

Topic: Aquifer Protection; Overlay District
Resource Type: Regulations
State: New York
Jurisdiction Type: Municipal
Municipality: Town of Bedford
Year (adopted, written, etc.): 1986
Community Type - applicable to: Suburban; Rural
Title: Town of Bedford Aquifer Protection Ordinance
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Abstract

This ordinance delineates an aquifer protection zone where certain uses and activities are regulated or prohibited. It includes a Table of Uses and their Wastewater Equivalents, which can aid in community development and planning. The boundaries of the protected zone are delineated on an official map, prepared by hydrogeologists.

Resource

AQUIFER PROTECTION ORDINANCE

(SEE TOWN OF BEDFORD, N.Y., ZONING CH. 125, § 125-29.4 (1986)).

[HISTORY AND BACKGROUND: The following "Aquifer Protection Zone" is found in article 125, Town of Bedford, New York, added 1-28-1986.]

§ 125-29.4 Aquifer Protection Zone

A. Findings. The [municipality] finds that:

- (1) The groundwater underlying the [municipality] is a major source of its existing and future water supply, including drinking water.
- (2) The groundwater aquifers are integrally connected with and flow into the surface waters, lakes, and streams which constitute a major source of drinking water for New York City or for parts of the State of Connecticut.
- (3) Accidental spills and discharges of toxic and hazardous materials have threatened the quality of such groundwater supplies and related water resources in the [municipality], posing potential public health and safety hazards.

- (4) Unless preventive measures are adopted to control the discharge and storage of toxic and hazardous materials within the [municipality], further spills and discharges of such materials will predictably occur and with greater frequency and degree of hazard by reason of increasing construction, commercial and industrial development, population, and vehicular traffic. [This type of study is very helpful to provide support and reasoning for natural resource protection.]
- (5) The foregoing conclusions are confirmed by findings set forth in the Water Quality Management Plan of Westchester County, prepared pursuant to section 208 of the Federal Clean Water Act, and by [municipality]-commissioned studies.
- (6) There is also a growing concern for control of nitrate-nitrogen in the aquifer within tolerable amounts.

B. Purpose. The purpose of this section is to protect public health, safety and welfare through the preservation of the [municipality's] major groundwater resources to ensure a future supply of safe and healthful drinking water for the [municipality], local residents and employees, and the general public. The designation of Aquifer Protection Zones and careful regulation of development activities within these zones can reduce the potential for groundwater contamination. The purpose of this section is to protect areas having a high potential for use as a water supply and thereby to maintain the existing quality and improve the future quality of the groundwater of the [municipality].

C. Aquifer Protection Zone: location; applicability

- (1) These regulations shall apply to all land uses encompassed within the Aquifer Protection Zone as designated on a map entitled "Town of Bedford, New York Aquifer Map," dated December 5, 1985, which map is hereby made a part of these regulations.
- (2) These regulations shall be in addition to other requirements for the zoning districts designated on the Zoning Map of the [municipality] and shall apply irrespective of other sections of this code.

D. Use regulations for Aquifer Protection Zones.

- (1) Permitted principal and accessory uses. All uses which are permitted under the existing zoning regulations are permitted in the aquifer protection zone unless otherwise identified in subsection d (2), (3) and (4) below, including the following:
 - (A) On-site sewage disposal systems, provided that no such system shall discharge more than three hundred (300) gallons of wastewater per acre per day, as determined by the following schedule.

