Chapter 700 WELLHEAD PROTECTION: SITING OF FACILITIES THAT POSE A SIGNIFICANT THREAT TO DRINKING WATER

SUMMARY: This chapter and Chapter 692 set forth restrictions on the geographic location of facilities that pose a significant threat to drinking water.

1. **Purpose.** The purpose of this rule is to protect drinking water resources from contamination by controlling the location of certain facilities as defined consistent with legislative policy under An Act to Prevent Contamination of Drinking Water Supplies, 38 M. R.S.A. Section 1391.

2. **Definitions.** The following terms as used in this rule have the following meanings:

   A. **Automobile body shop.** "Automobile body shop" means any commercial facility that engages in the repair, replacement, painting, or alteration of automobile and other motorized vehicle bodies or body parts.

   B. **Automobile maintenance and repair facility.** "Automobile maintenance and repair facility" means any commercial facility, including fleet garages, engaged in the repair or replacement of car, truck and van, motorcycle or other motorized vehicle mechanical or exhaust components , or in the replacement of motor oil and other lubricants and fluids.

   C. **Automobile graveyard.** "Automobile graveyard" has the same meaning as found in 30-A M.R.S.A. § 3752(1) which states, in part, means a yard, field or other outdoor area used to store 3 or more unregistered or uninspected motor vehicles, as defined in 29-A M.R.S.A. § 101(42), or parts of the vehicles. "Automobile graveyard" includes an area used for automobile dismantling, salvage and recycling operations.

   D. **Board.** "Board" means the Board of Environmental Protection.

   E. **Automobile recycling business.** "Automobile recycling business" has the same meaning as found in 30-A M.R.S.A. § 3752(1-A) which states, in part, means the business premises of a dealer or a recycler licensed under 29-A M.R.S.A. §§ 851 to 1112 who purchases or acquires salvage vehicles for the purpose of reselling the vehicles or component parts of the vehicles or rebuilding or repairing salvage vehicles for the purpose of resale or for selling the basic materials in the salvage vehicles, as long as 80% of the business premises specified in the site plan in section 30-A M.R.S.A. § 3755-A(1)(C) is used for automobile recycling operations.

   F. **Commercial hazardous waste facility.** "Commercial hazardous waste facility" means a facility which accepts, for handling, hazardous wastes other than those generated on site by the owner of the facility. The handling of residual hazardous wastes generated on site in the process of handling hazardous wastes is included within the scope of the facility's operations. Commercial hazardous waste facility includes mobile treatment facilities.

   G. **Commissioner.** "Commissioner" means the Commissioner of Environmental Protection.

H. Community drinking water well. "Community drinking water well" means a public drinking water well that supplies a community water system as defined under 22 M.R.S.A. § 2660-B(2).

I. CMR. "CMR" means the Code of Maine Rules.

J. Department. "Department" means the Department of Environmental Protection composed of the Board of Environmental Protection and the commissioner.

K. Dry cleaning facility. "Dry cleaning facility" means a facility engaged in the cleaning of garments in perchloroethylene by means of one or more washes in the solvent, extraction of the solvent by spinning, and drying by tumbling in an air stream. The facility includes, but is not limited to any washer, dryer, emission control device(s), exhaust dampers, diverter valves, filter purification system, waste disposal system, stills, holding tank, muck cooker, water separators, filters, solvent containers, pump and attendant piping, hoses, ducts and valves. Terms used in this definition have the same meaning as found in Perchloroethylene Dry Cleaner Regulation, 06-096 CMR, Chapter 125(2) (last amended Jan. 14, 2003).

L. Facility. "Facility", as used in this rule, means a facility that poses a significant threat to drinking water.

M. **Facilities that pose a significant threat to drinking water.** "Facilities that pose a significant threat to drinking water" for the purposes of this rule include:

(1) An automobile graveyard as defined in § 30-AM.R.S.A. § 3752, subsection 1 or automobile recycling business as defined in 30-AM.R.S.A. § 3752(1-A);

(2) An automobile body shop or other commercial automobile maintenance and repair facility;

(3) A dry cleaning facility that uses perchloroethylene;

(4) A metal finishing or plating facility; and

(5) A commercial hazardous waste facility as defined under Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. § 1303-C(4).

N. Metal finishing or plating facility. "Metal finishing or plating facility" means a commercial or industrial facility that performs any or all of the following: electroplating, plating, polishing, anodizing, coloring and coating operations on metals.

