

CHAPTER 147

WATER WELL PROTECTION

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147.01 PURPOSE. The purpose of this chapter is to establish separation distances from wells from all structures and uses, to protect the public, and to preserve the health and welfare of the community by protecting water purity.

147.02 ESTABLISHMENT OF SEPARATION DISTANCES. The distances for separating uses and construction around all wells within the City, including old wells as well as new wells, have been established by State requirements relative to possible pollutants and their distances from wells, and the Council has found that the said State requirements shall be adopted as the minimum acceptable requirements for separation distances from wells, and no construction or use shall be allowed within said minimum distances to City wells as set forth herein.

147.03 DEFINITIONS. For use in this chapter, the following terms are defined. Use of the word “building” includes the word “structure.”

1. “Animal enclosure” means a lot, yard, corral or similar structure in which the concentration of livestock or poultry is such that a vegetative cover is not maintained.
2. “Animal pasturage” means a fenced area where vegetative cover is maintained and in which the animals are enclosed.
3. “Animal waste” means animal waste consisting of excreta, leachings, feed losses, litter, wash water or other associated waste.
4. “Animal waste stockpiles” means stacking, composting or containment of animal wastes.
5. “Animal waste storage basin or lagoon” means fully or partially excavated or diked earthen structure including earthen side slopes or floor.
6. “Animal waste storage tank” means a completely fabricated structure, with or without a cover, either formed in place or transported to the site, used for containing animal waste.
7. “Cistern” means a covered tank in which rain water from roof drains is stored.

8. “Deep well” means a well located and constructed in such a manner that there is a continuous layer of low permeability soil or rock at least five feet thick located at a depth of at least 25 feet below the normal ground surface and above the aquifer from which the water is to be drawn.
9. “Low permeability” means an unconsolidated soil layer of well sorted fine grain-sized sediments that under normal hydrostatic pressures would not be significantly permeable. Low permeability soils may include homogeneous clays below the zone of weathering, mudstone, claystone and some glacial till.
10. “Privy” means a structure used for the deposition of human body wastes.
11. “Sanitary sewer pipe” means a sewer pipe complying with the standards of sewer construction of the Department of Natural Resources.
12. “Septic tank” means a watertight tank which receives sewage.
13. “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 25 feet below the normal ground surface.
14. “Water main pipe” means a water main complying with the Department of Natural Resources standards for water main construction.

147.04 SEPARATION DISTANCES TABLE. No building or use shall be allowed within the separation distances from City wells as set out in Table A at the end of this chapter. A building permit is required for all construction within 1,000 feet of municipal wells. No building permit shall be issued which is in violation of the separation distances from municipal wells if in violation of this chapter or a source of contamination for said well. Any use or construction in violation of this chapter is a nuisance as defined in Chapter 50 of this Code of Ordinances and prohibited pursuant to Section 50.04; and the notice requirements regarding abatement of nuisances and prohibited conditions and all provisions of this Code of Ordinances in regard to abatement, costs of collection, hearings and penalties for maintaining a nuisance or prohibited condition as set forth herein are applicable. Specifically, and in addition to any other remedies allowed by ordinance or at law, the City shall recover any costs for water treatment which are created by any source of contamination which is identified, where said source is in violation of this chapter.

147.05 MANDATORY CONNECTION TO PUBLIC WATER SYSTEM AND USE OF PRIVATE WELLS.

1. Connections to the Public Water System. Except as otherwise provided herein, all residences and business establishments within the City using water for human habitation or occupancy shall connect to the public water system. Water is used for human habitation or occupancy if it is used in the plumbing system of a residence or a business occupied by humans.

2. Exceptions. A residence or business establishment within the City using water for human habitation or occupancy may obtain its water from a private well as follows:

A. Existing Wells. A well in existence on the effective date of the ordinance codified by this section may continue to obtain water from a private well as follows:

- (1) For irrigation of grass and landscape planting upon the property for so long as desired;
- (2) For human habitation or occupancy until the date established at Section 147.05(2) herein.

