

**CHAPTER 31**  
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## **WELLHEAD PROTECTION**

### **Sec. 31.01** Purpose and Authority

The residents of the Village of Whiting depend exclusively on groundwater for a safe drinking water supply. Certain land use practices and activities can seriously threaten or degrade groundwater quality. The purpose of this Wellhead Protection Ordinance is to institute land use regulations and restrictions to protect the Village's municipal water supply and well fields, and to promote the public health, safety, and general welfare of the residents of the Village of Whiting.

Statutory authority of the Village to enact these regulations was established by the Wisconsin Legislature in 1983, Wisconsin Act 410 (effective date May 11, 1984), which specifically added groundwater protection to the statutory authorization for municipal planning and zoning to protect public health, safety and welfare.

### **Sec. 31.02** Application of Regulations

The regulations specified in this Wellhead Protection Ordinance shall apply only within the Village of Whiting corporate limits, to all lands that lie within 1,500 feet of the Whiting well field (Cone of Depression) and within the five-year Time of Travel (TOT) of the well field.

### **Sec. 31.03** Definitions

- 1) **AQUIFER.** A saturated, permeable, geologic formation that contains and will yield significant quantities of water.
- 2) **CONE OF DEPRESSION.** The cone-shaped area around a well, in which the water level has been lowered 0.1 of a foot by pumping of the well. The Wisconsin Geological and Natural History Survey Special Report No. 10, entitled "Wellhead-Protection Districts in Wisconsin: An Analysis and Test Applications", identified the Cone of Depression for the Village of Whiting to be a radius of 1,422 feet. For ease of determination and to protect the entire Village of Whiting well field, the Cone of Depression or Groundwater Protection Overlay District A has been established as being 1,500 feet from the property boundaries of the Whiting well field.
- 3) **FIVE YEAR TIME OF TRAVEL (TOT).** The Five-Year TOT is the recharge area up gradient of the cone of depression, the outer boundary of which it is determined or estimated that groundwater and potential contaminants will take five years to reach a pumping well(s). The Five-Year TOT for the Village of Whiting well field is established as a distance of one (1) mile up gradient from the ownership boundaries of the well field, based on groundwater flow rates calculated for the Whiting recharge area as discussed in the Wisconsin Geological and Natural History Survey Special Report No. 10.
- 4) **NATURAL VEGETATION.** Includes native trees, shrubs, prairie species, and non-native plants, excluding lawns.
- 5) **NET LOT AREA.** Determined by subtracting the area of the building footprint, driveways, patios, pools and other impervious surface from the total lot area.
- 6) **RECHARGE AREA.** Area in which water reaches the zone of saturation by surface infiltration and encompasses all areas or features that supply groundwater recharge to a well.
- 7) **WELL FIELD.** A piece of land used primarily for the purpose of locating wells to supply a municipal water system.

### **Sec. 31.04** Groundwater Protection Overlay District A - Cone of Depression

- 1) **INTENT.** The primary area of the Whiting recharge area to be protected is the land within 1,500 feet of the boundary of the Whiting well field, known as the Cone of Depression. These lands are subject to the most stringent land use and development restrictions because of their close proximity to the well field and the corresponding high threat of contamination.
- 2) **PERMITTED USES.** The following uses are permitted uses within Groundwater Protection Overlay District. Uses not listed are to be considered prohibited uses.
  - a. Parks provided there is no on-site waste disposal or fuel storage tank facilities associated within this use.
  - b. Playgrounds.
  - c. Wildlife areas.
  - d. Nonmotorized trails, such as biking, skiing, nature and fitness trails.

- 3) PROHIBITED USES. The following uses are prohibited uses within the Groundwater Protection overlay District. Uses not listed are not considered permitted uses, unless specifically listed above under Permitted Uses.
- a. Sewered or unsewered residential uses.
  - b. On-site private sewage systems.
  - c. Underground storage tanks of any size.
  - d. Basement storage tanks.
  - e. Agricultural activities.
  - f. Pesticide and/or fertilizer storage and use.
  - g. Septage and/or sludge spreading.
  - h. Animal waste landspreading.
  - i. Animal waste facilities.
  - j. Animal confinement.
  - k. Gas stations.
  - l. Vehicle repair establishments, including auto body repair.
  - m. Printing and duplicating businesses.
  - n. Any manufacturing or industrial businesses.
  - o. Bus or truck terminals.
  - p. Repair shops.
  - q. Landfills or waste disposal facilities.
  - r. Wastewater treatment facilities.
  - s. Spray wastewater facilities.
  - t. Junk yards or auto salvage yards.
  - u. Bulk fertilizer and/or pesticide facilities.
  - v. Asphalt products manufacturing.
  - w. Dry cleaning businesses.
  - x. Salt storage.
  - y. Electroplating facilities.
  - z. Exterminating businesses.
  - aa. Paint and coating manufacturing.
  - bb. Hazardous and/or toxic materials storage.
  - cc. Toxic and hazardous waste facilities
  - dd. Radioactive waste facilities.