O. M.R.S.A. "M.R.S.A." means the Maine Revised Statutes Annotated.

P. Person. "Person" means any natural person, firm, association, partnership, corporation, trust, the State and any agency of the State, government entity, quasi-governmental entity, the United States and any agency of the United States and any other legal entity.

Q. Private drinking water well. "Private drinking water well" means a well that is used to supply water for human consumption and that is not a public drinking water well.

R. Public drinking water well. "Public drinking water well" means a drinking water supply well for a public water system as defined in 22 M.R.S.A. § 2601(8).

S. Public drinking water supply. "Public drinking water supply" means any well or other source of water that furnishes water to the public for human consumption for at least 15 connections, regularly serves an average of at least 25 individuals daily at least 60 days out of the year, or that supplies bottled water for sale.

T. Wellhead protection zone. "Wellhead protection zone" means:

(1) In the case of a private drinking water well, the area within 300 feet of the well; and

(2) In the case of a public drinking water well, the greater of:

(1) The area within 1,000 feet of the well; and

(2) The source water protection area of the well if mapped by the Department of Health and Human Services as described under 30-A M.R.S.A. § 2001(20-A).

Note: The wellhead protection zone only applies to drinking water wells in existence at the time an application for a variance is submitted to the department.

(3) Prohibition on facilities in wellhead protection zones. A person may not install or cause to be installed a facility in a wellhead protection zone.

A. Exceptions. The prohibition of this section does not apply to:

(1) A facility in existence or under construction on September 30, 2008;

(2) The replacement or expansion of a facility in existence on September 30, 2008 as long as the replacement or expansion occurs on the same property and the facility meets all applicable requirements of law;

(3) The installation of a facility located on the same property of a well serving only users of that property.

B. Variances. (1) The Board may grant a variance for a commercial hazardous waste facility, with or without conditions, to the prohibition of this section if the Board determines during the processing of the license application under Licensing of Hazardous Waste Facilities, 06-096 CMR Chapter 856 (last amended Nov. 3, 2002) that granting such variance is consistent with the intent of 38 M.R.S.A. § 1391.

(2) The commissioner may grant a variance for any other facility under subsection 2(M) above to the prohibition of this section if:

(a) In the case of a community drinking water well, a private drinking water well or a well that supplies drinking water to a school, the applicant demonstrates to the commissioner's satisfaction that no hydrogeologic connection exists between the proposed facility and the water supply at issue; or

(b) In the case of a public drinking water well other than a community drinking water well or a drinking water well supplying drinking water to a school, the commissioner determines that the engineering and monitoring measures proposed by the applicant exceed regulatory requirements and will effectively minimize the likelihood of drinking water contamination due to the discharge of oil, hazardous matter or waste.

In considering whether to grant a variance under this section, the commissioner may consider the importance of the groundwater resource, the hydrogeology of the site and other relevant factors.

The commissioner may not grant a variance for an automobile graveyard or automobile recycling business to the prohibition of this section in a location that is prohibited under 30-A M.R.S.A. § 3753.

4. **Prohibition on facilities in sand and gravel aquifers.** A person may not install or cause to be installed a facility within a significant sand and gravel aquifer (herein "aquifer") mapped by the Maine Geological Survey. This prohibition applies regardless of proximity to a public or private drinking water well.

NOTE: Significant Sand and Gravel Aquifer maps are available for inspection in most municipal offices and from the Maine Geological Survey, (207) 287-2801. Electronic versions are available from the Maine Office of Geographic Information Systems, **http://megis.maine.gov**.

A. Exceptions. The prohibition of this section does not apply to:

(1) A facility in existence on September 30, 2008;

(2) The replacement or expansion of a facility in existence on September 30, 2008 as long as the replacement or expansion occurs on the same property and the facility meets all applicable requirements law.

B. Variance for incorrectly mapped aquifer.

(1) The Board may grant a variance for a commercial hazardous waste facility to the prohibition of this section if the Board determines during the processing of the license application under Chapter 856 that granting such variance is consistent with the intent of 38 M.R.S.A. Section 1391.

(2) The commissioner may grant a variance to the prohibition of this section for any other proposed facility under section 2(M), above, if:

(a) The applicant submits a site-specific hydrogeological investigation demonstrating to the commissioner's satisfaction that the proposed facility site does not overlie an aquifer mapped by the Maine Geological Survey; and

(b) The municipality in which the facility is to be located is required to issue a permit for an automobile graveyard or automobile recycling business to the facility

pursuant to 30-A M.R.S.A. § 3753 and has acknowledged the incorrectly mapped aquifer.

