

4.3 GROUNDWATER Protection District

4.3.1 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 *general* 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, *to prevent temporary and permanent contamination of GROUNDWATER and SURFACE WATER*~~the environment~~, and to limit the adverse effects of the USE and development of land on the quality *and quantity* of the GROUNDWATER and SURFACE WATER resources of the Town of Acton.

Comment [A1]: Unnecessary

The GROUNDWATER Protection District is an overlay district whose boundaries are superimposed on all districts established by this Bylaw and whose regulations are in addition to any other regulations established by this Bylaw. *This overlay district shall apply to all new construction, reconstruction, or expansion of existing buildings and new or expanded uses.*

Comment [A2]: This sentence needs to be revised to conform to Chapter 40A, Section 6, which provides: "Except as hereinafter provided, a zoning ordinance or by-law shall not apply to structures or uses lawfully in existence or lawfully begun, or to a building or special permit issued before the first publication of notice of the public hearing on such ordinance or by-law required by section five, but shall apply to any change or substantial extension of such use, to a building or special permit issued after the first notice of said public hearing, to any reconstruction, extension or structural change of such structure and to any alteration of a structure begun after the first notice of said public hearing, to any reconstruction, extension or structural change to a single or two-family residential structure does not increase the nonconforming nature of said structure. Pre-existing nonconforming structures or uses may be extended or altered, provided, that no such extension or alteration shall be permitted unless there is a finding by the permit granting authority or by the special permit granting authority designated by ordinance or by-law that such change, extension or alteration shall not be substantially more detrimental than the existing nonconforming use to the neighborhood..."

The regulations in this district are not intended to supersede or limit the protections contained in state or federal GROUNDWATER protection programs, but to supplement protections contained in other statutes and regulations. The GROUNDWATER Protection District encompasses the entire Town, but it is divided into four separate protection zones, the regulations for which vary depending on their proximity to the Town's present ~~and future~~ drinking WATER SUPPLY wells. *Once The locations of future drinking WATER SUPPLY wells have not been approved, installed or placed into operation, the GROUNDWATER Protection District boundaries set forth in Section 4.3.2 and the Groundwater Protection District Map of the Town of Acton shall be updated to include Zones 1-3 of each such future drinking WATER SUPPLY well determined. However, the protections placed on the existing protection zones are such that utmost consideration is has been taken to ensure the protection of all groundwater resources in the Town.*

One way to rewrite this sentence would be as follows: "This overlay district shall apply to all BUILDINGS, STRUCTURES and USES to the maximum extent permitted by M.G.L. c. 40A, Section 6."

4.3.2 District Boundaries – The GROUNDWATER Protection District is divided into four protection zones, as follows:

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4.3.2.1 ZONE 1 - The area from which GROUNDWATER will travel to a pumping municipal well within a one year time period, based on average recharge conditions and anticipated pumping, as established in the "Groundwater Protection District Map of the Town of Acton, January 1989", prepared by Goldberg, Zoino and Associates (GZA) in the "Final Report - Aquifer Protection Zones, Town of Acton, Massachusetts, January 1989".

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4.3.2.2 ZONE 2 - The Recharge Protection Area – The area within which GROUNDWATER will move toward a pumping municipal well at the end of a 180 day period of no surficial recharge and full design capacity pumping of

the well (as more fully defined by the Massachusetts Department of Environmental Protection in 310 CMR 22.02), established in the "Groundwater Protection District Map of the Town of Acton, January 1989", as last amended and most recently adopted by Town Meeting. For the Clapp/Whitcomb and the School Street well fields, the Zone II 2 delineation was prepared by Goldberg, Zoino and Associates (GZA) in the "Final Report - Aquifer Protection Zones, Town of Acton, Massachusetts, January 1989". For the Conant I and II well fields, the ZONE II 2 delineation was prepared by Dufresne-Henry, Inc. for the Acton Water District in the "Report on Conant II Pumping Test", dated January 1993. For the Kennedy/Marshall well fields, the ZONE II 2 delineation was prepared by Dufresne-Henry, Inc. for the Acton Water District in the "Report on Kennedy No.1 and Marshall Wellfields Zone II Delineation", dated October 1996. For the Assabet well fields, the ZONE II 2 delineation was prepared by Stantec Consulting for the Acton Water District in the report "Prolonged Pumping Test Assabet Well No. 3", dated May 2008 and revised by Stantec Consulting in a letter report dated January 2009. All Zones II 2 have been approved by the Massachusetts Department of Environmental Protection (DEP) as the State approved Zones II 2.

