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Title: City of Springfield Drinking Water Protection (DWP) Overlay District
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Abstract

Springfield created a Drinking Water Protection Overlay District that contains four time of travel zones (TOTZ) around its wellheads “to protect aquifers used as potable water supply sources by the City from contamination.” Within these zones the ordinance restricts use of hazardous materials, which could potentially enter and harm the groundwater. The district includes 0-1, 1-5, and 10-20 year TOTZ.

Resource

ARTICLE 17

DRINKING WATER PROTECTION (DWP) OVERLAY DISTRICT

17.010 GENERAL

- (1) The DWP Overlay District regulations supplement the regulations of the underlying district. Where the regulations and permitted uses of an underlying district conflict with those of an overlay district, the more restrictive standards shall apply.
- (2) **Warning and Disclaimer of Liability.** The degree of aquifer protection required by this Article in the areas designated in Section 17.040 is based on scientific and engineering considerations. The nature of these considerations is such that the exact boundaries of Time of Travel Zones (TOTZ) have an associated uncertainty that renders conclusions based on them to be estimates. Under no conditions should this Article be construed to guarantee the purity of the ambient ground water or guarantee the prevention of ground water contamination. Therefore, this Article shall not create liability on the part of the City, or any City personnel, for any contamination that may result from reliance on this Article or any administrative decision made under this Article.

17.020 DESCRIPTION

- (1) The purpose of the DWP Overlay District is to protect aquifers used as potable water supply sources by the City from contamination. This Article establishes procedures and standards for the physical use of hazardous materials harmful to groundwater within TOTZ by new and existing land uses requiring development approval. The provisions of this Article are designed to:
 - (a) protect the City's drinking water supply which is obtained from groundwater resources from impacts by facilities that store, handle, treat, use, produce, or otherwise have on premises substances that pose a hazard to groundwater quality; and
 - (b) provide standards for hazardous materials that pose a risk to groundwater within the TOTZ.
- (2) In order to accomplish this purpose, the DWP Overlay District includes methods and provisions to:
 - (a) restrict or prohibit the use of hazardous materials which are potential groundwater contaminants;
 - (b) set standards for the storage, use, handling, treatment, and production of hazardous materials that pose a risk to groundwater within TOTZ; and
 - (c) review new or expanded uses of hazardous material that pose a risk to groundwater.

17-1

17.030 APPLICABILITY

Upon the effective date of this ordinance, all areas within specified wellhead TOTZ within the City and its urbanizable area automatically are rezoned to add the DWP Overlay District to the underlying district. The areas to which the DWP Overlay District is applied are shown on the Drinking Water Protection Area Maps, hereby incorporated by reference.

17.040 TIME OF TRAVEL ZONES

- (1) The DWP Overlay District includes four TOTZ: 0-1 year; 1-5 years; 5-10 years; and 10-20 years. The locations of the TOTZ for each wellhead are shown on Drinking Water Protection Area Maps kept on file with the City of Springfield Development Services, Public Works, and Fire and Life Safety Departments; and Springfield Utility Board (SUB) and Rainbow Water District (RWD).
- (2) The areas within specified wellhead TOTZ are those drinking water protection areas certified by the Oregon Health Division, under the Oregon Administrative

Rules that apply to Oregon's EPA-approved Drinking Water Protection Program, in Oregon Health Division Delineation Certification #0002R, March 18, 1999.

- (3) In determining the location of a property within a TOTZ, the following criteria shall apply:
- (a) The Lane County Department of Assessment and Taxation maps shall be used as a base map with the addition of TOTZ boundaries.
 - (b) That portion of a tax lot that lies within a TOTZ shall be governed by the restrictions applicable to that TOTZ.
 - (c) Tax lots having parts lying within more than one TOTZ shall be governed by the standards of the more restrictive TOTZ.