C. Variance for potentially low use or polluted aquifers.

The commissioner may grant a variance to the prohibition of this section for any proposed facility under section 2(M)(1) through (4) above, if the commissioner finds that the aquifer has a low potential for future use as a public or private drinking water supply because at least one of the following circumstances apply:

(1) A public water system serves all water users within 1000 feet up gradient and 2000 feet down gradient of the proposed facility site, and the site is in an urban area or an area made up of dense commercial land uses, industrial land uses or dense residential development not served by public sewer;

(2) The installation of drinking water supply wells within 1000 feet up gradient or within 2000 feet down gradient is prohibited by property deed restrictions, municipal land use ordinance or a zoning rule of the Maine Land Use Regulation Commission (LURC);

(3) The applicant has submitted hydrogeological studies or groundwater quality testing data demonstrating to the commissioner's satisfaction that:

(a) The aquifer is polluted with one or more man-made contaminants in concentrations exceeding federal maximum contaminant levels (MCLs) or an MCL or maximum exposure guideline (MEG) established by the Maine Center for Disease Control and Prevention; and

(b) The aquifer has not been and is not now the subject of a commissioner-supervised remediation effort with the goal of the eventual restoration of or the protection of ground water in the aquifer to a quality suitable for human consumption; or

(4) The applicant has submitted other documentation demonstrating to the commissioner's satisfaction that the aquifer is unsuitable or unavailable as a future public or private drinking water resource.

The Commissioner may not grant a variance for an automobile graveyard or automobile recycling business to the prohibition of this section in a location that is prohibited pursuant to 30-A M.R.S.A. § 3753.

D. Variance for moderate yield aquifers.

(1) The Board may grant a variance for a commercial hazardous waste facility to the prohibition of this section if the Board determines during the processing of the license application under Chapter 856 that granting such variance is consistent with the intent of 38 M.R.S.A. § 1391.

(2) The commissioner may grant a variance for any other proposed facility under section 2(M), above to the prohibition of this section if the applicant demonstrates to the commissioner's satisfaction that:

(a) The aquifer does not have a high potential as a future drinking water resource as defined in subsection E of this section; and

(b) The facility will be designed and installed to include a combination of engineering and monitoring measures that collectively are more stringent than State or federal requirements and that are determined by the commissioner to further reduce the risk of oil and hazardous waste discharges and the likelihood of future ground water contamination.

NOTE: The following are examples of combinations of additional facility design and monitoring measures that could support a variance for applicable facilities.

- For automobile graveyards, automobile recycling businesses, and automobile body shops or other commercial automobile maintenance and repair facilities:

  (a) Floor and berm sealed with a coating impervious to spilled oil and hazardous materials, such as an epoxy coated floor. Floor must be compatible with materials handled;

  (b) Signed maintenance contract for floor. Inspection and repair to occur at least once every 3 years;

  (c) 4" berm around perimeter of work area in building;

  (d) 4" berm around storage area for hazardous materials and hazardous waste (4" berm to separate storage area from work area.) or secondary containment of hazardous materials and waste

  (Examples of secondary containment for hazardous materials and waste include fire rated storage cabinets with built in sumps, containment pallets for 55 gallon drums, etc.);

  (e) No floor drains;

  (f) Plan review. Plan to include drawing showing containment berm or list of secondary containment items;

  (g) All handling of fluids to occur inside building;

  (h) All storage of fluids drained from automobile to occur inside building;

  (i) All storage of hazardous materials and hazardous wastes to occur inside building;

  (j) All disassembly of vehicles to occur inside building; and

  (k) Paint fume hood to exhaust vertically and through a roof.

- For dry cleaning facilities that use perchloroethylene:

  (a) Floor and berm sealed with a coating impervious to spilled oil and hazardous materials, such as an epoxy coated floor. Floor must be compatible with materials handled;

(b) Signed maintenance contract for floor. Inspection and repair to occur at least once every 3 years;

(c) No floor drains;

(d) Dry cleaning process to be a closed loop system; and

(e) Secondary containment for hazardous materials and waste such as fire rated storage cabinets with built in sumps, containment pallets for 55 gallon drums, etc.