**Sec. 31.05** Groundwater Protection Overlay District B - 5 Year Time of Travel

- 1) INTENT. A secondary area of the Whiting recharge area to be protected is the land which lies within the five-year groundwater travel zone up gradient from the Whiting well field. The Five-Year Time of Travel (TOT) for the Whiting well field is established at one (1) mile from the boundaries of the Whiting well field, based on an average rate of groundwater flow of 1,070 feet per year in the Whiting District B are less restrictive than in overlay District A because of longer flow time and a greater opportunity for containment, dilution and attenuation potential.
- 2) PERMITTED USES. The following uses are permitted within the Groundwater Protection Overlay District B. Uses not listed are to be considered prohibited uses.
  - a. All uses listed as permitted uses in Groundwater Protection Overlay District A.
  - b. Sewered residential uses.
  - c. Above ground storage tanks (660 gallons).
  - d. Basement storage tanks.
  - e. Sewered commercial and/or industrial uses, except those listed as prohibited uses in Prohibited Uses.
- 3) PERFORMANCE STANDARDS. The following standards and requirements shall apply to all uses permitted within the Groundwater Protection Overlay District B.
  - a. All residential, commercial, and industrial uses are allowed only 25% of the net lot area to be maintained in manicured lawn or grass. Seventy-five percent of the net lot area shall be retained or developed into natural vegetative cover not requiring the use of pesticides or fertilization after the initial establishment.

- b. All above ground liquid petroleum storage tanks shall be approved leak proof containment equal to 125% of the tank volume.
- 4) PROHIBITED USES. The following uses are prohibited uses within Groundwater Protection Overlay District. Uses not listed are not considered permitted uses unless specifically listed above under Permitted Uses.
- a. Underground storage tanks of any size.
  - b. On-site private sewage systems.
  - c. Agricultural activities.
  - d. Pesticide and/or fertilizer storage and use.
  - e. Septage and/or sludge spreading.
  - f. Animal waste landspreading.
  - g. Animal waste facilities.
  - h. Animal confinement facilities.
  - i. Gas stations.
  - j. Vehicle repair establishments, including auto body repair.
  - k. Printing and duplicating.
  - l. Bus or truck terminals.
  - m. Repair shops.
  - n. Landfills.
  - o. Wastewater treatment facilities.
  - p. Spray wastewater facilities.
  - q. Junkyards or auto salvage yards.
  - r. Bulk fertilizer and pesticide facilities.
  - s. Asphalt products manufacturing.
  - t. Dry cleaning facilities.
  - u. Salt storage.
  - v. Electroplating.
  - w. Exterminating shops.
  - x. Pain and coating manufacturing.
  - y. Hazardous and toxic materials storage and use.
  - z. Hazardous and toxic waste facilities.
  - aa. Radioactive waste facilities.
  - bb. Tire and battery services.
  - cc. Garage and vehicular towing.
  - dd. Public and municipal maintenance garages.

**Sec. 31.06** Enforcement and Penalties

- 1) VIOLATIONS. It shall be unlawful to construct or use any structure, land or water in violation of any of the provisions of this Chapter. In case of any violation, the Village Board, Plan Commission, Building Inspector, or any person who would be specifically damaged by such violation, may institute appropriate action or proceedings to enjoin a violation of this Chapter.
- 2) PENALTIES. Any person, firm, or corporation who fails to comply with the provisions of this chapter of this chapter shall upon conviction thereof, forfeit not less than One Hundred (\$100.00) Dollars nor more than Five Hundred (\$500.00) Dollars, plus the costs of prosecution for each violation, and in default of payment thereof, but not exceeding Thirty (30) Days, or in the alternative, shall have such costs added to their real property as a lien against the property. Each say a violation exists or continues shall constitute a separate offense.