B. New Wells. A well may be drilled only upon property that does not have access to the City water system within 200 feet of the property, and use of the well for human habitation or occupancy may continue until the date established at Section 147.05(2) herein.

(1) Permit. No person shall install or maintain a private well after the date of enactment of the ordinance codified by this section, or own or use a private well within the City after such date, unless the person has registered such well and obtained a permit for same from the City. The registration and permit process shall be completed on forms provided by the City.

(2) Contaminated Area, Notwithstanding anything to the contrary which permits a private well to remain in existence within the City, neither shall a new private well be drilled nor shall repairs to an existing private well be made after the date of enactment of the ordinance codified by this section, if the well is located within a contaminated area.

(3) Variance. The City Council, upon recommendation of the Superintendent of the City Water System or the Superintendent's designated assistant or agent, may consider a variance or exception to this section on application to the City.

(4) Termination of Use of Existing Wells. The use of any private well not permitted to continue under this section shall cease and the well shall be plugged in accordance with rules of the Iowa Department of Natural Resources on July 1, 2005, or 90 days after the date the public water system is extended to within 200 feet of the affected property, whichever is later.

(5) Definitions. For use in this section the following terms are defined:

a. "Private well" means any groundwater well, except a monitoring well used as a part of a remediation system, used both for drinking water and for non-drinking water purposes, including a groundwater well which is not properly plugged in accordance with rules of the Iowa Department of Natural Resources.

b. "Contaminated area: means a point within an area that has groundwater contamination or that in accordance with design models of the Iowa Department of Natural Resources may become contaminated due to percolation of groundwater contamination in the vicinity of the well site.

c. "Human habitation or occupancy" means use of water in the plumbing system of a residence or business used or occupied by humans.

(Ord. 817 – Jun. 04 Supp.)

TABLE A

Source of Contamination			Distances (Feet)									
			5	10	25	50	75	100	200	400	1000	
WASTEWATER STRUCTURES	POINT DISCHARGE TO GROUND SURFACE	Well house floor drains	A									
		Water treatment plant wastes				A						
		Sanitary and industrial discharge									A	
	SEWERS AND DRAINS	Well house floor drains to surface	ENC A	WM A	A	SP	A	-----Unknown-----				
		Well house floor drains to sewers			A	WM	A	SP	A	--Unknown--		
		Water plant wastes			A	WM	A	SP	A	--Unknown--		
		Sanitary and storm sewers, drains			A	WM	A	SP	A	--Unknown--		
		Sewer force mains					A	WM	WM	A	SP	
	LAND DISPOSAL OF WASTES	Land application of solid waste						D	S			
		Irrigation of wastewater						D	S			
		Concrete vaults and septic tanks						D	S			
		Mechanical wastewater treatment plants							D	S		
		Cesspools and earth pit privies							D	S		
		Soil absorption fields							D	S		
		Lagoons								D	S	
CHEMICAL S	CHEMICAL AND MINERAL STORAGE	Chemical application to ground surface						D	S			
		Above ground						D	S			
		On or under ground							D	S		
ANIMALS	ANIMAL WASTES	Animal pasturage				A						
		Animal enclosure						D	S			
		Land application of solids						D	S			
		Land application of liquid or slurry						D	S			
		Storage tank						D	S			
		Solids stockpile							D	S		
		Storage basin or lagoon								D	S	
MISCELLANEOUS		Earthen silage storage trench or pit						D	S			
		Basements, pits, sumps		A								
		Flowing streams or other surface water bodies				A						
		Cisterns				D		S				
		Cemeteries							A			
		Private wells							D	S		
		Solid waste disposal sites									A	

KEY	
D	Deep Well
S	Shallow Well
A	All Wells
WM	Pipe of Water Main Specifications
SP	Pipe of Sewer Pipe Specifications
ENCWM	Encased in 4 inches of Concrete