- 4.3.2.3 ZONE 3 - The AQUIFER Protection Area – The Area of the TOWN underlain with the geologic formation of STRATIFIED DRIFT, based on the U.S. Soil Conservation Service's (SCS) soil map field sheets 1988 and Interim Soil Survey Report, 1986; and based on the United States Geologic Survey's (USGS) Surficial Geology Maps for the Hudson Maynard Quadrangle, 1956, and the Assabet River Basin, Hydrologic Investigations Atlas, 1969.
- 4.3.2.4 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.
- 4.3.2.5 Boundary Determination – The locations of the various ZONES are shown on the "Groundwater Protection District Map of the Town of Acton, January 1989", as amended April 2011, consisting of Map Number 3A showing all ZONES at a scale of 1"=1200', and of Map Number 3B. Map Number 3B consists of sheets 3B-1 through 3B-18 showing ZONE 1 and ZONE 2 at a scale of 1"=200'. The sheets 3B-1 through 3B-18 correspond to the matching town atlas pages, which are also indicated on these sheets, and the ZONE

delineations are either traced on these corresponding town atlas pages or on matching overlays to these pages. The "Groundwater Protection District Map of the Town of Acton, January 1989", as amended *April 2011*, is available at the office of the Town Clerk and the Engineering and Planning Departments. Actual site locations of the ZONE 1 and ZONE 2 boundary lines shall be determined by scaling from the Map Number 3B. Actual site location of the boundary line between ZONE 3 and ZONE 4 shall be located by the Zoning Enforcement Officer, or in the case of a Special Permit under Section 4.3.8, by the Planning Board, based on information from Map Number 3A. 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 *or Professional Geologist* versed in soil identification and classification. *The methodology used to ~~locate delineate a boundary~~ **BOUNDARY** line between ZONE 3 and ZONE 4 shall be presented to the Planning Board and Acton Water District for review and approval. ~~before a re-delineation is performed.~~*

4.3.2.6 Split ZONE LOTS – Notwithstanding any other provisions of this Bylaw, whenever a GROUNDWATER Protection District ZONE boundary line divides a LOT, *the entire ~~each portion of the~~ LOT shall comply with the requirements of this Bylaw applicable to the more restrictive ~~its respective~~ ZONE. ~~Discharge of water extracted from a higher ZONE into a lower ZONE must meet the requirements of the lower ZONE.~~*

Comment [A3]: This amendment may not be consistent with the "uniformity" requirement of Chapter 40A, Section 4.

4.3.3 Definitions – For the purpose of the GROUNDWATER Protection District the following terms shall have the following meaning. The terms defined below are capitalized in this Section 4.3 in addition to the terms defined in Section 1.

4.3.3.1 AQUIFER – *A geologic formation composed of FRACTURED BEDROCK, sand or gravel that contains significant amounts of potentially recoverable groundwater. ~~An area of permeable deposits of rock or soil, containing significant amounts of potentially recoverable water.~~*

4.3.3.2 DIVERSION BOX – A precast concrete box or similar STRUCTURE, designed and positioned to direct a defined initial portion of runoff from a storm event in one direction and to direct remainder of the runoff water in another direction.

4.3.3.3 PRIMARY, SECONDARY, TERTIARY TREATED EFFLUENT – As defined from time to time in the applicable regulations of the Massachusetts Department of Environmental Protection.

4.3.3.4 FILL – Any material taken from on-site or off-site used for the purpose of augmenting or altering existing on-site topography, including but not limited

to, landscaping, grading, or leveling of naturally occurring depressions in the land or of man-made excavations.

