 19.
  12. In subsection 4.3.3.12 (as renumbered) - SPECIAL WASTE, correct the Code of Massachusetts Regulation reference from 310 C.M.R. 19.061(6)(c)4 to 310 C.M.R. 19.061(3)(b), and delete the reference in the parentheses at the end of the section.
- D. In section 4.3.6 - Other Design and Operation Requirements, amend various subsections as follows:
1. Delete subsection 4.3.6.1 - FILL, and replace it with:
    - 4.3.6.1 FILL – FILL material shall not contain HAZARDOUS MATERIAL OR WASTE, SPECIAL WASTE, SOLID WASTE or LEACHABLE WASTE. This Section shall also apply in ZONE 4.

*[Subsection 4.3.6.1 currently reads:  
FILL – FILL material shall not contain HAZARDOUS MATERIAL OR WASTE, SPECIAL WASTE, or SOLID WASTE. This Section shall also apply in ZONE 4.]*
  2. In subsection 4.3.6.2 - Watershed Recharge, delete the 2<sup>nd</sup> sentence and replace it with:

“Where a Special Permit or Subdivision Approval is required the Special Permit Granting Authority or the Planning Board, or the Zoning Enforcement officer if no Special Permit is required, shall require a hydrologic budget or water balance calculation for the site, showing pre- and post-development conditions, prepared by a Certified Professional Soil Scientist (CPSS) certified by the Soil Science Society of America (SSSA), by a soil scientist who is certified as a Professional Member of the Society of Soil Scientist of Southern New England (SSSSNE), or by a Massachusetts Registered Professional Engineer experienced in hydrogeology.”

*[The section sentence of subsection 4.3.6.2 currently reads:  
Where a Special Permit or Subdivision Approval is required the Special Permit Granting Authority or the Planning Board shall require a hydrologic budget or water balance calculation for the site, showing pre- and post-development conditions, prepared by a Massachusetts Registered Professional Engineer experienced in hydrogeology.]*
  3. In subsection 4.3.6.3 - Treatment and Renovation of Runoff, add the following phrase at the end of the last sentence:

“, or by the Zoning Enforcement officer if no Special Permit is required, if he determines the intent of this section is met.”

*[The last sentence of subsection 4.3.6.3 currently reads:  
Alternate methods of runoff treatment and renovation may be approved by the Special Permit Granting Authority if the Special Permit Granting Authority determines the intent of this Section is met.]*
  4. In subsection 4.3.6.5 - Location, delete the first sentence and replace it with:

“Where a LOT is divided into two or more protection ZONES, potential pollution sources, such as HAZARDOUS MATERIALS OR WASTE processing, remediation, storage and disposal systems, septic systems, or wastewater treatment plants, shall be located and contained on that portion of the LOT which is in the ZONE farthest away from the public wells.”

*[The 1<sup>st</sup> sentence of subsection 4.3.6.5 currently reads:*

*Where a LOT is divided into two or more protection ZONES, potential pollution sources, such as HAZARDOUS MATERIALS OR WASTE processing, storage and disposal systems, septic systems, or wastewater treatment plants, shall be located on that portion of the LOT which is in the ZONE farthest away from the public wells.]*

E. In the lead paragraph of section 4.3.7 - GROUNDWATER Protection District Use Regulations, correct this title by replacing the word “Use” with “USE”.

F. In Table 4.3.7.2 - USE Regulations within the GROUNDWATER Protection District, amend various lines as follows:

1. Delete lines 6., 7. and 8., and replace them with:

	ZONE 1 Well Protection Area	ZONE 2 Recharge Protection Area	ZONE 3 Aquifer Protection Area
6. Aboveground STORAGE of PETROLEUM PRODUCTS for purposes other than heating the premises on which it is located****	N	N	Y****
7. Underground STORAGE of PETROLEUM PRODUCTS or other HAZARDOUS MATERIALS OR WASTES	N	N	N
8. Underground STORAGE of PETROLEUM PRODUCTS, or other HAZARDOUS MATERIALS OR WASTES associated with residential USE	N	N	N
<i>[Lines 6., 7. and 8. currently read as follows:</i>			
<i>6. STORAGE of petroleum products for purposes other than heating the premises on which it is located</i>	<i>N</i>	<i>N</i>	<i>Y</i>
<i>7. Underground STORAGE of fuel oil, gasoline, or other HAZARDOUS MATERIALS</i>	<i>N</i>	<i>N</i>	<i>N</i>
<i>8. Underground STORAGE of fuel oil, gasoline, or other HAZARDOUS MATERIALS associated with residential USE</i>	<i>N</i>	<i>N</i>	<i>N]</i>

