

Model Groundwater Protection Ordinance

The following model ordinance is designed to be incorporated, as an overlay zone, into an existing zoning bylaw. An overlay zone functions within a zoning ordinance as a separate district that is placed over an existing district. The standards of the overlay zone do not exempt an applicant from meeting the standards of the underlying zone.

As the characteristics of all Source Protection Areas and all towns vary, it is recommended that municipalities consult with the Water Supply Division in tailoring this model ordinance to fit their specific needs.

GROUNDWATER PROTECTION OVERLAY DISTRICT

A. TITLE

This bylaw shall be known as the Groundwater Protection Overlay District Bylaw of the Town of _____ (“GPOD Bylaw”). This bylaw is in addition to other districts already established through the Town of _____ Zoning Ordinance.

B. PURPOSE AND INTENT

The Town 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, or where contaminants can get into a bedrock aquifer. To ensure the protection of these drinking water supplies, this bylaw establishes a zoning overlay district to be known as the Groundwater Protection Overlay District (GPOD).

The purpose of the GPOD is to protect public health and safety by minimizing contamination of vulnerable aquifers and preserving and protecting existing and potential sources of drinking water supplies. It is the intent of the Town of _____ to accomplish this through the adoption of this GPOD. The GPOD allows for appropriate land use regulations, in addition to those currently imposed by existing zoning districts or other state and federal regulations. It is intended that public education and cooperation will complement this effort.

The GPOD is superimposed on all (or specific) 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 that fall within the GPOD must additionally comply with the requirements of this district. Uses prohibited in the underlying zoning districts shall not be permitted in the GPOD.

C. AUTHORITY

1. This bylaw has been prepared and adopted pursuant to the provisions of 24 V.S.A. Chapter 117 (§ 4414(2)), known as the Vermont Municipal and Regional Planning and Development Act.

2. Pursuant to 24 V.S.A. Chapter 117, the [Zoning Board of Adjustment/Development Review Board] of the Town of _____ is authorized to review, approve, conditionally approve, and deny applications for land development, including sketch, preliminary and final plans, and installation. Pursuant to 24 V.S.A. § 4440(d) the [Board] is authorized to hire qualified persons to conduct an independent technical review of applications and to require the applicant to pay for all reasonable costs thereof.

D. 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 either composed of unconsolidated rock, sand, gravel, or other unconsolidated soils, or composed of bedrock with an interconnected series of crevasses, fractures, joints, faults, cleavages, bedding planes, porosity, or other geologic features which allow groundwater to move in the subsurface environment and are capable of storing and yielding groundwater to wells and springs.
2. **Contamination.** An impairment of water quality by chemicals, biologic organisms, or other extraneous matter whether or not it affects the potential or intended beneficial use of water.
3. **Land Development.** The division of a parcel into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any building or other structure, or of any mining, excavation or landfill, and any change in the use of any building or other structure, or land, or extension of use of land.
4. **Facility.** Something that is built, installed, or established for a particular purpose.
5. **Gray Water.** All domestic wastewater except toilet discharge water.
6. **Groundwater.** Water below the land surface in a zone of saturation.
7. **Groundwater Protection Overlay District.** A zoning district that is superimposed on all underlying zoning districts in the Town of _____. It includes all lands that are included in the definitions of Zones A and B of the GPOD, and is included in the Official Map of the Town of _____. This district may include specifically designated recharge areas that collect precipitation or surface water and carry it to aquifers.
8. **Hazardous Material** means all petroleum and toxic, corrosive or other chemicals and related sludge included in any of the following:
 - (A) any substance defined in section 101(14) of the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980;
 - (B) petroleum, including crude oil or any fraction thereof; or
 - (C) hazardous wastes, as determined under subdivision (9) of this section;

(D) "Hazardous material" does not include herbicides and pesticides when applied consistent with good practice conducted in conformity with federal, state and local laws and regulations and according to manufacturer's instructions.

(E) "Hazardous material" does not include livestock wastes.