Use	Wastewater Equivalent*
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	(gallons per day)
Single-family dwelling	300
Efficiency apartments and hotel/motel units	100 per unit, plus food service
Efficiency apartments and hotel/motel units over 400 square feet in area	150, plus food service
1-bedroom apartments/condominiums	150
2-bedroom apartments/condominiums	225
3-bedroom apartments/condominiums	300
1-bedroom planned retirement apartments/condominiums	100
Seasonal cottages	100 per bedroom
Tourist camps	60 per day
Trailer parks	150 per trailer
Theaters	1.5 per occupant
Drive-in theaters	5 per parking space
Bowling alleys and racquetball or tennis courts	100 per court or alley
Day schools	5 per occupant, plus food service
Boarding schools or boarding homes	75 per occupant
Office space	12 per occupant
Industrial storage/warehouses	0.04 per square foot, plus food service
Spas, beaches or country clubs	15 per occupant, plus food service
Medical arts	225 per suite
Hospitals	300 per bed
Nursing homes	150 per bed
Proprietary homes	110 per bed
Public gather places	15 per occupant
Eating places	30 per occupant
Bars	15 per occupant, plus food service
Catering halls	7.5 per occupant
Markets and wet stores	0.05 per square foot of building floor area
Delicatessen and food processing	0.15 per square foot of building floor area
Dry stores	0.03 per square foot of building floor area
Take-out eating	1.5 per square foot of building floor area
Churches	1.5 per occupant
Bathhouses	5 per occupant
Laundry facilities	400 per washing machine
Light industrial uses	0.03 per square foot building floor area

*NOTE: These figures are to be used only for the purposes of the Aquifer Protection Zone; they are not the standards of the Westchester County Department of Health.

(B) On-site storage of heating oil in tanks of less than one thousand one hundred (1,100) gallons installed below ground, provided that such tanks are designed and constructed in accordance with the standards of the New York State Department of Environmental Conservation rules and regulations for bulk storage (6 NYCRR Part 614). Replacement tanks must meet the requirements of this section.

(2) Special permit uses

(A) Within the Aquifer Protection Zone, each use below requires the issuance of a special permit by the Planning Board pursuant to the requirements of §§ 125-57 through 125-65:

[1] On-site sewage disposal systems that discharge more than three hundred (300) gallons of wastewater per acre per day as measured by the criteria of § 125-29.4d(1)(a).

[2] The use of common septic fields or sewage treatment plants for residential development under the provisions of §§ 125-51 through 125-56 (conservation development) and § 107-22B and C (conservation subdivision) of this code.

[3] The handling and storage of road salt and deicing materials, provided that structural and nonstructural measures are implemented to prevent leachate contamination. such measures may include, but are not limited to, building enclosures, impervious pads and pavements, self-contained drainage systems, detention basins, filters, separators or other devices and other management practices.

[4] Groundwater heat pumps supplying heating and cooling for other than a one-family detached dwelling unit, provided that such systems are designed to treat, if necessary, and return discharged water to the groundwater.

(B) As stated in § 125-61, the Planning Board may add such conditions and safeguards to any special permit as are, in its opinion, necessary to ensure initial and continued conformance to all applicable standards and requirements. Such conditions may include, but are not limited to, monitoring wells and the requirement of additional setbacks from sewage disposal systems to downgradient property lines.

(3) Prohibited uses. The following uses are prohibited uses within the Aquifer Protection Zone:

- (A) The disposal of hazardous materials or solid waste.
 - (B) The treatment of hazardous materials, but not including rehabilitation programs authorized by a government agency for treating existing hazardous materials.
 - (C) The storage of hazardous materials, except in sealed or unopened containers for resale or in containers normal for household use.
 - (D) The creation of hazardous materials.
 - (E) Dry-cleaning and dyeing establishments and laundries that utilize cleaning solvents.
 - (F) Printing and photo processing establishments.
 - (G) Furniture and finish stripping establishments.
 - (H) The storage of hydrocarbon products except for heating oil and vehicle fuel stored in vehicle tanks.
 - (I) Oil, gasoline, or hazardous material pipelines.
 - (J) Disposal of septic sludge.
 - (K) Uses otherwise allowed in the zone which may discharge hazardous materials into the groundwater.
 - (L) Automotive service stations.
- (4) Nonconforming uses or structures. Any lawful use of a structure or of land, existing as of the effective date of this section, shall be deemed nonconforming and may be discontinued subject to the provisions of § 125-11.
- A. Aquifer impact assessment. All applications for a special permit pursuant to § 125-29.4d(2) shall include an aquifer impact assessment. The purpose of this assessment shall be to demonstrate that no activities will be conducted upon the property that will result in groundwater infiltration into a designated aquifer such that, at a confidence level of ninety percent (90%), the New York State Drinking Water Standards (10 NYCRR Part 5) will not be violated at the property line. Said assessment shall be prepared by a qualified hydrogeologist at the expense of the applicant. The cost to the [municipality] of hydrogeologic review of such assessment shall be paid by the applicant. The aquifer impact assessment shall include, insofar as is pertinent to the application:
- (1) Aquifer flow characteristics, including a delineation of the primary recharge area, distribution of transmissivity, and details of the hydrologic budget –

including natural and man-induced sources of recharge and withdrawal. Existing data from [municipality] studies on the aquifer areas may be used in the aquifer impact assessment.