EXCEPTION: The Director may waive the requirement that the more restrictive standards apply when all of the following apply:

- 1. Storage, use, handling, treatment, and/or production of hazardous materials that pose a risk to groundwater will not take place within the portion of the tax lot having the more restrictive TOTZ standards; and
 - 2. Storage, use, handling, treatment, and/or production of hazardous materials that pose a risk to groundwater will not take place within 50 feet of the portion of the tax lot having more restrictive TOTZ standards; and
 - 3. The tax lot is 20,000 square feet or larger.
- (4) A property owner may request the TOTZ be modified by submitting a Zone Change application to the City. Any request for modification of the TOTZ shall be accompanied by certification of the TOTZ as proposed to be modified by the Oregon Health Division, under the Administrative Rules that apply to Oregon's EPA-approved Drinking Water Protection Program.

17-2

17.050 REVIEW.

- (1) A DWP Overlay District Development Application is required when the criteria of both subsections (a) and (b) are met:
- (a) A site is affected by one of the following:
 - (i) there is a change of land use, occupancy or tenancy of a property, including but not limited to a change from vacant to occupied; or
 - (ii) during the Building Permit process; or

(iii) in conjunction with any development application including but not limited to Site Plan review and Minimum Development Standards.

(b) The action in subsection (a) above will:

(i) affect the storage, use, and/or production of hazardous materials that pose a risk to groundwater; or

(ii) increase the quantity of hazardous materials that pose a risk to groundwater that are stored, used and/or produced.

(2) Prior to the submittal of a DWP Overlay District Development Application, an exemption request may be submitted to the Director. See 17.060(2)(a).

(3) DWP Overlay District applications shall be reviewed under Type I procedures.

(4) Prior to undertaking an activity covered by subsection (1) of this section, the owner or tenant shall submit a DWP Overlay District Application to the City for review and approval. Applications shall include the following information:

(a) a Hazardous Material Inventory Statement and a Material Safety Data Sheet for any or all materials entered in the Statement unless exempted under 17.060 of this article. Hazardous material weights shall be converted to volume measurement for purposes of determining amounts - 10 pounds shall be considered equal to 1 gallon in conformance with Uniform Fire Code 8001.15.1;

(b) a list of the chemicals to be monitored through the analysis of groundwater samples and a monitoring schedule if ground water monitoring is anticipated to be required;

(c) a detailed description of the activities conducted at the facility that involve the storage, handling, treatment, use or production of hazardous materials in quantities greater than the maximum allowable amounts as stated in 17.070(1)(a);

17-3

(d) a description of the primary and any secondary containment devices proposed, and, if applicable, clearly identified as to whether the devices will drain to the storm or sanitary sewer;

(e) a proposed Hazardous Material Management Plan for the facility that indicates procedures to be followed to prevent, control, collect and dispose of any unauthorized release of a hazardous material;

- (f) a description of the procedures for inspection and maintenance of containment devices and emergency equipment;
 - (g) a description of the plan for disposition of unused hazardous materials or hazardous material waste products over the maximum allowable amounts including the type of transportation, and proposed routes.
- (5) For those development proposals requiring Site Plan Review or Minimum Development Standards review as specified in Article 31 of this Code, applications may be submitted concurrently.
 - (6) A complete DWP Overlay District Development application together with all required materials shall be accepted by the Director prior to the review of the request as specified in Section 3.050, Application Submittal.
 - (7) The Director shall review the application and make a decision on the application, based on the standards contained in section 17.070, after consulting with the Building Official, Fire Marshall, Public Works Director, and the managers of SUB and RWD, as appropriate.

17.060 EXEMPTIONS

This Article does not exempt any material or use from Fire Code regulations adopted by the City of Springfield.

- (1) Exemptions are as specified in this section unless the Director, in consultation with SUB and Fire/Life Safety, determines that a hazardous material, activity, and/or facility that is exempt pursuant to this section has a significant or substantial potential to degrade groundwater quality. Then the Director may require compliance with the requirements of this Article related to that hazardous material, activity or facility. Such determinations will be based upon site and/or chemical-specific data and shall be eligible for appeal to the Hearings Official as specified in Section 17.090 of this Article.
- (2) Except as otherwise provided herein, the following materials are exempt from regulation hereunder:
 - (a) Use, storage and handling of specific hazardous materials that do not present a risk to the aquifer, as determined and listed by the Director in consultation with SUB, are exempt from all regulation under this Article with the exception of the potential requirement to list these hazardous materials on the Hazardous Material Inventory Statement as found in the most recent Fire Code regulations adopted by the City.

