

## Chapter XX

### WELL HEAD PROTECTION DISTRICT

### CITY of XXX, ND ORDINANCES

As adopted by City Commissioners 1992

#### PURPOSE AND INTENT

The City Commission recognizes (1) that residents of the City of XXX rely exclusively on ground water for a safe drinking water supply and (2) that certain land uses in McHenry County can contaminate ground water particularly in shallow/surficial aquifers.

The purpose of the Wellhead Protection District is to protect public health and safety by minimizing contamination of the shallow/surficial aquifers of XXX County. It is the intent to accomplish this, as much as possible, by public education and securing public cooperation.

Appropriate land use regulations will be imposed, however, which are in addition to those imposed in the underlying zoning districts or in other county regulations. It is not the intent to grandfather in existing land uses which pose a serious threat to public health through potential contamination of public water supply wellheads areas.

#### Section 20.0101 DEFINITIONS

##### 1. AQUIFER

A geological formation, group of formations, or part of a formation capable of storing and yielding ground water to wells and springs.

##### 2. BEST MANAGEMENT PRACTICES

Measures, either managerial or structural, that are determined to be the most effective, practical means of preventing or reducing pollution inputs from nonpoint sources to water bodies.

##### 3. BUFFER ZONE

An area outside and adjacent to Zone A that has been delineated to account for possible changes in the boundaries of Zone A due to effects of irrigation pumping.

##### 4. CHEMIGATION

The process of applying agricultural chemicals (fertilizer or pesticides) using an irrigation system by injecting the chemicals into the water.

##### 5. CONTAMINATION

The process of making impure, unclean, inferior, or unfit for use by introduction of undesirable elements.

##### 6. CONTINGENCY PLANS

Detailed plans for control, containment, recovery, and clean-up of hazardous materials released during fires, equipment failures, leaks, and spills.

##### 7. DEVELOPMENT

The carrying out of any construction, reconstruction, alteration of surface or structure or change of land use or intensity of use.

**8. FACILITY**

Something that is built, installed, or established for a particular purpose.

**9. FEEDLOT**

A parcel of land whereon there is contained an operation of feeding or raising animals in excess of one hundred (100) animal units per acre or in excess of five hundred (500) animal units per parcel of land. One animal unit is equivalent to one beef cow, steer, feeder or fat beef animal; one horse; 0.7airy cow; 1.7 swine; 6.7 sheep; 33 hens, cockerels, capons, broiler or ducks; and 10 geese or turkeys.

**10. GRAY WATER**

All domestic wastewater except toilet discharge water.

**11. HAZARDOUS MATERIAL**

A material which is defined in one or more of the following categories:

- (a) Ignitable: A gas, liquid or solid which may cause fires through friction, absorption of moisture, or which has low flash points. Examples: white phosphorus and gasoline.
- (b) Carcinogenic: A gas, liquid or solid which is normally considered to be cancer causing or mutagenic. Examples: PCB's in some waste oils.
- (c) Explosive: A reactive gas, liquid or solid which will vigorously and energetically react uncontrollably if exposed to heat, shock, pressure or combinations thereof. Examples: dynamite, organic peroxides and ammonium nitrate.
- (d) Highly Toxic: A gas, liquid, or solid so dangerous to man as to afford an unusual hazard to life. Examples: parathion and chlorine gas.
- (e) Moderately Toxic: A gas, liquid or solid which through repeated exposure or in a single large dose can be hazardous to man. Example: atrazine.
- (f) Corrosive: Any material, whether acid or alkaline, which will cause severe damage to human tissue, or in case of leakage might damage or destroy other containers of hazardous materials and cause the release of their contents. Examples: battery acid and phosphoric acid.

**12. MANURE STORAGE AREA**

An area for the containment of animal manure in excess of 8,000 pounds or 1,000 gallons.

**13. LEAKS AND SPILLS**

Any unplanned or improper discharge of a potential contaminant including any discharge of a hazardous material.

**14. PASTURE**

A field that provides continuous forage to animals without depletion of forage matter.

**15. PRIMARY CONTAINMENT FACILITY**

A tank, pit, container, pipe or vessel of first containment of a liquid or chemical.

**16. SECONDARY CONTAINMENT FACILITY**

A second tank, catchment pit, pipe, or vessel that limits and contains liquid or chemical leaking or leaching from a primary containment area; monitoring and recovery are required.

**17. SHALLOW/SURFICIAL AQUIFER**

An aquifer in which the permeable media (sand and gravel) starts at the land surface or immediately below the soil profile.

**18. TEN YEAR TIME OF TRAVEL DISTANCE**

The distance that ground water will travel in ten years. This distance is a function of the permeability and slope of the aquifer.

**19. ZONE OF CONTRIBUTION**

The entire area around a well or well field that is recharging or contributing water to the well or well field.

**Section 20.0201 ZONES**

**1. ZONE A - AQUIFER CRITICAL IMPACT ZONES**

Zone A, the wellhead protection area, is the zone of contribution mapped around all public water supply wells or well fields and includes land up gradient to the ten year time of travel boundary plus contributing drainage areas.