- For metal finishing or plating facilities:

(a) Floor and berm sealed with a coating impervious to spilled oil and hazardous materials, such as an epoxy coated floor. Floor must be compatible with materials handled;

(b) 4" berm around perimeter of work area in building;

(c) Signed maintenance contract for floor. Inspection and repair to occur at least once every 3 years;

(d) No floor drains; and

(e) Plan review. Plan to include drawing of storage areas and/or list of secondary containment items;

The commissioner may not grant a variance for an automobile graveyard or automobile recycling business to the prohibition of this section in a location that is prohibited under 30-A M.R.S.A. § 3753.

E. High potential aquifers; variance prohibited. Notwithstanding Section 4(B), the commissioner shall not grant a variance from the prohibition of this section if any part of a proposed facility overlies a mapped aquifer that has high potential as a future public drinking water resource. A high potential aquifer is any part of a mapped aquifer that has a good to excellent potential ground water yield, generally exceeding 50 gallons per minute, and good water quality. High potential aquifers include:

(1) Any area designated on a Maine Geological Survey "Significant Sand and Gravel Aquifer Map" as a surficial deposit generally with yields greater than 50 gallons per minute;

(2) An aquifer or ground water resource protection zone as designated in a municipal ordinance or a LURC zoning rule;

(3) The source water or recharge area of a community public drinking water system supply well, including a well that is in the process of being developed, or areas within 1000 feet of such a well, whichever is greater, provided the aquifer has been found to yield more than 50 gallons per minute, based on hydrogeological pump test data and analysis by a Maine-certified geologist; or

(4) A portion of a mapped aquifer that, based on a borehole test conducted in the center of a proposed facility site and in accordance with Appendix A of this rule, is expected to yield more than 50 gallons per minute.

Note: If an applicant believes that a high potential aquifer, as listed above, has been incorrectly mapped or identified, the applicant should engage the entities responsible for that mapping or identification regarding appropriate changes.

5. Variance procedure.

(A) Processing of applications for a variance under sections 3 and 4 for commercial hazardous waste facilities shall be done in conjunction with the processing of the license application required under Chapter 856. The information required in B(1) below shall be filed with the hazardous waste facility license application required by Chapter 856.

(B) Processing of applications for a variance under sections 3 and 4 for those facilities identified in sections 2M (1) through (4) including, but not limited to, application requirements, public notice, and appeal procedures, are governed by the department Rules Concerning the Processing of Applications and Other Administrative Matters, 06-096 CMR Chapter 2 (last amended April 1, 2003) except as specified below.

(1) Application requirements. Requests for variance from the siting restrictions of this rule must be submitted in writing on forms provided by the commissioner. In addition to the information required under Chapter 2(11), the application must include at a minimum the following information:

(a) The registration materials required under Rules for Underground Hazardous Substances Facilities, 06-096 CMR Chapter 695(5), if applicable;

(b) The names and mailing addresses of all abutters to the property on which the facility that poses a significant threat to drinking water is proposed;

(c) A plan view of the proposed facility that shows the precise location and footprint of all areas where hazardous substances will be contained, handled or stored in either a liquid or vapor phase;

(d) GIS map coordinates of each corner of any building(s) or other areas of the facility where hazardous substances will be contained, handled or stored. Locations of any proposed groundwater monitoring wells will also be shown. GIS coordinates are to be to sub-meter precision and accuracy in a format compatible with the State of Maine Geographical Information System;

NOTE: The Maine Geographic Information System (GIS) uses as a standard the UTM (Universal Traverse Mercator) system. The datum system used is the NAD83 (North American Datum 1983) version.

(e) If a variance is sought under section 4(B) or 4(C) of this chapter, a written report supporting the variance request. If the report includes ground water quality or other hydrogeological data that was collected and interpreted in support of the variance

request, the data and its written analysis must be certified by a Maine-certified geologist. If the variance request is based on a municipal land use ordinance, the report must include a copy of the relevant sections of the ordinance and a copy of the relevant land use mapping, certified by an authorized official of that municipality as being current and true copies. The location of a proposed facility must be accurately shown on the land use map.

(f) If a variance is sought under section 4(D) of this chapter, identification and a description of the design, installation, monitoring or other engineering and operating enhancements that will supplement the applicable requirements of Rules for Underground Hazardous Substance Storage Facilities, 06-096 CMR Chapter 695 and Rules for Underground Oil Storage Facilities, 06-096 CMR Chapter 691, and the Hazardous Waste Management Rules 06-096 CMR Chapters 850, 851, 854, 855, and 856 and the Waste Oil Management Rules 06-096 CMR Chapters 860, and a narrative explaining how the enhancements further minimize the risk of discharges and the likelihood of future ground water contamination.