9. **Hazardous Waste.** Any waste or combination of wastes of a solid, liquid, contained gaseous, or semi-solid form, including, but not limited to those which are toxic, corrosive, ignitable, reactive, strong sensitizers, or which generate pressure through decomposition, heat or other means, which in the judgment of the Secretary of the Vermont Agency of Natural Resources may cause, or contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, taking into account the toxicity of such waste, its persistence and degradability in nature, and its potential for assimilation, or concentration in tissue, and other factors that may otherwise cause or contribute to adverse acute or chronic effects on the health of persons or other living organisms, or any matter which may have an unusually destructive effect on water quality if discharged to ground or surface waters of the state. All special nuclear, source, or by-product material, as defined by the Atomic Energy Act of 1954 and amendments thereto, codified in 42 U.S.C. § 2014, is specifically excluded from this definition. The storage and handling of livestock wastes and by-products are specifically excluded from this definition.
10. **Primary Containment Facility.** A tank, pit, container, pipe or vessel of first containment of a liquid or chemical, excluding the storage and handling of livestock wastes and by-products.
11. **Public Water Supply.** Any system(s) or combination of systems owned or controlled by a person, that provides drinking water through pipes or other constructed conveyances to the public and that has at least 15 service connections or serves an average of at least 25 individuals daily for at least 60 days out of the year. Such term includes all collection, treatment, storage and distribution facilities under the control of the water supplier and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control that are used primarily in connection with such system. In addition, this includes any water supply system with ten or more residential connections.
12. **Release.** Any unplanned or improper discharge, leak, or spill of a potential contaminant including a hazardous material and/or hazardous waste, excluding the storage and handling of livestock wastes and by-products.
13. **Secondary Containment Facility.** A second tank, catchment pit, pipe, or vessel that limits and contains a hazardous material or hazardous waste leaking or leaching from a primary containment area; monitoring and recovery are required excluding the storage and handling of livestock wastes and by-products.
14. **Spill Response Plans.** Detailed plans for control, re-containment, recovery and clean up of hazardous material and/or hazardous waste releases, such as during fires or equipment failures.

15. **Stormwater Treatment Practice (STP).** A stormwater treatment practice that is a specific device or technique designed to provide stormwater quality treatment and or quality control.
16. **Stormwater Runoff.** Precipitation that does not infiltrate the soil, including material dissolved or suspended in it, but does not include discharges from undisturbed natural terrain or wastes from combined sewer overflows.
17. **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.

E. ZONES WITHIN THE GROUNDWATER PROTECTION OVERLAY DISTRICT

1. Zone A: Drinking Water Critical Impact Zone.

Zone A is defined as the area within the combined two-year time-of-travel distance and zones 1 and 2 as identified in an existing water system's Source Protection Plan where these zones have been mapped around a public water supply well(s) or around the location designated for a potential future water supply. *(Note: Not all water supply sources may have these zones identified, depending upon the age of the original delineation. Although zone A may typically include the area within 500 to 1,000 feet of a public water supply source, it should not be reduced to less than 200 feet from the water supply.)*

- a. **Permitted Uses:** The following uses are allowed within Zone A provided they meet the appropriate performance standards outlined in Section 2 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, playgrounds, ball fields and tennis courts.
 - Necessary public drinking water supply related facilities, including the construction, maintenance, repair, and enlargement of source, treatment, storage, pumping, or distribution facilities.
 - Conservation efforts for soil, water, plants, and wildlife.
- b. **Conditional Uses:** The following uses are allowed only under the terms of a conditional use permit and must conform to the provisions of the underlying zoning district and meet the performance standards outlined in Section 2 below. Non-conforming uses may only be expanded to the extent permitted by the underlying zoning district, and their expansion must conform with the performance standards outlined in Section 2 below.
 - 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;
 - Proposed land developments which utilize an “enhanced prescriptive” or “performance based” approach for wastewater systems according to the State of Vermont, Environmental Protection Rules effective 1/1/05;
 - Expansion of existing non-conforming uses to the extent allowed by the underlying district. The applicant should consult the local zoning plan to confirm nonconforming uses. The Town of _____ reserves the right to review all applications and shall not grant conditional use approval unless it finds such expansion does not pose greater potential contamination of groundwater than the existing use;
 - Equipment maintenance/fueling areas;
 - Injection wells/dry wells/sumps, except for single-family residences directing gutter downspouts to a drywell;
 - Underground storage tanks, (except septic tanks and 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 hazardous material or hazardous waste having potentially harmful impact on groundwater quality;
 - All uses not listed as allowed or conditional shall be prohibited.
- c. **Two Year Time of Travel:** Approval of septic disposal systems within the two-year time of travel boundary is prohibited unless it can be demonstrated that the discharge from the septic disposal site is not hydraulically connected to the drinking water aquifer, or that additional information is presented to document that a two-year time of travel is met or exceeded to the existing or potential water supply source.

