

CHAPTER 146

PUBLIC WATER SUPPLY WELL FIELD PROTECTION

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146.01 PURPOSE. The purpose of this chapter is to institute land use regulations and restrictions to protect the City’s water supply and well fields, restrict the location of potential sources of contamination in close proximity to a public water supply, and to promote the public health, safety and general welfare of the residents to the City.

146.02 DEFINITIONS.

1. “Aquifer” means a rock formation, group of rock formations or part of a rock formation that contains enough saturated permeable material to yield significant quantities of water.
2. “Alluvium” means sand, clay, etc., gradually deposited by moving water.
3. “Contamination” means the presence of any harmful or deleterious substances in the water supply.
4. “Groundwater” means subsurface water in the saturated zone from which wells, springs and groundwater runoff are supplied.
5. “Hazardous substances” means those materials specified in Section 146.03 of this chapter.
6. “Labeled quantities” means the maximum quantity of chemical as recommended on the label, for specific applications.
7. “Permitted pumping capacity” means the amount of water authorized to be pumped from a well during a one-year period.
8. “Person” means any natural person, individual, public or private corporation, firm, association, joint venture, partnership, municipality, governmental agency, political subdivision, public officer, or any other entity whatsoever or any combination of such, jointly or severally.

9. "Petroleum product" means fuels (gasoline, diesel fuel, kerosene and mixtures of those products), lubricating oils, motor oils, hydraulic fluids and other similar products.
10. "Pollution" means the presence of any substance (organic, inorganic, radiological or biological) or condition (temperature, pH turbidity) in water that tends to degrade its quality so as to constitute a hazard or impair the usefulness of the water.
11. "Potable water" means water that is satisfactory for drinking, culinary and domestic purposes, meeting current drinking water standards.
12. "Primary containment" means the first level of product-tight containment, i.e., the inside portion of that container which comes into immediate contact on its inner surface with the hazardous material being contained.
13. "Public utility" means any utility (gas, water, sewer, electrical, telephone, cable television, etc.) whether publicly owned or privately owned.
14. "Secondary containment" means the level of product-tight containment external to and separate from the primary containment. Secondary containment consists of leakproof trays under containers, floor curbing or other containment systems and shall be of adequate size and design to handle all spills, leaks, overflows and precipitation until appropriate action can be taken. The specific design and selection of materials shall be sufficient to preclude any substance loss. Containment systems shall be sheltered so that the intrusion of precipitation is effectively prevented.
15. "Shallow well" means a well located and constructed in such a manner that there is not a continuous five-foot layer of low permeability soil or rock between the aquifer from which the water supply is drawn and a point twenty-five (25) feet below the normal ground surface.
16. "Toxic substance" means any substance that has the capacity to produce personal injury or illness to humans through ingestion, inhalation or absorption into the body.
17. "Water pollution" means the introduction in any surface or underground water of any organic or inorganic deleterious substance in such quantities, proportions and accumulations that are injurious to human, plant, animal, fish and other aquatic life or property or that unreasonably interfere with the comfortable enjoyment of life or property or the conduct of business.

18. “Well” means a pit or hole sunk into the earth to reach a resource supply such as water.

19. “Well field” means a tract of land that contains a number of wells for supplying water.

20. “Zones of Influence” means zones delineated by fixed radii around well heads, within which toxic substances will be regulated to protect the quality of the underground resource.

146.03 SUBSTANCES REGULATED. The materials regulated by this chapter are the following:

1. Petroleum products as defined in Section 146.02;
2. Substances listed in 40 CFR Part 261, subparts C and D, the Federal Hazardous Waste List;
3. Substances listed by the Iowa Labor Commissioner pursuant to Section 898.12 of the Code of Iowa (Hazardous Chemicals Risks - Right to Know).

146.04 MAPS OF ZONES OF INFLUENCE.

1. Maps. Zones of Influence Maps and any amendments thereto are incorporated by reference and made a part of this chapter. These maps are on file in the Water Department. The location of all wells in the City supplying potable water to the City Water System are shown on the official Zoning District Map with Primary and Secondary Protection Zones indicated. No land within the Primary Protection Zone that is currently not zoned commercial or industrial will be allowed to be rezoned to a commercial or industrial classification. Said maps shall be provided to the Clerk and any other agency requesting said maps.