- (2) Details of the proposed aquifer usage – including static conditions of the potentiometric surface, range of withdrawals anticipated, and the potentiometric surface at critical points in that range. An estimate of the quantity of induced surface flows at each critical point in the range shall also be detailed.
- (3) Potential impacts resulting from the planned discharges or withdrawals – including impacts to other users of the aquifer (wells, surface expressions of groundwater, etc.) In terms of levels, quantity of water available, and induced water quality changes. The impacts resulting from induced infiltration – including quantity implication to both the groundwater and surface water systems – shall be addressed.
- (4) Proposed measures to mitigate any adverse impacts (i.e., The system for monitoring quantity, quality, or any other aspect deemed important, including monitoring wells and a reporting schedule) shall be specified.

§ 125-3 Definitions

As used in this chapter, the following terms shall have the meanings indicated:

Aquifer – A geologic unit capable of yielding usable amounts of water. [Added 1-28-1986]

Aquifer Protection Zone - An area designated on the [Municipality] Recharge Area Map as a primary recharge area for an aquifer yielding usable amounts of water for existing or potential water supplies. [Added 1-28-1986]

Building - Any structure having a roof (supported by columns or by walls or self-supporting) and intended for the shelter, housing, or enclosure of persons, animals, or chattel.

Club, Private - A voluntary organization, not conducted for gain, with facilities catering principally to members and guests for recreational, athletic, or social purposes.

Cottage - A single dwelling unit within an accessory building which is incidental and subordinate to a principal one-family residence and located on the same lot therewith, where either unit is occupied by the owner of the premises. [Added 7-25-1989]

Delicatessen - A business enterprise engaged primarily in the retail sale of prepared food and beverages and in which tables, chairs, or counters for the consumption of food on the premises are not provided.

Designated Aquifer - A geologic unit capable of yielding usable amounts of water and designated on a map entitled, "Town of Bedford Recharge Area Map." [Added 1-28-1986]

Direct Recharge - The process by which the precipitation replenishes a stratified-drift aquifer by natural infiltration through the unsaturated zone to the water table. [Added 1-28-1986]

Dwelling - A building, or portion thereof, used principally as nontransient living quarters for one or more families. The term shall not include an automobile court, hotel, motel, boardinghouse, trailer, mobile home, tourist home, or tent.

Dwelling, Multifamily - A dwelling containing three or more dwelling units.

Dwelling, One-Family or Dwelling, Detached - A dwelling containing one dwelling unit.

Dwelling, Townhouse - A dwelling containing three or more dwelling units attached to each other at the side or rear by means of a common wall or walls, each dwelling solely occupying the internal space from ground to roof and having its own separate entrance or entrances from the outside.

Dwelling, Two-Family - A dwelling containing two dwelling units.

Dwelling Unit - A building or portion thereof providing complete housekeeping facilities for one family.

Family - One or more persons occupying a dwelling unit and living together as a single housekeeping unit in a more domestic relationship based upon birth, marriage or adoption; or not more than four unrelated persons occupying a dwelling unit and living together as a single housekeeping unit.