4.3.3.5. ~~Fractured Bedrock~~ **FRACTURED BEDROCK – FRACTURED BEDROCK**
~~Fractured bedrock is becoming an alternative aquifer to STRATIFIED DRIFT~~
AQUIFERS. FRACTURED BEDROCK ~~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**
~~bedrock~~ **AQUIFERS** ~~aquifers~~ as a source of drinking water, protection of
them is vital as **GROUNDWATER** from ~~this a~~ **FRACTURED BEDROCK**
AQUIFER ~~type~~ can recharge the overlying sand and gravel deposits and
other surface water bodies.

4.3.3.6 **5** **GENERATOR OF HAZARDOUS MATERIALS OR WASTE** – Any individual or business that produces, uses or stores (stores: within the meaning of STORAGE pursuant to Section 4.3.3.17 **4**) on site **HAZARDOUS MATERIAL OR WASTE** as defined in Section 4.3.3.8 **7**, as a **PRINCIPAL** or **ACCESSORY USE** and in quantities exceeding normal household or **BUILDING** maintenance needs.

4.3.3.7 **6** **GROUNDWATER** – Water beneath the ground surface in the zone of saturation where every pore space between ~~sediment rock and soil~~ particles *or all open fractures in FRACTURED BEDROCK* is saturated with water.

4.3.3.8 **7** **HAZARDOUS MATERIAL OR WASTE** – Any substance, including petroleum, *coal*, or derivatives thereof, or combination of substances which because of their quantity, concentration, physical, chemical, infectious, flammable, combustible, radioactive, or toxic characteristics, may cause or significantly contribute to a present or potential risk to human health, safety or welfare; to the **GROUNDWATER** resources; or to the natural environment. Any substance, including but not limited to those regulated under the applicable Acton Board of Health regulations and under any of the following State and Federal laws and regulations, or any amendments thereof, shall be considered **HAZARDOUS MATERIAL OR WASTE**:

M.G.L., Chapter 21C, 315 C.M.R. 2.04;

M.G.L., Chapter 21E, 310 C.M.R. 40.00;

M.G.L., Chapter 111F, 105 C.M.R. 670.00;

M.G.L., Chapter 148, Section 13;

Toxic Substances Control Act - 15 U.S.C s.2601 et seq.;

Federal Insecticide, Fungicide and Rodenticide Act - 7 U.S.C s.136 et seq.;

Resource Conservation and Recovery Act - 42 U.S.C s.6901 et seq.;

Comprehensive Environmental Response, Compensation and Liability Act of 1980 - 42 U.S.C s. 9601 et seq.;

Federal Clean Water Act - 33 U.S.C s.1251 et seq..

For the purposes of this Section, sanitary domestic wastes from residential sources shall not be considered a HAZARDOUS MATERIAL OR WASTE.

4.3.3.9 ~~8~~ IMPERVIOUS COVER – Refers to material covering the ground, with a coefficient of runoff greater than 0.7 (as defined in Data Book for Civil Engineers by Seelye; C = runoff/rainfall) including, but not limited to, macadam, concrete, pavement and BUILDINGS.

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~~ aquifers of the Town.*

4.3.3.11 ~~9~~ MAXIMUM GROUNDWATER ELEVATION – The height of the GROUNDWATER table when it is at its maximum level or elevation. This level is usually reached during the months of December through April. Determination of the MAXIMUM GROUNDWATER ELEVATION shall be made based upon the historical high GROUNDWATER table as determined by the United States Geological Survey (USGS), *(for example, using the U.S.G.S method described in “Probable High Ground-Water Levels in Massachusetts,” Open file Report 80-1205 by M.H. Frimpter)*, Acton Board of Health records, data from monitoring wells or other adequate field testing, whichever indicates the highest elevation. Where applicable, the determination of the MAXIMUM GROUNDWATER ELEVATION shall be made with the additional assumption that any well, which during pumping would draw down the GROUNDWATER table at the site, is not operating and that the GROUNDWATER table is leveled off to its natural state.