2. Map Maintenance. The Zones of Influence Maps may be updated on an annual basis. The reasons for such an update may include, but are not limited to, the following:

- A. Changes in the technical knowledge concerning the aquifer;
- B. Changes in permitted pumping capacity of City well fields;
- C. Additions of wells to existing well fields;
- D. Designation of new well fields.

3. Zones of Influence. The Zones of Influence indicated on the Zone of Influence Maps are as follows:

- A. Primary Protection Zone — an area extending 200 feet radially from any well supplying potable water to the City water systems.
- B. Secondary Protection Zone — an area extending between 200 and 2,640 feet radially from any well supplying potable water to the City water system.

146.05 RESTRICTIONS WITHIN THE PRIMARY PROTECTION ZONE.

1. Permitted Uses. The following uses are permitted uses within the Primary Protection Zone. 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, and the Iowa Department of Natural Resources *Separation Distances from Wells* for sources of contamination is complied with.
2. Prohibited Uses. All other uses are prohibited within the Primary Protection Zone. Additional restrictions are as follows:
 - A. No person shall discharge or cause or permit the discharge of a hazardous substance (including herbicide and pesticide application) to the soils, groundwater or surface water within the Primary Protection Zone. Any person knowing or having evidence of a discharge shall report such information to the Council or Wellhead Protection Officer.
 - B. New sanitary landfills are prohibited within the Primary Protection Zone.
 - C. The use, handling, production and storage of hazardous substances is prohibited in the Primary Protection Zone except as provided under Section 146.07. All persons who presently engage in nonexempt activity within the protection zone who store, handle, use or produce any hazardous substances shall cease to do so within two (2) years after the effective date of the ordinance codified in this chapter except as provided herein.
 - D. Feedlots or other concentrated animal facilities are prohibited within the Primary Protection Zone.
 - E. Wastewater Treatment plants, percolation ponds, dredge soil deposits and similar facilities are prohibited within the Primary Protection Zone.

- F. Septic tanks are prohibited within the Primary Protection Zone.
- G. Other prohibited uses are: septage and/or sludge and/or animal waste landspreading, salt storage and radioactive waste facilities.

146.06 RESTRICTIONS WITHIN THE SECONDARY PROTECTION ZONE.

1. Permitted Uses. The following uses are permitted in the Secondary Protection Zone.
 - A. All uses listed as permitted in the Primary Protection Zone.
 - B. Sewered residential, commercial and/or industrial uses except those listed as prohibited uses in subsection 2 of this section.
 - C. Above-ground storage tanks of 660 gallons or less.
 - D. Basement storage tanks.
2. Prohibited Uses. All other uses are prohibited within the Secondary Protection Zone. Additional restrictions are as follows:
 - A. No person shall discharge or cause or permit the discharge of a hazardous substance in excess of labeled quantities (including herbicide and pesticide application) to the soils, groundwater or surface water within the Secondary Protection Zone. Any person knowing or having evidence of a discharge shall report such information to the City.
 - B. New sanitary landfills are prohibited within the Secondary Protection Zone.
 - C. The use, handling, production and storage of hazardous substances is prohibited in the Secondary Protection Zone except where secondary containment is provided or underground storage tanks in compliance with Chapter 135 of the Iowa Administrative Code, above ground storage tanks in compliance with requirements of the State Fire Marshal, or as provided under Section 146.07.
 - D. Feedlots or other concentrated animal facilities are prohibited within the Secondary Protection Zone.

E. Wastewater Treatment plants, percolation ponds, dredge soil deposits and similar facilities are prohibited within the Secondary Protection Zone.

146.07 EXCEPTIONS.

1. The following activities or uses are exempt from the provisions of this chapter:

A. The transportation of any hazardous substance through the well field protection zones, provided the transporting vehicle is in transit.

B. Silviculture uses and mosquito control spraying providing that said uses comply with the Iowa Commercial and Public Pesticide Applicators and Dealers Licensing through the Iowa Department of Agriculture. The use and storage of herbicides and pesticides for silviculture uses is prohibited within the Primary Protection Zone but is allowed within the Secondary Protection Zone.

