

## **Model Groundwater Ordinance**

### **GROUNDWATER PROTECTION OVERLAY DISTRICT**

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#### **EXAMPLE ORDINANCE**

- **PURPOSE AND INTENT**

The jurisdiction of \_\_\_\_\_ recognizes that many residents rely on groundwater for their safe drinking water supply, and that certain land uses can contaminate groundwater particularly in shallow/surficial aquifers. To ensure the protection of these drinking water supplies, this ordinance establishes a zoning overlay district to be known as the Groundwater Protection Overlay District.

The purpose of the Groundwater Protection Overlay District is to protect public health and safety by minimizing contamination of shallow/surficial aquifers and preserving and protecting existing and potential sources of drinking water supplies. It is the intent to accomplish this through both public education and public cooperation, as well as by creating appropriate land use regulations that may be imposed in addition to those currently imposed by existing zoning districts or other county regulations.

The Groundwater Protection Overlay District is superimposed on current zoning districts and shall apply to all new construction, reconstruction, or expansion of existing buildings and new or expanded uses. Applicable activities/ uses allowed in a portion of one of the underlying zoning districts which fall within the Groundwater Protection Overlay District must additionally comply with the requirements of this district. Uses prohibited in the underlying zoning districts shall not be permitted in the Groundwater Protection Overlay District.

- **DEFINITIONS**

For the purposes of this section, the following terms are defined below:

1. **AQUIFER.** A geological formation, group of formations or part of a formation composed of rock, sand or gravel capable of storing and yielding groundwater to wells and springs.
2. **CONTAMINATION.** An impairment of water quality by chemicals, radionuclides, biologic organisms, or other extraneous matter whether or not it affects the potential or intended beneficial use of water.
3. **DEVELOPMENT.** The carrying out of any construction, reconstruction, alteration of surface or structure or change of land use or intensity of use.
4. **FACILITY.** Something that is built, installed, or established for a particular purpose.
5. **GREY WATER.** All domestic wastewater except toilet discharge water.

6. GROUNDWATER PROTECTION OVERLAY DISTRICT: The zoning district defined to overlay other zoning districts in the (jurisdiction) of \_\_\_\_\_. This district may include specifically designated recharge areas that collect precipitation or surface water and carry it to aquifers.

7. HAZARDOUS MATERIAL. A material which is defined in one or more of the following categories:

Ignitable: A gas, liquid or solid which may cause fires through friction, absorption of moisture, or which has low flash points. Examples: white phosphorous and gasoline.

Carcinogenic: A gas, liquid, or solid which is normally considered to be cancer causing or mutagenic. Examples: PCB's in some waste oils.

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.

Highly Toxic: A gas, liquid, or solid so dangerous to man as to afford an unusual hazard to life. Example: chlorine gas.

Moderately Toxic: A gas, liquid or solid which through repeated exposure or in a single large dose can be hazardous to man.

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.

8. PRIMARY CONTAINMENT FACILITY. A tank, pit, container, pipe or vessel of first containment of a liquid or chemical.

9. RELEASE. Any unplanned or improper discharge, leak, or spill of a potential contaminant including a hazardous material.

10. 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,

11. SHALLOW/SURFICIAL AQUIFER. An aquifer in which the permeable medial (sand and gravel) starts at the land surface or immediately below the soil profile.

12. SPILL RESPONSE PLANS. Detailed plans for control, recontainment, recovery, and clean up of hazardous material releases, such as during fires or equipment failures.

13. STORMWATER TREATMENT PRACTICES (STPs). Measures, either structural or nonstructural, that are determined to be the most effective, practical means of preventing or reducing point source or nonpoint source pollution inputs to stormwater runoff and water bodies.

14. **TIME-OF-TRAVEL DISTANCE.** The distance that groundwater will travel in a specified time. This distance is generally a function of the permeability and slope of the aquifer.

• **ZONES WITHIN THE GROUNDWATER PROTECTION OVERLAY DISTRICT**

3.1 **ZONE 1 - DRINKING WATER CRITICAL IMPACT ZONE.**

Zone 1 is defined as the area within the 6-month time-of-travel distance mapped around all the public water supply well(s). (NOTE: This zone typically constitutes the area within about 1000 feet of a public water supply well.)

a. **Encouraged Uses.** The following uses are encouraged within Zone 1 provided they meet the appropriate performance standards outlined in 3.1.c below and are designed so as to prevent any groundwater contamination.

Parks, greenways, or publicly-owned recreational areas such as foot, bicycle and/or horse paths, and bridges.

Necessary public utilities/facilities including the construction, maintenance, repair, and enlargement of drinking water supply related facilities such as, but not limited to, wells, pipelines, aqueducts, and tunnels..

Conservation efforts for soil, water, plants, and wildlife;

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 in 3.2.(c) below.

Expansion of existing nonconforming uses to the extent allowed by the underlying district. The applicant should consult the local zoning plan to confirm nonconforming uses. The (zoning authority) reserves the right to review all applications and shall not grant approval unless it finds such expansion does not pose greater potential contamination of groundwater than the existing use.

c. **Prohibited Uses.** The following uses, unless granted a special exception, are prohibited within Zone 1, the 6- month time-of-travel zone. (NOTE: this is typically within about 1000 feet of the public water supply well.)