4.3.3.12 ~~10~~ UNDISTURBED OPEN SPACE – An area within the OPEN SPACE that lies outside of any disturbances due to clearing, grading, paving, building, landscaping or other site development activities. It may be subject to limited and selected cutting of trees, removal of dead wood, or yearly mowing of grass and brush.

4.3.3.13 *~~PETROLEUM PRODUCT~~ ~~Petroleum Product~~ – ~~PETROLEUM PRODUCT~~ means *oils of any kind or origin or in any form 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~~ ~~Petroleum product~~ shall not include liquefied petroleum gas including, but not limited to, liquefied natural gas, propane or butane.**

Comment [A4]: I question the appropriateness of referencing this [1981 publication](#) in this definition.

Comment [A5]: This portion of the definition comes from G.L. c. 21E, § 2.

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- 4.3.3.14 SOLID WASTE – For the purpose of this Section, SOLID WASTE shall mean any unwanted or discarded solid material, as defined in 310 C.M.R. 19.08, with the exception of brush, yard trimmings and grass clippings.
- 4.3.3.15 SPECIAL WASTE – SPECIAL WASTE means any solid waste that is determined not to be a hazardous waste pursuant to 310 CMR 30.000 and that exists in such quantity or in such chemical or physical state, or any combination thereof, so that particular management controls are required to prevent an adverse impact from the collection, transport, transfer, storage, processing, treatment or disposal of the solid waste. Without limitation, SPECIAL WASTE includes waste that will require special management to ensure protection of public health, safety, or the environment based upon the physical, biological, or chemical properties of the waste. SPECIAL WASTES include but are not limited to: asbestos waste, infectious wastes except as specified in 310 CMR 19.061(2)(b) ~~(6)(e)4~~, sludges including wastewater treatment sludges and industrial process wastewater treatment sludges. For purposes of this Bylaw, SPECIAL WASTE does not include drinking water treatment sludges. ~~(Ref: 310 CMR 19.006 and 19.061(2) and (3))~~
- 4.3.3.16 ~~13~~ STRATIFIED DRIFT – Permeable, porous deposits of glacial outwash, consisting primarily of sand and gravel. The particular deposits referred to herein are those occurring in glacial river valleys in which the town's drinking WATER SUPPLIES are located. These deposits are defined in the United States Geologic Survey's (USGS) Surficial Geology Maps for the Hudson Maynard Quadrangle, 1956, and the Assabet River Basin, Hydrologic Investigations Atlas, 1969, and in the U.S. Soil Conservation Service's (SCS) soil map field sheets, 1988, and Interim Soil Survey Report, 1986; soil types associated with STRATIFIED DRIFT listed in the Interim Soil Survey Report are: Agawam series, Amostown series, Birdsall series, Carver series, Deerfield series, Freetown series, Freetown-ponded, Hadley series, Haven series, Hinkley series, Hinkley series-bouldery, Limerick series, Merrimac series, Merrimac-urban land complex, Ninigret series, Occum series, Pipestone series, Pootatuck series, Quonset series, Raynham series, Rippowam series, Saco series, Scarboro series, Scio series, Sudbury series, Suncook series, Swansea series, Tisbury series, Walpole series, Windsor series, Winooski series; also Udorthents, Gravel Pits, Landfills, and Urban Land Complexes when surrounded by or primarily associated with soil types listed above. The above referenced soil types are associated with STRATIFIED DRIFT in general, however, not necessarily every listed soil type does occur within the boundaries of the Town of Acton.
- 4.3.3.17 ~~14~~ STORAGE – On-site containment or retention of materials (liquid, gas, solid) for PRINCIPAL or ACCESSORY USE for a period of more than 24 hours and occurring with a frequency of more than once a month.

4.3.3.18~~15~~ SURFACE WATER – All surface water bodies and wetlands protected under Massachusetts General Laws, Chapter 131, Section 40.