(a) Permitted uses provided they meet appropriate performance standards outlined for aquifer protection overlay zones:

1. Agriculture
2. Horticulture
3. Park, greenways or publicly owned recreational areas
4. Necessary public utilities/facilities designed so as to prevent contamination of ground water.

(b) Special exceptions: The following uses are permitted only under the terms of a special exception and must conform to provisions of the underlying zoning district and meet the Performance Standards outlined for the Aquifer Protection Overlay Zones.

1. Expansion of existing nonconforming uses to the extent allowed by the underlining district. The Commission shall not grant approval unless it finds such expansion does not pose greater potential contamination to ground water than the existing use.

(c) Prohibited uses:

1. New feedlots installed after adoption of this ordinance;
2. Disposal of solid waste except spreading of manure;
3. Outside unenclosed storage of road salt;
4. Disposal of snow containing deicing chemicals;
5. Processing and storage of PCB containing oils;
6. Car washes;
7. Auto service, repair or painting facilities and junk or salvage yards;
8. Disposal of radioactive waste;
9. Graveyards or animal burial sites;
10. Open burning and detonation sites;
11. All other facilities involving the collection, handling, manufacture, use, storage, transfer or disposal of any solid or liquid material or waste having potentially harmful impact on ground water quality;
12. All uses not permitted or not permitted as special exceptions;
13. Fall application of nitrogen fertilizer except spreading of manure;
14. Weed sprays used must conform to county standards.
15. Disposal of waste oil, oil filters, tires and all other petroleum products.

2. ZONE B - Zone B is established as the remainder of the shallow/surficial aquifer not included in Zone A.
  - (a) Permitted uses:
    1. All uses permitted in the underlying zoning districts provided that they can meet the Performance Standards as outlined for the Aquifer Protection Overlay Zones.
  - (b) Special exceptions:
    1. All special exceptions allowed in underlying districts may be approved by the City Commission provided they can meet Performance Standards outlined for the Aquifer Protection Overlay Zones.
  - (c) Prohibited uses:
    1. Fall application of nitrogen fertilizer except spreading of manure.
    2. Weed Sprays that do not conform to county standards.
  - (d) Performance standards:

The following standards shall apply to land uses in Zone A and B of the Aquifer Protection Overlay Districts:

    1. New or replacement septic tanks and associated drain fields for containment of human or animal wastes must conform with regulations established by the North Dakota State Department of Health.
    2. Any Facility involving the collection, handling, manufacture, use, storage, transfer or disposal of any solid or liquid material or wastes, except for spreading of manure, in excess of 1000 pounds and or 100 gallons which has the potential to contaminate ground water must have a secondary containment system which are easily inspected and whose purpose is to intercept any leak or discharge from the primary containment vessel or structure. Underground tanks or buried pipes carrying such materials must have double walls and inspectable sumps. Pipes installed to carry diluted chemicals for chemigation are exempted and storage of liquid fertilizer for chemigation is allowed as long as a secondary containment system is used. Secondary containment for tanks used for chemigation must be in place by July 1, 1990.
    3. Open liquid ponds containing materials referred to in (2) above will not be permitted without a secondary containment system except for community wastewater lagoons. Agricultural waste storage ponds are permitted under certain conditions as approved by the City Commission.
    4. Storage of petroleum products in quantities exceeding fifty-five (55) gallons at one locality in one tank or series of tanks must be in elevated tanks; such tanks must have a secondary containment system noted in (2) above where it is deemed necessary by the City Commission.
    5. Discharge of industrial process water on site is prohibited without City Commission approval.
    6. Owners/operators of active or abandoned feedlots shall handle and dispose of manure in accordance with regulations set by the City Commission.
    7. Auto service, repair, or painting facilities and junk or salvage yards in Zone B shall meet all Federal and State standards for storage, handling and disposal of petroleum products and shall properly dispose of all potentially hazardous waste materials.

8. An acceptable contingency plan for all permitted facilities must be prepared and on file in the City Auditor's office for preventing hazardous materials from contaminating the shallow/surficial aquifer should flood, fire and other natural catastrophes or equipment failure occur:
  1. For flood control, all underground facilities shall include but not be limited to a monitoring system and secondary standpipe above the 100 year flood control level, for monitoring and recovery. For above ground facilities, an impervious, dike, above the 100 year flood level and capable of containing 100 percent of the largest volume of storage will be provided with an overflow recovery catchment area (sump).
  2. For fire control, plans shall include but not be limited to a Safe fire fighting procedure, a fire retardant system, and provide for dealing safely with both health and technical hazards that may be encountered by disaster control personnel in combating fire. Hazards to be considered are overhead and buried electrical lines, pipes, liquids, chemicals or open flames in the immediate vicinity.
  3. For equipment failures, plans shall include but not be limited to:
    - (a) Below ground level, removal and replacement of leaking parts, a leak detection system with monitoring, and an overflow protection system.
    - (b) Above ground level, liquid and leaching monitoring of primary containment systems, their replacement or repair and cleanup and/or repair of the impervious surface.
  4. For any other natural or man-caused disasters occurring, the owner and or operator shall report all incidents involving liquid or chemical material in an endangerment of the health and /or safety of either disaster personnel and/or public in general. Agricultural operations are exempted from this section unless they store chemicals that are on the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) extremely hazardous substance list over the threshold planning quantity at anyone time. The City Inspector shall be informed within 24 hours of all leaks and spills of materials that might potentially contaminate the water.
9. Since it is known that improperly abandoned wells can become a direct conduit for contamination of ground water by surface water, all abandoned wells should be plugged.

