

## SECTION 12: WATER RESOURCE PROTECTION OVERLAY DISTRICT

*Existing Bylaw Section: Section 10—Water Resource Protection Overlay District*

**Approach:** *This section was drafted to accomplish three primary objectives:*

- 1) *Clarify existing language and ensure that all references and definitions are up to date with current state law and practice (administrative);*
- 2) *Provide more specific requirements for Special Permit applications, which are currently sparse in the existing Bylaw (more restrictive);*
- 3) *Provide concrete criteria for approval of Special Permits, which are currently absent in the existing Bylaw (administrative);*

*It is important to note that none of the district boundaries or use allowances associated with different districts has been changed.*

*Commentary for specific provisions is provided throughout this document along with more specific references to those sections of the existing bylaw that are directly related to these revisions.*

### 1. Purpose

- A. To protect, preserve and maintain the existing and potential groundwater supply within the known aquifers of the Town.
- B. To preserve and protect present and potential sources of water supply for the public health and safety.
- C. To conserve the natural resources of the Town.

**COMMENTARY:** *This Section is unchanged.*

**COMMENTARY:** *The definitions were relocated to Section 14 of the proposed bylaw with all other zoning definitions*

### 2. Establishment and Delineation of Water Resource Protection Overlay District

- A. For the purpose of this district, there are hereby established within the Town, certain aquifer protection areas, consisting of aquifers, well pumping areas and aquifer recharge areas. These areas are determined by standard geologic and hydrologic investigations which may include drilling observation wells, utilizing existing boring data and stratigraphic profiles, conducting seismic surveys or other geophysical techniques, performing pumping tests, water sampling, geologic mapping, and computer modeling.
- B. The boundaries of this district are delineated on maps at a scale of 1" — 1,200' entitled "Water Resource Protection Overlay District, Town of Walpole, MA" on file in the office of the Town Clerk, which maps are

hereby made part of this Bylaw. These boundaries reflect the best hydrogeologic information available as of the date of the maps.

- C. When the exact location of the WRPOD boundary on the ground is in doubt or dispute in relation to a particular parcel or lot shown on the WRPOD map, the Building Inspector shall determine the boundary location by the distance in feet, if given, from other lines upon map, or, if distances are not given, then by the scale of the map.
- D. The WRPOD includes the Aquifer's significant areas of recharge consisting of:
  - (1) Zone I Wellhead Protection Area - The protective radii around public water supply wells and wellfields as defined by 310CMR22.02.
  - (2) Area 1 Existing Water Supply Area - Area of pumping influence of all existing municipal wells within the Town, confirmed by long-term pump test or by stabilized water levels after maximum duration pumping. The cones-of-depression and respective areas of influence and recharge generated by the municipal wells after one hundred and eighty (180) days of continuous pumping at the currently utilized capacities. (May be based upon computer modeling.)
  - (3) Area 2 Potential Water Supply Area - Buried river stratified drift deposits with greater than forty (40) foot thickness.
  - (4) Area 3 Primary Recharge Area - Buried river stratified drift deposits with less than forty (40) foot thickness and upgradient of Areas 1 and 2.
  - (5) Area 4 Secondary Recharge Area - Upgradient areas consisting of till and other materials which contribute groundwater or surface water drainage to Areas 1, 2, or 3.

***COMMENTARY: This Section is unchanged. (See existing Zoning Bylaw Section 10-C)***

### **3. Use Regulations**

The WRPOD shall be considered as overlaying all other zoning districts within its boundaries. Within the WRPOD, any use permitted in the underlying district shall be subject to that district's regulations and additional regulations within the WRPOD.

- A. The following uses are allowed by-right within the WRPOD provided all necessary permits, orders, or approvals required by local, state or federal laws shall have been obtained:
  - (1) Zone I.
    - (a) Conservation of soil, water, plants, and wildlife;
    - (b) Outdoor recreation nature study, boating, fishing, and



(20,000) square feet of lot area. All roof runoff from new construction or any addition to an existing residence that adds more than six hundred (600) square feet of impervious cover to a building shall be recharged to the groundwater. The recharge system shall be designed by a Registered Professional Engineer and shall be capable of recharging at least the first one (1) inch of runoff from the roof.