4.3.3.19~~16~~ WATER SUPPLY – A GROUNDWATER AQUIFER and SURFACE WATER recharge to a GROUNDWATER AQUIFER, which is a present or potential future drinking WATER SUPPLY source for the Town of Acton.

4.3.4 OPEN SPACE and LOT cover – The following requirements shall apply for OPEN SPACE, UNDISTURBED OPEN SPACE and IMPERVIOUS COVER:

4.3.4.1 ZONE 1 – In the Well Protection Area (ZONE 1) a minimum of 90% of every LOT shall remain OPEN SPACE, 50% of every LOT shall remain as UNDISTURBED OPEN SPACE. No more than 10% of every LOT shall be covered with IMPERVIOUS COVER.

4.3.4.2 ZONE 2 – In the Recharge Protection Area (ZONE 2) a minimum of 70% of every LOT shall remain OPEN SPACE, 40% of every LOT shall remain as UNDISTURBED OPEN SPACE. No more than 30% of a LOT shall be covered with IMPERVIOUS COVER.

4.3.4.3 ZONE 3, ZONE 4 – In the Aquifer Protection Area (ZONE 3) *a minimum of 50% of every LOT shall remain OPEN SPACE* and in the Watershed Protection Area (ZONE 4) *a minimum of 30% of every LOT shall remain OPEN SPACE. No more than 30% of a LOT shall be covered with IMPERVIOUS COVER for either Zone 3 or Zone 4.* ~~the OPEN SPACE requirements of the underlying Zoning District shall apply.~~

Comment [A6]: This is a significant change.

4.3.4.4 Outdoor STORAGE – Outdoor STORAGE areas shall not be considered a part of the OPEN SPACE of any LOT.

4.3.5 Depth to GROUNDWATER – Except for single FAMILY residential USES or BUILDINGS, no land within ZONES 1, 2 and 3 of the GROUNDWATER Protection District shall be developed or used except in accordance with the following requirements:

4.3.5.1 Minimum Distance to GROUNDWATER – The vertical distance between the existing or pre-development land surface and the MAXIMUM GROUNDWATER ELEVATION shall generally not be reduced, except when necessary to properly grade and construct STREETS, driveways, parking facilities and BUILDING sites, in order to comply with applicable regulations and to meet generally accepted ACCESS and safety standards.

- 1) The minimum distance between the finished or post-development grade from the MAXIMUM GROUNDWATER ELEVATION shall be not less than ten (10) feet, except as provided in Section 4.3.5.2.

- 2) If the distance between the existing or pre-development land surface and the MAXIMUM GROUNDWATER ELEVATION is less than ten (10) feet, the distance may be reduced in accordance with Section 4.3.5.2.
- 4.3.5.2 Maximum Allowed Reduction within 10 ft. of GROUNDWATER – Where the existing or pre-development land surface is less than 10 feet above the MAXIMUM GROUNDWATER ELEVATION, the vertical distance between the finished or post-development grade to the MAXIMUM GROUNDWATER ELEVATION may be not less than ninety (90) percent of the pre-development distance.
- 4.3.5.3 GROUNDWATER Recharge Facilities – The bottom elevation of a leaching pond, or the bottom elevation of the stone layer in a leaching galley or trench shall be not less than two (2) feet above the MAXIMUM GROUNDWATER ELEVATION. This Section shall apply to STRUCTURES associated with surface drainage only.
- 4.3.6 Other Design and Operation Requirements – Except for single FAMILY residential USES or BUILDINGS, no land within ZONES 1, 2 and 3 of the GROUNDWATER Protection District, and with respect to Sections 4.3.6.1 and 4.3.6.2 no land within the entire GROUNDWATER Protection District, shall be developed or used except in accordance with the following requirements:
- 4.3.6.1 FILL – FILL material shall not contain HAZARDOUS MATERIAL OR WASTE (*Section 4.3.3.8*), SPECIAL WASTE (*Section 4.3.3.15*), or SOLID WASTE (*Section 4.3.3.14*), or LEACHABLE WASTE (*Section 4.3.3.10*). This Section shall also apply in ZONE 4.
- 4.3.6.2 Watershed Recharge – The amount of annual precipitation being captured and recharged to the GROUNDWATER on site shall not be reduced due to development related surface runoff from the site when compared to pre-development conditions. 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 *or Professional Geologist*. This Section shall also apply in ZONE 4.
- 4.3.6.3 Treatment and Renovation of Runoff – All water runoff from IMPERVIOUS COVERS shall be funneled into gas trap catch basins. In addition, the first (1st) inch of every storm event shall be directed into a retention pond(s), where it shall be retained for an average of at least 3 days prior to recharge into the ground or discharge from the site. The retention pond(s) shall be exposed to sunlight, vegetated, and lined with soil featuring a permeability of 0.0001 cm/sec (0.1417 in/hr) or less. A DIVERSION BOX shall direct all