- Automobile body/repair shop;
- Gas station;
- Fleet/trucking/bus terminal;
- Dry cleaner;
- Electrical/electronic manufacturing facility;
- Machine shop;
- Metal plating/finishing/fabricating facility;
- Chemical processing/storage facility;
- Wood preserving/treating facility;

- Junk/scrap/salvage yard;
- Mines/gravel pit
- Irrigated nursery/greenhouse stock
- Confined animal feeding operations
- Land divisions resulting in high density (>1 unit/acre) septic systems;
- Equipment maintenance/fueling areas;
- Injection wells/dry wells/sumps, except for single-family residences directing gutter downspouts to a drywell;
- Underground storage tanks, (except those with spill, overflow, and corrosion protection requirements in place);
- 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 groundwater quality;
- All uses not permitted in the underlying zone district

### 3.2 ZONE 2 - DRINKING WATER POTENTIAL IMPACT ZONE.

Zone 2 is established as the remainder of the Groundwater Protection Overlay District not included in Zone 1, but deemed necessary to ensure adequate protection of public drinking water supplies.

a. **Permitted Uses:** All uses permitted in the underlying zoning districts provided that they can meet the Performance Standards as outlined for the Groundwater Protection Overlay District.

b. **Special Exceptions:** All special exceptions allowed in underlying districts may be approved by the \_\_\_\_\_ (zoning authority) provided they can meet performance standards outlined for the Groundwater Protection Overlay District.

c. **Performance Standards:** The following standards shall apply to uses in Zones 1 and 2 of the Groundwater Protection Overlay District:

Any facility involving the collection, handling, manufacture, use, storage, transfer or disposal of any solid or liquid material or wastes, unless granted a special exception either through permit or another ordinance, must have a secondary containment system which is easily inspected and whose purpose is to intercept any leak or release from the primary containment vessel or structure. Underground tanks or buried pipes carrying such materials must have double walls and inspectable sumps.

Open liquid waste ponds containing materials referred to in item (1) above will not be permitted without a secondary containment system.

Storage of petroleum products in quantities exceeding ( ) 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 item (1) above where it is deemed necessary by \_\_\_\_\_.

All permitted facilities must adhere to appropriate federal and state standards for storage, handling and disposal of any hazardous waste materials.

An acceptable contingency plan for all permitted facilities must be prepared for preventing hazardous materials from contaminating the shallow/surficial aquifer should floods, fire, or other natural

catastrophes, equipment failure, or releases occur:

(a) 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).

(b) For fire control, plans shall include but not be limited to a safe fire fighting procedure, a fire retarding system, effective containment of any liquid runoff, and provide for dealing safely with any other health and technical hazards that may be encountered by disaster control personnel in combating fire. Hazards to be considered are pipes, liquids, chemicals, or open flames in the immediate vicinity.

(c) For equipment failures, plans shall include but not be limited to:

Below ground level, removal and replacement of leaking parts, a leak detection system with monitoring, and an overfill protection system.

Above ground level, liquid and leaching monitoring of primary containment systems, the replacement or repair and cleanup and/or repair of the impervious surface.

(d) For any other release occurring, the owner and/or operator shall report all incidents involving liquid or chemical material to the groundwater protection coordinator designated by the (local government authority).

Since it is known that improperly abandoned wells can become a direct conduit for contamination of groundwater by surface water, all abandoned wells should be properly plugged according to local and state regulations.

#### • **LIABILITY**

Nothing in this ordinance shall be construed to imply that the (local government authority) \_\_\_\_\_ has accepted any of an owner/developer's liability if a permitted facility or use contaminates groundwater in any aquifer.

#### **5. DISTRICT BOUNDARY DISPUTES**

If the location of the Groundwater Protection Overlay District boundary in relation to a particular parcel is in doubt, resolution of boundary disputes shall be through a Special Permit application. The burden of proof shall be upon the owner(s) of the land to demonstrate where the boundaries of the district with respect to their individual parcel(s) of land should be located. If the owner(s) request that the local government agency determine more accurately the boundaries of the district with respect to individual parcels of land, the agency may engage a professional engineer, hydrologist, geologist, or soil scientist and charge the owner(s) for the cost of the investigation.

#### **6.0. ENFORCEMENT**

**6.1. CIVIL ENFORCEMENT:**

- a. Any person may submit a verbal or written complaint alleging a violation of this ordinance.
- b. Upon receipt of a complaint, the jurisdiction shall conduct a brief investigation of the substances of the complaint, including a meeting with the landowner involved.
- c. Based upon the determination that there is a violation of this ordinance, the jurisdiction shall conduct an informal reconciliation with the violator. As part of such informal reconciliation, the jurisdiction shall:
  - (1) Notify the violator by mail of the violation of this ordinance and a desire of the jurisdiction to correct the violation through informal reconciliation. The statement shall also indicate that should the violator refuse to allow the recommended corrective actions within the time set forth by the jurisdiction, action may be taken to correct the violation and the violator will be billed for the cost of taking the corrective action.
  - (2) Make a good faith effort to meet the violator and resolve/correct the violation.
- d. If after taking the steps above and after a period of ( ) days following the mailing of the notice of the violation, the jurisdiction in good faith determines that the violator is unwilling to participate in informal reconciliation and take the corrective actions prescribed, the jurisdiction shall notify the violator by mail of the termination of the informal reconciliation.
- e. The jurisdiction may take corrective actions deemed necessary following ( ) 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.

**6.2. CRIMINAL ENFORCEMENT:** In lieu of civil enforcement proceeding, a person who is alleged to have violated this ordinance may be prosecuted for the commission of a crime. Violation of this ordinance is a misdemeanor and may be punished by imprisonment of not more than ( ) days or imposition of a fine of not more than \$\_ or both.

**7.0. SAVING CLAUSE**

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. A determination that any portion or provision of this overlay protection district is invalid shall not invalidate any special permit previously issued thereunder.

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