**COMMENTARY: Subsection (e) above proposes substituting the word “runoff” for “rainfall” in the last sentence. Otherwise the text is unchanged from the existing 10-D(1)(b)(5).**

- (3) Areas 3 and 4.
  - (a) All uses allowed in Zone I, Area 1, and Area 2
  - (b) Commercial or industrial development allowed in underlying zoning districts and not otherwise prohibited or requiring a Special Permit as part of this Section of the Bylaw. Such commercial or industrial development shall be on lots of at least forty thousand (40,000) square feet in area such that no more than the greater of fifteen percent (15%) or two thousand five hundred (2,500) square feet of the lot is rendered impervious and such that on-site sewage disposal is less than or equal to one hundred and ten (110) gallons per day per ten thousand (10,000) square feet of lot area.
  - (c) Residential development of single family dwellings with on-site domestic sewage disposal on lots of at least eighty thousand (80,000) square feet in area or, where a Special Permit has been granted for Open Space Residential Design, the equivalent density. Such residential development shall be designed so that the greater of fifteen percent (15%) or two thousand five hundred (2,500) square feet of the building lots shall not be rendered impervious. All roof runoff from new construction or any addition to an existing residence that adds more than six hundred (600) square feet of impervious cover to a building shall be recharged to the groundwater. The recharge system shall be designed by a Registered Professional Engineer and shall be capable of recharging at least the first one (1) inch of runoff from the roof.

**COMMENTARY: Subsection (e) above proposes substituting the word “runoff” for “rainfall” in the last sentence. Otherwise the text is unchanged from the existing 10-D(1)(c)(3).**

B. Prohibited uses:

- (1) District-Wide Prohibitions – The following uses shall be categorically prohibited in the WRPOD.

***COMMENTARY: Subsection (1) above has been reworded slightly to make the language stronger than the existing 10-D(2).***

- (a) Landfills and open dumps as defined in 310 CMR 19.006;
- (b) Automobile graveyards and junkyards, as defined in M.G.L.C.140B, §1;
- (c) Landfills receiving wastewater and/or septage residuals including those approved by the state Department of Environmental Protection pursuant to M.G.L. c. 21, §26 through 53; M.G.L. c. 111, §17; M.G.L. c. 83, §6 and 7, and regulations promulgated thereunder;
- (d) Facilities that generate, treat, store, or dispose of hazardous wastes that are subject to M.G.L.C. 21C and 310 CMR 30.00, except for the following:
  - i. Very small quantity generators as defined under 310 CMR 30.000;
  - ii. Household hazardous waste centers and events under 310 CMR 30.390;
  - iii. Waste oil retention facilities required by M.G.L. c.21, § 52A; or
  - iv. Water remediation treatment works approved by DEP for the treatment of contaminated ground or surface waters.
- (e) Petroleum, fuel oil, and heating oil bulk stations and terminals including, but not limited to, those listed under the 2007 North American Industry Classification System (NAICS) Codes 45431 and 4274 or latest equivalent code revision.
- (f) Storage of liquid hazardous materials, as defined in M.G.L. c. 21E, and/or liquid petroleum products unless allowed by Special Permit in accordance with Section 12.3.C.6;

***COMMENTARY: Subsection (f) above references a Special Permit process rather than placing the performance criteria directly under the zoning. This allows for a higher level of review than what is currently provided under 10-D(2)(a)(6). The same review criteria are applied, but they are now enforceable with conditions through a Special Permit process.***

- (g) Storage of sludge and septage, unless such storage is in compliance with 310 CMR 32.30 and 310 CMR 32.31;
- (h) Storage of deicing chemicals unless such storage, including loading areas, is within a structure designed to prevent the

- (i) generation and escape of contaminated runoff or leachate;  
Storage of animal manure unless such storage is within a structure designed to prevent the generation and escape of contaminated runoff or leachate;

***COMMENTARY: Subsection (i) above proposes removing reference to the NRCS standards found in Section 10-D(2)(a)(9). Research into these standards suggests that smaller manure generators such as equestrian schools or petting zoos would be required to construct storage facilities that cost up to \$20,000 to meet this requirement. If a storage facility is designed to “prevent the escape of runoff or leachate”, the desired protection of the aquifer will be achieved.***

- (j) The removal of soil, loam, sand, gravel or any other mineral substances within four feet of the historical high groundwater table elevation (as determined from monitoring wells and historical water table fluctuation data compiled by the United States Geological Survey), unless allowed by Special Permit subject to Section 12.3.C.7 of this Bylaw. Excavations for the construction of building foundations or the installation of utility works, including but not limited to retention or detention recharge systems or wetland replication as governed by the Massachusetts Wetlands Protection Act, M.G.L. 131, §40 shall be exempt from this provision and do not require a special permit under Section 12.3.C.7.

