

Model Surface Water Ordinance

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(A). Statement of intent.

The Reservoir Protection Overlay Zone (RPOZ) regulations are intended to ensure the adequate protection of current or potential public water supply reservoirs. The establishment of these regulations is intended to protect public health, insure the availability of safe drinking water, and prevent the degradation of the water supply in the reservoir through the regulation of land uses and development within the reservoir drainage area.

(B). Applicability.

The special provisions established in this section shall apply to proposed projects identified as possible contaminating activities within areas designated as Reservoir Protection Overlay Zones. These areas may be identified through drainage, groundwater and soils analyses and are considered to be essential to protection of existing or potential reservoirs from the effects of point and non-point source pollution or sedimentation.

The boundaries of the Reservoir Protection Overlay Zone shall be delineated using the most current and best available location data and must be shown on all master zoning map(s) kept on file. The boundaries should be of sufficient size to guarantee the appropriate level of treatment for stormwater runoff from new and existing projects that can contribute to the contamination of public water supplies. These zones may be modified as necessary by the (local governmental authority) as new assessment data becomes available.

The boundaries of the Reservoir Protection Overlay Zone should be adequate to ensure that pollutants of concern are removed from runoff before entering the reservoir. Local officials may consider using a watershed approach to delineating the boundaries to ensure that all surface water/groundwater/recharge areas for the water supply are protected. A tiered zone approach to the overlay size, much like that done with wellhead protection zones to protect public well recharge areas has been used in some parts of the country. Please see the Greensboro, NC water supply watershed district is an example of this approach.

(C). Definitions.

For the purposes of this section, the following terms shall have the following meanings:

Development. Any construction, external repair, land disturbing activity, grading, road building, pipe laying, or other activity resulting in a change in the physical character of any parcel or land.

Potential Contaminating Activity. Activities identified as having the potential to discharge contaminants to surface or groundwaters.

Reservoir. Any impoundment of surface waters designed to provide drinking water to

the public.

Tributary stream. Any perennial or intermittent stream, including any lake, pond or other body of water formed therefrom, flowing either directly or indirectly into any reservoir.

Watershed. Any area lying within the drainage basin of any reservoir.

(D). Use regulations.

Within the Reservoir Protection Overlay Zone, the permitted uses, special permit uses, accessory uses, dimensional standards and special requirements established by the underlying zoning district shall apply, unless specifically modified by the requirements of this ordinance.

The following uses shall be specifically prohibited within the RPOZ areas:

(1) Storage or production of hazardous materials as defined in either or both of the following:

- a. Superfund Amendment and Reauthorization Act of 1986; and
- b. Identification and Listing of Hazardous Wastes, 40 C.F.R. §261 (1987).

(2) Disposal of hazardous materials or solid wastes

(3) Treatment of hazardous material, except rehabilitation programs authorized by a government agency to treat hazardous material present at a site prior to the adoption of this ordinance.

(4) Dry-cleaning, dyeing, printing, photo processing and any other business that stores, uses, or disposes of hazardous material, unless all facilities and equipment are designed and operated to prevent the release or discharge of hazardous materials and have undergone an inspection to certify they are in compliance within hazardous material regulations.

(5) Disposal of septage or septic sludge

(6) Automobile service stations

(7) Junkyards

(8) Other uses as specified by the (local government authority) as potential contaminating activities

(E). Review requirements for Development in the Reservoir Protection Overlay Zone

(1) A copy of any new application for a building permit, zoning permit, area variance, use variance, zoning amendment, or other land development proposal, including the subdivision of land, occurring wholly or partly in a Reservoir Protection Overlay Zone area shall be submitted to the (local governmental authority) and shall be accompanied by an impact study prepared in accordance with the requirements set forth in subsection (f) below.

(2) Applications for development within the Reservoir Protection Overlay Zone will be evaluated by the (local governmental authority) to ensure that:

(a). Non-point source pollution is prevented to the maximum extent possible, by taking into account site conditions such as slope, soil type and erosivity, and vegetative cover.

(b). Management practices are in place sufficient to remove or neutralize those pollutants that present a potential impact to the reservoir

(c). Grading and removal of vegetation at a development site is minimized and erosion and sediment control measures are in place and properly installed.

(d). All sewage disposal systems will be monitored, inspected and maintained on a regular basis to ensure proper functioning. If two or more dwelling units share a common sewage treatment system, a perpetual maintenance agreement shall be required by the (local governmental authority)

(e). Businesses involved in potential contaminating activities within the Reservoir Protection Overlay Zone but which have received a special use permit must submit a spill control plan for approval. This plan shall include the following elements:

(1). Disclosure statements describing the types, quantities, and storage locations of all contaminants that will be part of the proposed project.

(2). Contaminant handling and spill prevention techniques

(3). Spill reporting procedures, including a list of affected agencies to be contacted in the event of a spill

(4). Spill recovery plans, including a list of available equipment

(5). Spill clean-up and disposal plans

(3). Existing land uses located within the Reservoir Protection Overlay Zone and identified as potential contaminating activities by the (local governmental authority) shall comply with the requirements of Section E, Subsection (2 (e)) listed above

(F). Impact study.