A Hazardous Materials Exemption Request may be submitted to the Director for Hazardous Materials that can be demonstrated to pose no threat to the aquifer. These materials may be exempted from regulation and added to the list. The demonstration of no threat is the responsibility of the applicant seeking the exemption and will be subject to review by technical experts.

- (b) Hazardous materials offered for sale in their original sealed containers of five (5) gallons or less shall be exempt from the 500 gallon storage limit set in 17.070(1)(a).
- (c) Hazardous materials in fuel tanks and fluid reservoirs attached to (i) a private or commercial motor vehicle and used directly in the motoring operation of that vehicle, or (ii) machinery, including but not limited to fuel, engine oil and coolant.
- (d) Fuel oil used in existing heating systems.
- (e) Emergency use, storage, and handling of hazardous materials by governmental organizations in the public interest.
- (f) Hazardous materials used and stored specifically for water treatment processes of public water systems and private systems for the same purposes when approved by the Director.
- (g) Hazardous materials contained in properly operating sealed units (transformers, refrigeration units, etc.) that are not opened as part of routine use.
- (h) Local natural gas distribution lines.
- (i) Fuel for emergency generators located at facilities that provide essential community services (hospitals, fire/life safety, police, public shelters, telephone systems etc.).
- (j) Any commonly used office supply – such as correcting fluid for typewriters, toner for computer printers or cleaners for windows and bathrooms – where the supplies are purchased off-site for use on-site.
- (k) Aggregate quantities equal to or less than 20 gallons of hazardous materials that do not contain DNAPLs .

**17.070 STANDARDS FOR APPROVAL OF DWP OVERLAY DISTRICT APPLICATIONS
WITHIN TIME OF TRAVEL ZONES**

Applications shall comply with the following standards. Where the following standards are more restrictive than the standards of the Uniform Fire Code, the following standards shall apply:

- (1) 0-1 year TOTZ Standards.

17-5

- (a) Within the 0-1 year TOTZ, hazardous materials that pose a risk to groundwater may be stored in aggregate quantities of no more than 500 gallons if in original containers not exceeding 5 gallons* in size. Within that aggregated 500 gallon inventory, no more than 150 gallons of hazardous materials that pose a risk to groundwater may be on the premises in opened containers for handling, treatment, use production, or dispensing on site. Hazardous materials that pose a risk to groundwater shall be allowed only upon compliance with containment and safety standards set by the most recent Fire Code adopted by the City.

*A waiver of the 5 gallon maximum size may be given by the Director if the applicant can demonstrate that a larger size container would pose less risk to the aquifer.

- (b) Except those exempted, all hazardous materials that pose a risk to groundwater shall be stored in areas with approved secondary containment in place (Uniform Fire Code Articles 2 and 8003.1.3.3).
- (c) All new uses of Dense Non-Aqueous Phase Liquids (DNAPLs) shall be prohibited.
- (d) Any change in type of use or an increase in maximum daily inventory quantity of any DNAPL shall be considered a new use and shall be prohibited.
- (e) The following certain types of new facilities or changes in use and/or storage of hazardous materials that pose a risk to groundwater shall be prohibited:
 1. underground hazardous material storage facilities;
 2. hazardous material product pipelines used to transport the hazardous material off of the tax lot where it is produced or used;
 3. injection wells, except dry wells for roof drainage;
 4. solid waste landfills and transfer stations;

5. fill materials containing hazardous materials;
 6. land uses and new facilities that will use, store, treat, handle, and/or produce DNAPLs.
- (f) Requirements found in Uniform Fire Code Appendix II-E 3.2.6 for a monitoring program and in 8003.1.3.3 for monitoring methods to detect hazardous materials in the secondary containment system shall be met for all amounts of hazardous materials that pose a risk to groundwater except those exempted.