2. Delete line 13 and replace it with:

	ZONE 1 Well Protection Area	ZONE 2 Recharge Protection Area	ZONE 3 Aquifer Protection Area
13. STORAGE outside of a BUILDING of fertilizers, pesticides, herbicides, deicing chemicals; and STORAGE outside of a BUILDING of LEACHABLE WASTE except as provided in line 14. below	N	N	N
<i>[Line 13. currently reads: 13. Outdoor STORAGE of fertilizer, animal manure, soil conditioner, pesticide, herbicide and, deicing chemicals</i>	N	N	Y

3. Insert a new line 14. as follows:

	ZONE 1 Well Protection Area	ZONE 2 Recharge Protection Area	ZONE 3 Aquifer Protection Area
14. STORAGE outside of a BUILDING of animal manure, soil conditioner, or compost in aggregate quantities larger than ten (10) cubic yards	N	N	Y

And, renumber the subsequent lines of Table 4.3.7.2 in the proper sequential order.

4. Amend the Notes section at the bottom of Table 4.3.7.2 as follows:
- In footnote (\*) - delete the errant phrase at the beginning of the second sentence, which reads “Except as indicated in NOTE(\*\*\*)”,.
  - Insert new footnotes (\*\*\*) and (\*\*\*\*) and follows:
    - (\*\*\*) *See Hazardous Materials Control Bylaw.*
    - (\*\*\*\*) *Aboveground storage of quantities greater than 1,320 gallons requires compliance with Federal SPCC regulations (Spill Prevention Control and Countermeasures Plan; 40 CFR 112)*
  - Insert below “gpd Gallons per day” a new line stating “sf Square feet”.

- G. In section 4.3.8 - Special Permit for the change or extension of nonconforming USES in the Groundwater Protection District, correct the Code of Massachusetts Regulations in subsection 4.3.8.2.a) from 314 C.M.R. 6.00 to 314 C.M.R. 5.00.

And, insert a new subsection 4.3.8.2.d) as follows:

- d) The Planning Board may impose conditions in the special permit to protect the GROUNDWATER, SURFACE WATER and overall WATER SUPPLY of the Town of Acton, including without limitation conditions to require the placement and periodic sampling and testing of GROUNDWATER monitoring wells or SURFACE WATER at the applicant's expense around any aboveground or underground storage tank, SOLID or HAZARDOUS WASTE area, or any structure or activity that may adversely affect an AQUIFER ZONE as defined in Section 4.3.2. The Planning Board may require that the sampling be paid for by the applicant and conducted by an agent of the Acton Water District.

, or take any other action relative thereto.

### SUMMARY

Groundwater Protection District has been modified and updated in order to improve the protections afforded to both the quality and quantity of the drinking water supplied to the residents of the Town. Definitions were added in order to include new types of aquifers (i.e. fractured bedrock), leachable wastes, and petroleum products. Updated references on aboveground and underground storage tanks to make them in compliance with Federal Regulations (40 CFR 112) (relates to aboveground storage tank volume). Defined volume limits (10 cubic yards) of storage outside of a building for animal manure, soil conditioner, or compost. To protect the groundwater, surface water and overall water resources of the Town of Acton, the Planning Board can require the placement and periodic sampling and testing of groundwater monitoring wells or surface water at the applicant's expense around any aboveground or underground storage tank, solid or hazardous waste area, or any structure or activity that may adversely affect an aquifer zone as defined in Section 4.3.2. The Planning Board may require that the sampling be paid for by the applicant and conducted by an agent of the Acton Water District.[k1]

Direct inquiries to: Roland Bartl, Planning Director: [planning@acton-ma.gov](mailto:planning@acton-ma.gov) / (978) 929-6631

Selectman assigned:

**Recommendations:**      **Board of Selectmen**      **Finance Committee**      **Planning Board**