#### Section 20.0301 SCOPE

The provisions of this article shall apply to all wells or other openings greater than fifteen (15) feet in depth. Furthermore, the owner of any proposed well shall be required to apply and receive from the City Commission a permit to construct such a well or opening, the application for which shall supply all the information required under Section 20.0501, and for such permit the Council shall charge and receive the fee hereinafter provided for.

## Section 20.0401 PERMIT

1. A permit shall be granted when the City Inspector has examined the application and determined that the proposed use, activity, or development meets the performance standards.
2. In securing a use permit, the owner/developer must make future improvements which may become necessary to prevent contamination of shallow/surficial aquifers and the owner/developer must allow City personnel to inspect any improvements to verify they meet the performance standards.
3. Whenever any person has obtained a permit and thereafter desires alteration of the authorized us, such persons shall apply for a new permit. The owner may appeal a City Inspector's decision to modify or deny a requested permit.
4. It shall be unlawful for any person to drill or otherwise construct, repair, correct, abandon or plug a well, or to engage upon such work, within the limits of the area, or to employ anyone else to engage in such work, without first applying for and securing a permit from the City Commission or a duly authorized agent thereof. Such permit may be granted with the approval of the City Commission the application hereinafter required, and complies with all other provisions of this article applicable to him.

## Section 20.501 APPLICATION

1. Every application for a permit for the drilling, construction, repair and correction, abandonment of plugging of a well, shall state the name and address of the owner thereof, the purpose for which the permit is desired, which shall be done or more of the acts above-mentioned; the definite location of the well or proposed well; its approximate depth; and if the permit for the drilling or construction or repair and correction of a water well, the estimated amount of water to be, or which is pumped daily, monthly or annually, and the use or uses for which the water will be or is required; if for a permit for the drilling or construction or the repair and correction of a well, the proposed method of drilling or construction, or the proposed method of repair and correction, and the kind of equipment to be used, and in all cases, the name of the contractor(s), and the license number issued by the City Commission, if done through a contractor, whom the owner desires to drill or construct, repair and correct, or do the work pursuant to an abandonment of a well in compliance with this article.

## Section 20.0601 CITY LIABILITY

1. Nothing in this ordinance shall be construed to imply that the XXX City Commission, by issuing a permit, has accepted any of an owner/developer's liability if a permitted development contaminates water in shallow/superficial aquifers.

## SECTION 20.0701 ENFORCEMENT

1. CIVIL ENFORCEMENT:
  - (a) Any person may submit to the city a verbal or written complaint alleging a violation of this ordinance.
  - (b) Upon receipt of a complaint, the city shall conduct an investigation of the substances of the complaint. The investigation shall include a meeting with the landowner involved and an inspection of the animal feedlot and/or manure storage area to which the complaint pertains.

- (c) Based upon the determination that there is a violation of this ordinance, the City shall conduct an informal reconciliation with the violator. As part of such informal reconciliation, the city shall;
  - 1. Notify the violator by mail of the violation of this ordinance and a desire of the city to correct the violation through informal reconciliation. The statement shall also indicate that should the violator refuse to follow the recommended corrective actions within the time set forth by the city, the city may take action to correct the violation and bill the violator for the cost of taking the corrective action.
  - 2. Make a good faith effort to meet with the violator and resolve the correction of the violation.
- (d) If after taking the steps above and after a period of ninety (90) days following the mailing of the notice of the violation, the city in good faith determines that the violator is unwilling to participate in informal reconciliation and take the corrective action as prescribed, the city shall notify the violator by mail of the termination of the informal reconciliation.
- (e) The city may take the corrective action prescribed above following thirty (30) days after notifying violator by mail of the notice of termination of the informal reconciliation, and bill the violator for the reasonable cost of such action.

2. CRIMINAL ENFORCEMENT:

- (a) In lieu of proceeding under Section 2D.0701, a person who is alleged to have violated Sections (c) and (d) may be prosecuted for the commission of a crime. Violation of Section (c) and (d) is a misdemeanor and may be punished by imprisonment of not more than ninety (90) days or imposition of a fine of not more than \$700.00 or both.

SECTION 20.0801 SAVING CLAUSE

- 1. Should any section or provision of this ordinance be declared invalid, such decision shall not affect the validity of the ordinance as a whole or any other part thereof.