NOTE: A pre-application meeting with the department is recommended to ensure the applicant understands the variance requirements as they may apply to the specific proposed facility site. Such meetings usually avoid misunderstandings of expectations and processing delays.

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(2) Public notice. Within 30 days before filing an application, the applicant shall provide notice by certified mail of the application:

(a)To the chief administrative officer and planning board chairperson of the municipality in which the facility is proposed to be located, or to the county commissioners and the LURC director if the facility is proposed in an unorganized township or plantation;

(b) To the local public water utility or other community public water provider, if any;

(c) To abutters of the property on which the facility is proposed;

(d) To other interested persons who have requested in writing of the commissioner to receive variance notices, a list of such persons and their mailing addresses to be maintained by the commissioner; and

(e) By publication once in a newspaper generally circulated in the area where the facility is proposed.

The notice must include the information listed in Chapter 2(14)(A).

(3) Public meeting. In lieu of or in addition to holding a hearing on a variance application as provided under Chapter 2(7), the commissioner may hold a public informational meeting where deemed appropriate for the applicant to provide information about the variance request to interested parties. If the commissioner decides to hold a public meeting, notice must be sent at least 10 business days prior to the meeting to the applicant, abutters, the local public water utility or community

water provider, the planning board chairperson and chief administrative officer of the municipality in which the facility is proposed (or the LURC director and appropriate county commissioners if the facility is proposed in an unorganized township or plantation) and other interested persons who have requested in writing of the commissioner to receive variance notices.

(4) Decision; appeal. The commissioner may deny a variance request or approve the request with or without conditions. The decision must be in writing with findings sufficient to explain the basis of the decision. A copy of the decision must be provided to the applicant, abutters, the local public water utility or community water provider, and the planning board chairperson and chief administrative officer of the municipality in which the facility is proposed (or the LURC director and county commissioners if the facility is located in an unorganized township or plantation). Copies also must be provided to other interested persons upon request. Each copy must be accompanied by a plain statement of the rights of administrative and judicial review of the decision and the time within which those rights must be exercised, as provided under 38 M.R.S.A. § 341-D(4)(A)and Chapter 2(24).

AUTHORITY: 38 M.R.S.A. § 341-D(1-B); PL 2001, c. 302, §3 and PL 2007, c. 569, §7

APPENDIX A: Determination of the Water Supply Potential of a Mapped Significant Sand and Gravel Aquifer

If the site of the proposed facility falls within a zone mapped as generally yielding 10 to 50 gallons per minute (gpm), but possibly more than 50 gallons per minute in some locations, the applicant must implement a limited hydrogeological evaluation to determine whether the site is located on a previously unrecognized high yield zone (well yield greater than 50 gpm) of the aquifer.

The evaluation may be as extensive as the applicant chooses, but at a minimum it must demonstrate to the commissioner's or Board's satisfaction whether or not a properly constructed well in the sand and gravel aquifer beneath the site would yield greater than 50 gallons per minute. The design of the evaluation, the fieldwork and the written report must be supervised and certified by a Maine-certified geologist with demonstrated expertise in hydrogeology.

The Sand and Gravel Aquifer Mapping Program at the Maine Geological Survey has used a single-borehole evaluation to estimate the projected long-term yield of aquifers in areas where no other information is available. The techniques are described on pages 15-18 of Maine Geological Survey Open File No. 98-2, Hydrogeology and Water Quality of Significant Sand and Gravel Aquifers in Parts of Piscataquis and Somerset Counties, Maine, 1998, Nichols, W. J., Neil, C. D., Locke, D. B. and Foley, M. E. (authors). The method requires a borehole advanced to the bedrock surface with continuous soils sampling. Geological information along with the grain size analysis of the soils samples will be used to estimate the hydraulic conductivity of the strata, and the aquifer thickness will be used to calculate a transmissivity value and to estimate the long-term yield of a well at that location. An evaluation using this methodology is the minimum that the commissioner or Board would accept. The commissioner or Board would also accept the results of a properly conducted and interpreted pumping test.

NOTE: Copies of the above referenced technical document are available from the Department or the Maine Geological Survey

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