water, which falls onto the site in excess of one (1) inch during a single storm event, toward additional storage, direct infiltration, or discharge from the site. 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.

- 4.3.6.4 Pollution Safeguards – (1) Drainage facilities shall be designed to prevent leaks and shall be equipped with emergency slide gates or similar provisions to be closed in the event of an emergency. (2) Loading and unloading areas for HAZARDOUS MATERIALS OR WASTE, including fuel and heating oils, shall be equipped with a containment dike. (3) Compliance with the Acton Hazardous Materials Control Bylaw shall be required.
- 4.3.6.5 Location – 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. Where the ZONE boundary in question is one between ZONE 3 and ZONE 4, septic systems and waste-water treatment plants may be located in either ZONE, subject to certain restrictions contained in Section 4.3.7 of this Bylaw.

Where a LOT is partly in ZONE 4 and partly in another ZONE of the GROUNDWATER Protection District, IMPERVIOUS COVER runoff, generated in the ZONE 4 portion of the LOT but infiltrated, or discharged from the LOT, in a ZONE 1, 2 or 3 portion of the LOT, shall meet the same quality standard at the point of infiltration or discharge as if the runoff had been generated in ZONES 1, 2 and 3.

- 4.3.7 GROUNDWATER Protection District Use Regulations - No land which lies in ZONE 1, 2, and 3 of the GROUNDWATER Protection District shall be used and no activity shall be conducted on any land within these ZONES of the GROUNDWATER Protection District except in conformance with the following regulations:
 - 4.3.7.1 Permitted USES *including storage, generation, and disposal* for all ZONES – All USES allowed in the underlying zoning district except those which are prohibited or regulated in Section 4.3.7.2 are permitted.
 - 4.3.7.2 Prohibited USES *including storage, generation, and disposal* for all ZONES – In the following table of USE regulations "N" indicates that the USE is prohibited. "Y" indicates that a USE is permitted.

Comment [A7]: I question the need to call this out here and in the provisions that follow.

TABLE 4.3.7.2			
USE <i>Storage, Generation, and Disposal</i> Regulations within the GROUNDWATER Protection District			
	ZONE 1 Well Protection Area	ZONE 2 Recharge Protection Area	ZONE 3 Aquifer Protection Area
1. Sanitary landfill/solid waste disposal site, refuse treatment and disposal facility, landfilling of sludge and septage, storage of sludge and septage except for municipal USES as defined in Section 3.4.1 of this Bylaw associated with the provision of public sewer services	N	N	N
2. GENERATOR OF HAZARDOUS MATERIALS OR WASTE, except for municipal USES as defined in Section 3.4.1 of this Bylaw associated with the provision of public water and sewer services	N	N	Y
3. Vehicle Repair or Vehicle Body Shop	N	N	Y
4. Vehicle STORAGE for the purposes of leasing, rental, sale, resale, parts recovery, or similar USES	N	N	Y
5. Car, truck and equipment washing facility	N	N	Y
6. <i>Aboveground</i> STORAGE of <i>PETROLEUM PRODUCTS</i> for purposes other than heating the premises on which it is located****	N	N	Y***
7. Underground STORAGE of <i>PETROLEUM PRODUCTS</i> fuel oil, gasoline , or other HAZARDOUS MATERIALS or WASTES	N	N	N
8. Underground STORAGE of <i>PETROLEUM PRODUCTS</i> fuel oil, gasoline , or other HAZARDOUS MATERIALS or WASTES associated with residential USE	N	N	N
9. Commercial Laundries	N	N	Y
10. Dry cleaners with on-site cleaning facilities	N	N	Y
11. Furniture/wood stripping, painting & refinishing	N	N	Y
12. Disposal of snow contaminated with deicing chemicals and originating from a protection ZONE further distant from a public well than the location of disposal	N	N	N
13. Outdoor STORAGE of fertilizer, animal manure, soil	N	N	N✘