17-6

- (g) Requirements found in Uniform Fire Code Appendix II-E Section 3.2.7 for inspection and record keeping procedures for monthly in-house inspection and maintenance of containment and emergency equipment for all amounts of hazardous materials that pose a risk to groundwater except those exempted shall be met.
- (h) Application of fertilizers containing nitrates shall be restricted to no more than the amount recommended by the Lane County, Oregon State University Extension Service for turf grass and shall be prohibited within 100 feet of a wellhead. In no event shall a single application exceed one half pound per 1,000 square feet of area per single application or a total yearly application of 5 pounds nitrogen fertilizer per 1,000 square feet.
- (2) 1-5 year TOTZ Standards.
- (a) The storage, handling, treatment, use, application, or production or otherwise keeping on premises of more than 20 gallons of hazardous materials that pose a risk to groundwater in aggregate quantities not containing DNAPLs shall be allowed only upon compliance with containment and safety standards set by the most recent Fire Code adopted by the City.
- (b) Except those exempted, all hazardous materials that pose as risk to groundwater shall be stored in areas with approved secondary containment in place (Uniform Fire Code Articles 2 and 8003.1.3.3).
- (c) All new use of DNAPLs shall be prohibited.
- (d) Any change in the type of use or an increase in maximum daily inventory quantity of any DNAPL shall be considered a new use and shall be prohibited.
- (e) The following certain types of facilities or changes in chemical use and/or storage of hazardous materials that pose a risk to groundwater shall be

prohibited:

1. hazardous material product pipelines used to transport the hazardous material off of the tax lot where it is produced or used;
 2. injection wells, except dry wells for roof drainage;
 3. solid waste landfills and transfer stations;
 4. fill materials containing hazardous materials;
 5. land uses and new facilities that will use, store, treat handle, and/or produce DNAPLs.
- (f) Requirements found in Uniform Fire Code Appendix II-E 3.2.6 for a monitoring program and in 8003.1.3.3 for monitoring methods to detect hazardous materials in the secondary containment system shall be met for all amounts of hazardous materials that pose a risk to groundwater except those exempted.

17-7

- (g) Requirements found in Uniform Fire Code Appendix II-E Section 3.2.7 for inspection and record keeping procedures for monthly in-house inspection and maintenance of containment and emergency equipment for all amounts of hazardous materials that pose a risk to groundwater except those exempted shall be met.

(3) 5-10 year TOTZ Standards.

- (a) The storage, handling, treatment, use, production or otherwise keeping on premises of more than 20 gallons of hazardous materials that pose a risk to groundwater in aggregate quantities not containing DNAPLs shall be allowed upon compliance with containment and safety standards set by the most recent Fire Code adopted by the City.
- (b) All hazardous materials that pose a risk to groundwater shall be stored in areas with approved secondary containment in place (Uniform Fire Code Articles 2 and 8003.1.3.3).
- (c) All new use of DNAPLs shall be prohibited.
- (d) Any change in type of use or an increase in the maximum daily inventory quantity of any DNAPL shall be considered a new use and shall be prohibited.
- (e) Requirements found in Uniform Fire Code Appendix II-E Section 3.2.7 for

inspection and record keeping procedures for monthly in-house inspection and maintenance of containment and emergency equipment for all amounts of hazardous materials that pose a risk to groundwater except those exempted shall be met.

- (4) 10-20 year TOTZ Standards. The storage, handling, treatment, use, production or keeping on premises of more than 20 gallons of hazardous materials that pose a risk to groundwater in aggregate quantities not containing DNAPLs shall be allowed only upon compliance with containment and safety standards set by the most recent Fire Code adopted by the City.

17.080 CONDITIONS OF APPROVAL

The Director may attach conditions of approval that will minimize negative impacts of regulated substances on groundwater and ensure that the facility or the proposed development can fully meet the standards specified in Section 17.070 of this Article.

These conditions may include on-site monitoring wells, Wellhead Protection Area signs, special storm water facilities or other conditions to address specific risks associated with the proposed development.

17-8

17.090 APPEALS

The only portions of this Article that are subject to appeal are Section 17.050(7) the Director's decision on a DWP application, Section 17.060, Exemptions, and Section 17.070(1)(a) waiver. The appeal of a decision of the Director may be appealed to the Hearings Official under Type III procedures as specified in Section 15.020 of this Code."

(Ord. 5962 05/15/00)

17-9