Groundwater - Water in the subsurface area beneath the water table in which all open spaces are filled with water. [Added 1-28-1986]

Groundwater Recharge Area - That area from which water is added to the saturated zone by natural processes, such as infiltration or precipitation, or artificial processes, such as induced infiltration. [Added 1-28-1986]

Hazardous Material - Material which is a present or potential hazard to human health or the environment when improperly stored, transported or disposed of, or otherwise managed – including without exception all residual oil, hydrocarbon products (including but not limited to gasoline, oil, fuel, and diesel oil), and also any other toxic, caustic, or corrosive chemicals, radioactive materials, or other substance listed in Title 40 of the Code of Federal Regulations or Part 366 of Title 6 of the New York Codes, Rules and Regulations. [Added 1-28-1986]

Hospital - A building for the diagnosis and treatment of human ailments – including a sanatorium, rest home, nursing home, adult home, hospice and convalescent home but not including any facility for the treatment of contagious diseases, alcoholism, drug addiction, epilepsy, or mental diseases.

Hotel or motel - A building or portion thereof containing rooms occupied by transient guests who are lodged with or without meals and in which building or portion thereof, there may be certain public rooms or halls for the service of food and drink with or without accessory conveniences or services normally incidental to and associated with such a use.

Induced infiltration - The process by which water in a stream or lake or any other water body moves into an aquifer because of a hydraulic gradient from the surface water body toward a pumping well or wells. [Added 1-28-1986]

Nursing or convalescent home - A proprietary facility, licensed and regulated by the state of new york, for the accommodation of two or more persons, not related by blood or marriage, who are aged, convalescent or not acutely ill and not in need of hospital care and related medical services, which persons are boards and/or housed for remuneration, and in which facility such nursing care and medical services are prescribed by or are performed under the general direction of persons licensed to provide such care or services in accordance with the laws of the State of New York, but not including hospitals or the keeping of patients suffering from any contagious disease, tuberculosis, mental illness, acute alcoholism, or drug addiction.

Parking Space - An off-street space available for the parking of one motor vehicle, having rectangular dimensions of not less than nine and five-tenths by twenty (9.5 x 20) feet, exclusive passageways, and driveways appurtenant thereto and giving access thereto, and having direct usable access to a street.

Primary Recharge Area - That area immediately overlying the stratified-drift aquifer and adjacent areas of stratified-drift that may not have a sufficient saturated thickness to be part of the aquifer. The boundary of the "primary recharge area" is the contact between the stratified drift and adjacent till or bedrock. [Added 1-28-1986]

"The biggest risk to an unconfined aquifer is contaminated water moving through the permeable materials directly above it. This area is known as the primary recharge area."

Road - Any way over which the public possesses the right to travel, which heretofore has been duly laid out, adopted, and established by law, whether publicly owned or not. The term "road" includes state, county, and [municipality] highways and roads as well as streets, squares, places, courts, boulevards, parkways and other ways however designated to which the public has access.

Saturated Zone - The zone beneath the land surface in which all open spaces are filled with water. [Added 1-28-1986]

Solid Waste - Unwanted or discarded materials, including solid, liquid, or contained gaseous materials. [Added 1-28-1986]

Stratified-Drift Aquifer - Unconsolidated sediment composed of layers of sand, gravel, silt or clay, or similar deposits that are capable of yielding usable amounts of water, potentially in amounts greater than household supply wells. [Added 1-28-1986]

Structure - Anything constructed or erected, the use of which requires location on or under the ground or attachment to something having location on the ground. "Structure" includes a building. See also "building."

Subdivision - The division of any parcel of land as defined in the [Municipality] Land Subdivision Regulations.

Town of Bedford [Municipality] Recharge Area Map - A map, dated December 5, 1985, prepared by Legette, Brashears and Graham, Inc., Consulting Hydrogeologists, indicating the primary recharge areas in the [municipality]. [Added 1-28-1986]

Unsaturated Zone - The subsurface area above the water table. In this area open spaces are only partially filled with water. [Added 1-28-1986]

Use - The specific purpose for which land or a building is designated, arranged, or intended or for which it is or may be occupied or maintained. The term "permitted use" or its equivalent shall not be deemed to include any nonconforming use.

Use, Accessory - A use which is customarily incidental and subordinate to the principal use of a lot or a building and located on the same lot therewith.

Use, Nonconforming - A use of a building or of land that does not conform to the regulations as to use in the district in which it is situated, which use was lawful at the time this chapter or amendments thereto became effective.

Water Table - The interface between the saturated zone and the unsaturated zone (e.g., The top of the zone of saturation). [Added 1-28-1986]