(1) An impact study shall be performed or reviewed by a registered professional engineer and shall include, at a minimum, the following information:

a. Description of the proposed project including location and extent of impervious surfaces; on-site processes or storage of materials; the anticipated use of the land and buildings; description of the site including topographic, hydrologic, and vegetative features.

b. Characteristics of natural runoff on the site and projected runoff with the proposed

project, including its rate and chemical characteristics deemed necessary to make an adequate assessment of water quality.

c. Measures proposed to be employed to reduce the rate of runoff and pollutant loading of runoff from the project area, both during construction and after.

d. Proposed runoff control and reservoir protection measures for the site. These measures shall be designed with the goal of ensuring that the rate of surface water runoff from the site does not exceed pre-development conditions and that the quality of such runoff will not be less than pre-development conditions. Special emphasis shall be placed on the impacts of proposed encroachments into the required buffer.

e. Where the developer of property subject to the terms of this overlay district seeks to utilize existing or planned off-site stormwater quality management facilities, the developer shall provide a written certification that the owner of the off-site facilities will accept the runoff and be responsible for its adequate treatment to a level acceptable to the (local governmental authority).

(2) Such study shall be submitted to the (local governmental authority) for review and approval concurrent with the submission of applications for review and approval of site or subdivision plans or applications for land disturbing or erosion and sediment control permits. A copy of the impact study shall also be forwarded to those agencies identified as interested parties which are responsible for managing the reservoir watershed for review and comments.

(G). Buffer Requirements

Stream and shore buffer widths vary from twenty feet to up to 200 feet in ordinances throughout the United States. Since this ordinance is for reservoirs that supply public drinking water, the larger buffer width of 200 feet would be more appropriate.

There is a much more detailed stream buffer ordinance located at this website. Local communities may wish to consult this ordinance to establish an individual stream buffer ordinance

A foot (') wide buffer strip shall be maintained along the edge of all public water supply reservoirs and any tributary stream discharging into these reservoirs. The required setback distance shall be measured from the centerline of such tributary stream and from the mean high water level of such reservoir. The buffer strip shall be maintained in its natural state to the maximum extent possible, and shall be planted with an erosion resistant vegetative cover in those areas that have been disturbed. In the case of tributary streams located upstream from a stormwater management facility designed to provide water quality protection, no buffer shall be required if such facility has been designed to accommodate and manage the quality of runoff from the subject site.

A reduction in the required buffer width down to an absolute minimum of seventy-five feet (75') may be granted by the (local governmental authority) upon presentation of an impact study that provides sufficient documentation and justification that even with the reduction, the same or a greater degree of water quality protection would be afforded as would be with the full-width buffer. In granting such a reduction, the (local governmental authority) may require additional erosion control or runoff control measures as deemed necessary to protect reservoir water quality.

All development shall be located outside of the required buffer strip, except for the following:

- a. The buffer strip requirement shall not apply to development which is appurtenant to the production, supply, distribution or storage of water by a public water supplier.
- b. Encroachment into or through the required buffer by roads, main-line utilities, or stormwater management structures may be permitted provided the following performance standards are met:
 1. Road and main-line utility crossings will be limited to the shortest path possible and that which causes the least amount of land disturbance and alteration to the hydrology of the watershed.
 2. Any stormwater management facilities located within the buffer should be sited within the context of a larger watershed stormwater management program.
 3. No more land shall be disturbed than is necessary.
 4. Indigenous vegetation shall be preserved to the maximum extent possible.
 5. Wherever possible, disturbed areas shall be planted with trees and shrubs.
- c. When the property where an encroachment is proposed is owned by the entity owning and operating the water supply reservoir being protected, and such entity specifically and in writing authorizes and approves the encroachment, it shall be allowed.

(3) The following uses shall not be permitted within the buffer strip or within feet (') of the required buffer strip:

- a. septic tanks and drainfields;
- b. feed lots or other livestock impoundments;
- c. trash containers and dumpsters which are not under roof or which are located so that leachate from the receptacle could escape unfiltered and untreated;
- d. fuel storage in excess of fifty (50) gallons [200L];
- e. sanitary landfills;
- f. activities involving the manufacture, bulk storage or any type of distribution of petroleum, chemical or asphalt products or any materials hazardous to a water supply (as defined in the Hazardous Materials Spills Emergency Handbook, American Waterworks Association, 1975, as revised) including specifically the following general classes of materials:
 1. oil and oil products;

2. radioactive materials;
3. any material transported in large commercial quantities that is a very soluble acid or base, highly biodegradable, or can create a severe oxygen demand;
4. biologically accumulative poisons;
5. the active ingredients of poisons that are or were ever registered in accordance with the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 USC 135 et seq.); or
6. substances highly lethal to mammalian or aquatic life.