C. The use of any hazardous substance solely as fuel in a vehicle fuel tank or as lubricant in a vehicle.

D. Fire, police, emergency medical services, emergency management center facilities or public utility transmission facilities.

E. Retail sales establishments that store and handle hazardous substances for resale in their original unopened containers.

F. Consumer products limited to use at a facility solely for janitorial or minor maintenance purposes.

G. Consumer products located in the home which are used for personal, family or household purposes.

H. The storage and use of hazardous substances as a fuel or lubricant to provide auxiliary power for emergency use to the well field, provided an enclosed secondary containment system is provided for the hazardous substance.

I. The use of water treatment chemicals connected with the operation of the well.

2. The use of structures or facilities existing at the time of the adoption of the ordinance codified by this chapter may be continued even though such use may not conform with the regulations of this chapter.

However, such structures or facilities may not be enlarged, extended, reconstructed or substituted subsequent to adoption of said ordinance.

3. Any person who engages in nonresidential activities relating to the storage, handling, use and/or production of any toxic or hazardous substances who is exempt from this chapter by law shall not be subject to the restrictions contained herein.

4. All written requests to permit variances or special exceptions in the City's Well Field Protection Zones will be made to the Council and must include an environmental assessment report. Any exemptions granted will be made conditional and may include environmental and safety monitoring and/or a bond posted for future monitoring and cleanup costs. The exemption will be made void if environmental and/or safety monitoring indicates the facility is emitting any releases of harmful contaminants to the surrounding environment. The facility will be financially responsible for all environmental cleanup costs.

146.08 DETERMINATION OF LOCATIONS WITHIN ZONES. In determining the location of properties within the zones depicted on the Zones of Influence Maps, the following rules shall apply:

1. Properties located wholly within one zone reflected on the applicable Zone of Influence Map shall be governed by the restrictions applicable to that zone.
2. For properties having parts lying within more than one zone as reflected on the applicable Zones of Influence Map, each part shall be governed by the restrictions applicable to the zone in which it is located.

146.09 ENFORCEMENT AND PENALTIES.

1. The Water Superintendent is designated as the Well Field Protection Officer unless another person is specifically designated by the Council to supervise the implementation and enforcement of this chapter.
2. No building permit shall be issued which is a violation of the Iowa Department of Natural Resources *Separation Distance from Wells*, a violation of this chapter or a source of contamination for a City well.
3. No new underground tanks will be allowed for auxiliary fuel storage in the Primary or Secondary Zones.

146.10 INSPECTIONS.

1. The Well Field Protection Officer or Inspector shall have the power and authority to enter and inspect all buildings, structures and land

within well field Zones of Influence for the purpose of making an inspection. Failure of a person having common authority over a property to permit an inspection shall be sufficient grounds and probable cause for a court of competent jurisdiction to issue a search warrant to the Protection Officer to inspect such premises.

2. In the event a building or structure appears to be vacant or abandoned, and the owner cannot be readily contacted in order to obtain consent for an inspection, the officer or inspector may enter into or upon any open unsecured portion of the premises in order to conduct an inspection thereof.

3. The Well Field Protection Officer or Inspector shall inspect each well field annually and shall maintain an inventory, if applicable, of all hazardous substances which exist within each well field zone. An emergency plan shall be prepared and filed with the County Emergency Management Agency indicating the procedures which will be followed in the event of spillage of a regulated substance so as to control and collect all such spilled materials.

4. It is the duty of all law enforcement officers to assist in making inspections when such assistance is requested by the officer or inspector.

146.11 NOTICE OF VIOLATION AND HEARING. Whenever an officer or an inspector determines that there is a violation of this chapter, said officer shall give notice thereof, and such notice of violation shall:

1. Be in writing;
2. Be dated and signed by the officer or inspector;
3. Specify the violation or violations;
4. State that said violations shall be corrected within a specified period of time as issued in writing by the inspector.

146.12 INJUNCTIVE RELIEF. If any person who engages in nonresidential activities stores, handles, uses and/or produces toxic substances within the well field Zones of Influence, as indicated on the Zones of Influence Maps, continues to operate in violation of the provisions of this chapter, then the City may file an action for injunctive relief in the court of jurisdiction.

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