TABLE 4.3.7.2			
USE <i>Storage, Generation, and Disposal</i> Regulations within the GROUNDWATER Protection District			
	ZONE 1 Well Protection Area	ZONE 2 Recharge Protection Area	ZONE 3 Aquifer Protection Area
conditioner, pesticide, herbicide and deicing chemicals			
14. Chemical, bacteriological, biological or radiological laboratory or production facility	N	N	N
15. Subsurface disposal of wastewater effluent at a rate of less than 3.5gpd/1000sf of land area	Y	Y	Y
16. Subsurface disposal of wastewater effluent at a rate of 3.5gpd or more per 1000sf of land area but at a rate of less than 6gpd/1000sf of land area	N	Y	Y
17. Subsurface disposal of wastewater effluent at a rate of 6gpd or more per 1000sf of land area	N	N	Y
18. Subsurface disposal of wastewater effluent on a parcel of land which is not a buildable LOT as defined in footnote (**)	N	N	N

TABLE 4.3.7.2
USE Regulations within the GROUNDWATER Protection District
(continued)

	ZONE 1 Well Protection Area	ZONE 2 Recharge Protection Area	ZONE 3 Aquifer Protection Area
19. Subsurface disposal of wastewater effluent at a rate of less than 750gpd per buildable LOT(**)	Y	Y	Y
20. Subsurface disposal of wastewater effluent at a rate of 750gpd or more per buildable LOT(**) but at a rate of less than 2,000gpd per buildable LOT(**)	N	Y	Y
21. Subsurface disposal of wastewater effluent at a rate of 2,000gpd or more per buildable LOT(**) but at a rate of less than 6,000gpd per buildable LOT(**)	N	N	Y
22. Subsurface disposal of wastewater effluent at a rate of 6,000gpd or more per buildable LOT(**)	N	N	N
23. Subsurface disposal of TERTIARY TREATED wastewater EFFLUENT	Y	Y	Y
24. Any activity, construction or installation conducted solely for the purpose of environmental clean-up or remediation, and required or approved by the United States Environmental Protection Agency or the Massachusetts Department of Environmental Protection	Y	Y	Y
25. Treatment or disposal works for non-sanitary wastewater that are subject to 310 CMR 22.21 (2)(a)6 as amended, except the treatment and discharge of surface water runoff in compliance with section 4.3.6.3 of this bylaw	N	N	Y
<p>NOTES:</p> <p>(*) A USE may fall under one or more categories listed in this Table. Except as indicated in NOTE(***), any USE must be able to qualify for a Y or a SP in every applicable category, in order to be considered allowed (Y) or in order to be considered eligible for consideration of a special permit (SP), as the case may be.</p> <p>(**) For the purpose of this table, buildable LOT shall mean: a) A LOT that is shown on a plan recorded in the Middlesex County Registry of Deeds or the Land Court, and that complies with all requirements of this bylaw pertaining to the LOT and the STRUCTURES thereon; and b) Common Land as provided for in sections 4.2, 4.4, 9, and 9B of this bylaw.</p> <p>(***) See <i>Hazardous Materials Control Bylaw Section 3.5.1.</i></p> <p>(****) <i>Aboveground storage of quantities greater than 1,320 gallons requires compliance with Federal SPCC regulations (Spill Prevention Control and Countermeasures Plan; 40 CFR 112).</i></p> <p>gpd - Gallons per day <i>sf – square feet</i></p>			