***COMMENTARY: Subsection (j) above references a Special Permit process rather than placing the performance criteria directly under the zoning. This allows for a higher level of review than what is currently provided under 10-D(2)(a)(10). The same review criteria are applied, but they are now enforceable with conditions through a Special Permit process.***

- (k) Discharge to the ground of non-sanitary wastewater including industrial and commercial process waste water, except:
  - i. 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;
  - ii. treatment works approved by DEP designed for the treatment of contaminated ground or surface water and operating in compliance with 314 CMR 5.05(3) or 5.05(13); or
  - iii. publicly owned treatment works.
- (l) Stockpiling and disposal of snow and ice containing

- deicing chemicals brought in from outside the WRPOD;
    - (m) Storage of commercial fertilizers, as defined in M.G.L. Chapter 128, §64, unless such storage is within a structure designed to prevent the generation and escape of contaminated runoff or leachate;
    - (n) Any solid waste handling, transfer or storage facility.
- (2) In Areas 3 and 4, in addition to the District-Wide Prohibitions, the following are prohibited.
  - (a) Disposal of solid wastes, other than brush and stumps, natural soils and natural stone;
  - (b) The disposal of liquid or leachable wastes other than sanitary domestic wastes or innocuous process wastes, or runoff water for on-site recharge unless such runoff is stormwater runoff treated in accordance with the most recent version of the Massachusetts Stormwater Policy;

***COMMENTARY: Subsection (b) above is slightly different from the existing 10-D(2)(b)(2) in that it proposes that the recharge of stormwater runoff should be allowed as long as it is treated in accordance with state policies.***

- (c) Metal plating and etching;
  - (d) Chemical and bacteriological laboratories.
- (3) In Area 1 (excluding Zone I) and Area 2: In addition to the District-Wide Prohibited Uses, the following are prohibited.
  - (a) All uses specifically prohibited in Areas 3 and 4;
  - (b) Land uses resulting in the disposal of any waste material, solid or liquid, other than domestic sanitary wastes or runoff water for onsite recharge, natural soils or natural stone;
  - (c) Any use involving the sale, storage, transportation of fuel, oil or gasoline;
  - (d) Uses which, as part of normal operating or maintenance procedures, would involve the application, transfer, storage or use of toxic or hazardous materials in greater than household quantities; and
  - (e) The commercial mining of land.

***COMMENTARY: The order of prohibitions under Subsection (3) above has been changed slightly from the existing 10-D(2)(c). The prohibitions themselves have not changed.***

- (4) Zone I

- (a) All uses not permitted in Zone I are prohibited.

**COMMENTARY: Subsection (4) above proposes removing the following text:**

***“Underground storage tanks related to water supply facilities are not categorically permitted.”***

***It is difficult to determine what the intent of this sentence is as it is written. If there are existing underground storage tanks associated with pumping facilities in Walpole, these can be serviced under the current and proposed bylaw. If the intent was to prohibit new underground tanks, that is accomplished through (4)(a) above.***

- C. The following uses shall require a Special Permit from the Planning Board as the Special Permit Granting Authority (SPGA):
- (1) Expansion of existing or nonconforming uses to the extent allowed by the underlying district. The SPGA shall not grant such approval unless it shall find that such expansion shall not be substantially more detrimental to the water supply than the existing use;
  - (2) Unless categorically prohibited in Section 12.3.B, those activities allowed in the underlying zoning district that involve the handling of toxic or hazardous materials in amounts greater than normal household quantities;

**COMMENTARY: Subsection (2) above has been reworded to make it easier to understand.**

- (3) In Areas 3 and 4, any uses other than a single-family dwelling with a sewage flow, as determined by Title 5 of the State Environmental Code (3.10 CMR 15.00), exceeding one hundred and ten (110) gallons per day per ten thousand (10,000) square feet of lot area or exceeding fifteen thousand (15,000) gallons per day regardless of lot area;
- (4) Any non-residential use that will render impervious more than fifteen percent (15%) or two thousand five hundred (2,500) square feet of any lot, whichever is greater, but not more than the impervious coverage permitted in the underlying district. Applicants under this provision shall demonstrate that stormwater management shall meet the applicable criteria in the latest version of the Massachusetts Stormwater Policy;

**COMMENTARY: Subsection (4) above is different from the existing 10-D(4)(d) in that it uses the Massachusetts Stormwater Policy as the reference for treating stormwater. This state level document did not exist when the Walpole WRPOD Bylaw was first**

***adopted and now serves as the primary reference for high quality stormwater treatment.***

- (5) Any residential use that will render impervious more than fifteen percent (15%) or two thousand five hundred (2,500) square feet of any lot, whichever is greater;