2. Zone B: Drinking Water Potential Impact Zone.

Zone B is established as the remainder of the GPOD not included in Zone A, but deemed necessary to ensure adequate protection of public drinking water supplies. (*Note: Zone B is generally equivalent to a public water supply's Zone 3 as identified in their water system's Source Protection Plan.*)

- a. **Permitted Uses:** All uses allowed in the underlying zoning districts provided that they can meet the Performance Standards as outlined for the GPOD.
- b. **Conditional uses:** All conditional uses permitted in underlying districts may be approved by the Town of _____ Zoning Board of Adjustment or Development Review Board provided they can meet performance standards outlined for the GPOD.
- c. **Performance Standards:** The following permitting standards shall apply to uses in Zones A and B of the GPOD:
- Any conditionally permitted facility involving the collection, handling, manufacture, use, storage, transfer or disposal of hazardous material or hazardous wastes must have a secondary containment system that 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 hazardous material or hazardous wastes 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 as noted above.
- All permitted facilities must adhere to appropriate federal and state standards for storage, handling and disposal of any hazardous material or hazardous waste.
- All conditionally permitted facilities must prepare an acceptable contingency plan for preventing hazardous materials and/or hazardous wastes from contaminating the shallow/surficial aquifer should floods, fire, or other natural catastrophes, equipment failure, or releases occur:
 - (a) All conditionally permitted 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 conditionally permitted facilities, an impervious dike, above the 100-year flood level and capable of containing 110 percent of the largest volume of storage, will be provided with an overflow recovery catchment area (sump).
 - (b) All conditionally permitted facilities shall include fire fighting plans and procedures, a fire retarding system, 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, hazardous materials, hazardous wastes, or open flames in the immediate vicinity.
 - (c) For equipment failures, plans for conditionally permitted facilities that use, maintain, store, process or produce hazardous materials and/or hazardous wastes shall include, but not be limited to, below-ground level, removal and replacement of leaking parts, a leak detection system with monitoring, and an overflow protection system; and 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 Town of _____.

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

3. Liability.

Nothing in this ordinance shall be construed to imply that the Town of _____ has accepted any of an owner/developer's liability if a permitted facility or use contaminates groundwater in any aquifer.

F. DISTRICT BOUNDARY DISPUTES

If the location of the GPOD boundary in relation to a particular parcel is in doubt and the application already requires conditional use approval because of the requirements of the underlying zone, the Town Zoning Administrative Officer, interpreting the municipal zoning bylaw literally, shall inform the applicant whether he/she believes the project is located within the GPOD. If the project would not need conditional use approval based on the requirements of the underlying district, the Zoning Administrative Officer may still determine, based on the official map, that such project is located within the GPOD. Such decision may be appealed to the [Zoning Board of Adjustment/Development Review Board].

The burden of proof shall be upon the owner(s) of the land to demonstrate where the boundaries of the district should be located with respect to their individual parcel(s) of land. If the owner(s) request that the Town of _____ determine more accurately the boundaries of the district with respect to individual parcels of land, the Town may engage a professional engineer, hydrologist, geologist, or soil scientist and charge the owner(s) for the cost of the investigation.

G. ENFORCEMENT AND PENALTIES

1. A violation of this ordinance shall be a civil matter enforced in accordance with the provisions of 24 V.S.A. §§ 4451, 4452 and 4454 or 24 V.S.A. §§ 1974a and 1977, et seq., in the discretion of the zoning administrator. A civil penalty of not more than \$_____ per violation (*Note: may be up to \$100 per violation*) may be imposed for violation of this ordinance. The Zoning Administrative Officer shall issue a notice of alleged violation, which shall include the opportunity to cure the violation within seven days. If it is not cured after seven days, a municipal ticket may be issued immediately. The Zoning Administrative Officer may institute, in the name of the municipality, any appropriate action seeking an injunction, or other appropriate relief to prevent, restrain, correct, or abate that construction or use. Such action may be initiated in either the Vermont Environmental Court, or in the Vermont Judicial Bureau, as appropriate. Each day that the violation continues shall constitute a separate violation of this ordinance.

H. ENFORCEMENT OFFICIALS

1. The town (village/city) [zoning administrator, constable, police officer, health officer, state police trooper, or county sheriff, other] shall be the designated enforcement officer(s). Said designee(s) shall issue tickets and may be the appearing officer at any hearing.

I. ENFORCEMENT

- J. SEVERABILITY.** If any portion of this ordinance is held unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected.

K. EFFECTIVE DATE. This zoning bylaw shall become effective 21 days after its adoption by the legislative body. (Unless the town has determined to adopt, amend, and repeal zoning bylaws by Australian ballot, in which case, the bylaw shall become effective upon adoption by the voters of the Town of _____).

This zoning bylaw shall become effective 21 days after it has been adopted by a majority of the Selectboard of the Town of _____ (urban towns only).

Signatures

Date

ADOPTION HISTORY:

1. Agenda item at Planning Commission public hearing held on _____.
2. Agenda item at Selectboard public hearing held on _____.
3. Read and approved at regular Selectboard meeting on _____ and entered in the minutes of that meeting which were approved on _____.
4. Approved by legislative body on _____ OR, if town is a rural town AND it has determined to use Australian ballot to adopt, amend, or repeal zoning bylaws, such vote occurred on _____.
5. Other actions [petitions, etc.]