- 4.3.8 Special Permit for the change or extension of nonconforming USES in the Groundwater Protection District.
- 4.3.8.1 The Planning Board may grant a Special Permit for any change or substantial extension of any PRINCIPAL or ACCESSORY USE designated with “N” in Table 4.3.7.2 that is in existence as of April 7, 1997. Change or substantial extension as referred to herein shall include but not be limited to: Any change or increase in HAZARDOUS MATERIALS OR WASTE produced, used or stored; any change or increase in the outdoor STORAGE of fertilizers, animal manure, soil conditioners, pesticides, herbicides or deicing chemicals; any increase in wastewater effluent flow other than TERTIARY TREATED EFFLUENT; any change in the grade of the land or the drainage system for the LOT, which affects the flow of GROUNDWATER or SURFACE WATER; any expansion in ground area by 500 square feet or more of impervious material or any area devoted to the conduct of the PRINCIPAL or ACCESSORY USE.
- 4.3.8.2 Action by the Planning Board, Criteria for Special Permit – After notice and public hearing, and after due consideration of all reports and recommendations submitted to the Planning Board regarding the Special Permit application, the Planning Board may grant such a Special Permit provided that it shall make the following findings:
- a) Maintain GROUNDWATER Quality – That the change or extension of the USE will not cause the GROUNDWATER quality at the down-gradient property boundary to fall below the drinking water standards established by the Acton Water District, or where no such standards exist, below standards established in 314 C.M.R.5 6.00, Massachusetts Drinking Water Standards, or by the Acton Board of Health. Where existing GROUNDWATER quality is already below those standards, the Planning Board may grant such Special Permit upon determination that the change or expansion of the USE will not result in further degradation of the GROUNDWATER quality, and will not impede its improvement over time.
 - b) Protection of Overall WATER SUPPLY – That the change or extension of the USE will not, during construction or thereafter, have an adverse effect on the GROUNDWATER, SURFACE WATER and overall WATER SUPPLY of the Town of Acton and the resulting USE after the change or extension will be in harmony with the specific purpose and intent of this Section to protect the GROUNDWATER, SURFACE WATER and overall WATER SUPPLY of the Town of Acton.
 - c) Compliance – That the changed or extended USE is in harmony with the purpose and intent of this Section and complies with the standards of Section 10.3.5 of this Bylaw. In making such determinations, the Planning Board shall give consideration to the proposed USE, the demonstrated reliability and feasibility of the proposed pollution control

measures associated with the USE, and the degree of pollution threat to the GROUNDWATER which would result if the control measures perform at less than design specifications. The Planning Board may impose such conditions, safeguards, and limitations as it deems appropriate to protect the GROUNDWATER and SURFACE WATER resources of the Town of Acton.

- d) *The ~~Boards of Health or 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 ~~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 impact affect an ~~aquifer~~ AQUIFER ZONE as defined in Section 4.3.2. The Planning Board may require that the ~~of the Groundwater Protection District section of the Acton Zoning Bylaw as printed on May 1, 1990.~~ Sampling ~~will be~~ paid for by the applicant and conducted by an agent of the Acton Water District.*

Comment [A8]: This section concerns action by the Planning Board as the Special Permit Granting Authority.

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4.3.8.3 Filing Requirements – The Planning Board shall promulgate and adopt rules and regulations governing this Special Permit pursuant to Section 10.3.1 of this Bylaw. Such rules and regulations shall set forth the application filing requirements to ensure that the application, including any plans and accompanying text, provides sufficient information for a full evaluation of resulting impacts on the GROUNDWATER resources, and to allow the Planning Board an evaluation of the application under the criteria set forth in section 4.3.8.2 above.

4.3.8.4 Submittal of "As Built" Plan – Upon completion of any work authorized through a Special Permit under this Section, an "as built" plan prepared by a Registered Professional Engineer, showing all improvements authorized or required, shall be submitted to the Zoning Enforcement Officer for approval prior to the issuance of an Occupancy Permit.