***COMMENTARY: See comment for Subsection (4) above.***

- (6) Storage of liquid hazardous materials, as defined in M.G.L. c. 21E, and/or liquid petroleum products so long as the following criteria are met:
  - (a) above ground level; and
  - (b) on an impervious surface; and
  - (c) either in container(s) or above ground tank(s) within a building or outdoors in covered container(s) or above ground tank(s) in an area that has a containment system designed and operated to hold either ten percent (10%) of the total possible storage capacity of all containers, or one hundred and ten percent (110%) of the largest container's storage capacity of the largest container's storage capacity, whichever is greater.
- (7) The removal of soil, loam, sand, gravel or any other mineral substances within four feet of the historical high groundwater table elevation (as determined from monitoring wells and historical water table fluctuation data compiled by the United States Geological Survey), so long as the substances removed are re-deposited within forty five (45) days of removal on site to achieve a final grading greater than four feet above the historical high water mark or greater than the original topographical elevation, whichever is less.

***COMMENTARY: Subsections (6) and (7) above provide the Special Permit criteria that was moved from sections B(1)(f) and B(1)(j) .***

#### **4. Procedures for Issuance of Special Permit**

##### **A. Application Contents**

Any applicant for a Special Permit in the WRPOD shall submit the following materials and documentation to the SPGA.

- (1) All requirements for Full Site Plan Review as listed in Section 13 of the Zoning Bylaw. An applicant for a Special Permit may apply for waivers from specific Site Plan Review requirements that may not be relevant to the proposed use.

- (2) A list of applicable Special Permit trigger(s) associated with the use as identifiable in Subsection 12.3.C of this Bylaw.
- (3) A complete list of all chemicals, pesticides, fuels, and other potentially toxic or hazardous materials to be used or stored on the premises in amounts greater than normal household quantities;
- (4) A description of measures proposed to protect all storage containers/facilities from vandalism, corrosion, and leakage, and to provide for control of spills;
- (5) A description of potentially toxic or hazardous wastes to be generated, indicating storage and disposal methods;
- (6) A plan showing the storage location and, where storage is indoors, approximate floor elevation of any storage facilities for toxic or hazardous materials, fertilizers and waste;
- (7) Where applicable, typical schematic profile for any storage facility or structure designed to contain potential spills;
- (8) Evidence of approval by the Massachusetts Department of Environmental Protection (DEP) of any industrial waste treatment or disposal system or any wastewater treatment system over fifteen thousand (15,000) gallons per day capacity;
- (9) For underground storage of toxic or hazardous materials, evidence of qualified professional supervision of system design and installation;
- (10) Where applicable, all necessary engineering reports that demonstrate compliance with the Massachusetts Stormwater Policy as amended;
- (11) Where applicable, a description of the phasing of earth removal and replacement.

***COMMENTARY: Subsection A above has been significantly expanded to provide the SPGA with more information than the existing Section 10-D(4).***

B. Application Procedure

Applicants shall follow the standard Special Permit procedures listed in Section 2.2 of the Zoning Bylaw.

***COMMENTARY: Subsection B. above removes much of the text of the existing 10-D(4) as the Special Permit procedures in the proposed bylaw would be uniform.***

C. Decision of the SPGA

The SPGA may approve, approve with conditions, or deny an application for a Special Permit in the WRPOD. The SPGA may grant a Special Permit if it finds that the proposed use:

- (1) Complies with applicable performance and/or design criteria listed in Section 12.3.C of the Zoning Bylaw;
- (2) Will not, during construction or thereafter, have an adverse

- environmental impact on any water body or course in the district;  
and
- (3) Will not adversely affect an existing or potential water supply.

***COMMENTARY: Subsection C above is new text that provides the SPGA with concrete deliberations that are not provided in the existing bylaw.***

D. Special Permit Conditions

As part of the conditions for a Special Permit, the SPGA shall consider the following potential conditions. The SPGA may impose other reasonable conditions not listed below:

- (1) That proper and reasonable surface drainage of the land shall be provided during and after construction;
- (2) That pervious areas that have been compacted by heavy machinery shall be scarified to a depth of at least six (6) inches before topsoil is replaced;
- (3) That activities ancillary to the excavation, including, but not limited to, non-routine equipment and vehicle maintenance and storage of lubricants, fuels, solvents and other chemicals associated with earth removal operations shall be prohibited in the WRPOD;
- (4) Any fill material used in the WRPOD shall contain no solid waste, toxic, or hazardous materials, or hazardous waste. The SPGA may require testing of two soil samples by a certified laboratory at the applicant's expense; and
- (5) Periodic inventories of toxic and hazardous materials in excess of household quantities shall be submitted to the Building Inspector at a frequency no greater than twice each year.

***COMMENTARY: Subsection D above provides the SPGA with a list of items that should be considered when conditioning a Special Permit in a Water Resources Protection District. This guidance is currently not included in the existing bylaw.***