

# Town of Camden

P.O. DRAWER 1002  
CAMDEN, DELAWARE 19934

Mayor Robert A. Mooney  
Town Manager Donald H. Mulrine, Jr.

## ORDINANCE # 77

### WATER RESOURCE PROTECTION AREA AND ENVIRONMENTAL PROTECTION REGULATIONS

#### Section 1 Intent.

The intent of this section is to provide clarification on the environmental constraints and requirements for development in environmentally sensitive areas.

#### Section 2 Definitions.

This section defines words, terms, and phrases found in this article.

**Applicant.** A person, firm or government agency that executes the necessary forms to obtain approval or a permit for any zoning, subdivision, land development, building, land disturbance, or other activity regulated.

**Aquifer.** A body of rock (crystalline, sand or gravel) that contains sufficient saturated permeable material to conduct groundwater springs or to yield economically significant quantities of groundwater to wells.

**Drainage.** The process by which surface water (usually from rainfall) moves across the land surface. See *Stormwater Management*.

**Drainage Areas.** The delineated areas that currently contribute or are proposed to contribute runoff to a specific location or point.

**Groundwater.** A portion of the subsurface water that occurs beneath the water table in soils and geologic formations that are fully saturated.

**Public Water Supply Well.** A well from which the water is used to serve a community water system by section 22.146 (Public Water Systems) in the Delaware state Regulations Governing Public Drinking water Systems.

**Recharge Areas.** The recharge water resource protection areas are designated as having the best potential for groundwater recharge.

**Runoff.** That portion of precipitation or snow melt that has not evaporated or infiltrated into the soil, but flows on land surface.

**Stormwater Management.** The mitigation of the hydrologic impacts of lost natural runoff storage by the use of constructed storage facilities.

A) For water quantity control, a system of vegetative, structural, and other measures that may control the volume and rate of stormwater runoff which may be caused by land disturbing activities or activities upon the land; and

B) For water quality control, a system of vegetative, structural, and other measures that control adverse effects on water quality that may be caused by land disturbing activities or activities upon the land.

**Water Resource Protection Area.** Water resource protection areas are Wellhead and Recharge areas.

**Wellhead Protection Area.** The wellhead protection areas are surface and subsurface areas surrounding public water supply wells or well fields where the quantity or quality of groundwater moving toward such wells or well fields may be adversely affected by land use activity. Such activity may result in a reduction of recharge or may lead to introduction of contaminants to groundwater used for public supply ("wellhead").

**Wellhead Protection Area Class A.** Wellhead WRPAs are the area within a 300-foot radius circle around all public water supply wells classified as public water systems as defined by Section 22.146 Public Water Systems (PWS) in the State of Delaware Regulations Governing Public Drinking Water Systems. Class A wells are community (public water purveyors), transient non-community (restaurants, stores, hotels, parks, etc.), and non-transient non-community (schools, daycare centers, office, factory).

**Wellhead Protection Area Class B.** These wellhead protection areas have been delineated through the use of hydrogeologic mapping, analytical methods, and application of USEPA modular semi-analytical models using a five year time of travel. The methodology is explained in a report by the DGS entitled "Application of the EPA Wellhead Protection Area Models for Delineation of Wellhead Protection Areas in the Glendale and Eastern States Wellfield, New Castle County, Delaware" (January 1993).

**Wellhead Protection Area Class C.** Wellhead areas are delineated by the DGS and the DNREC through the interpretation of geologic and hydrologic reports and maps, water table maps, and best professional evaluation of available hydrogeological data.

### **Section 3 Water Resources Protection Areas (WRPA).**

Water resource protection areas are Wellhead and Recharge Areas. All such areas are as depicted on Water Resource Protection Area maps located in Town Hall. These areas shall be protected as required by the following sections to protect the Town's public drinking water resources from contamination and pollution.

### **Section 4 Wellheads**

A) Areas within one hundred (100) feet of the well shall be one hundred (100) percent open space.

B) The natural runoff flowing into wellhead areas shall be allowed and all new stormwater run-off shall be diverted around the wellhead protection areas wherever practical.

C) The stormwater system's discharge to wellhead WRPAs shall be by sheet through a grassland or discharge from a stormwater management facility having a wetland or aquatic bench. Stormwater runoff from all parking areas shall be directed to a stormwater management facility before it is discharged into a wellhead WRPA.

D) Within the wellhead protection area, impervious surfaces shall be limited to the buildings and access associated with the well and distribution and treatment facilities and their maintenance

E) The minimum lot area for a proposed public water supply well and related facility drawing from a confined aquifer shall be 1 acre and the minimum lot area for a public well drawing from an unconfined aquifer shall be 2 acres.

F) Underground storage tanks containing petroleum or any hazardous substances listed in 40 CFR 116 in an aggregate quantity equal to or greater than a reportable quantity as defined in 40 CFR 117 shall not be permitted in a designated wellhead area.

Or

Underground storage tanks containing petroleum or any hazardous substances listed in 40 CFR 116 in an aggregate quantity equal to or greater than a reportable quantity as defined in 40 CFR 117 may be constructed in a designated wellhead area provided the UST's are constructed with double containment in accordance with the Delaware Standards for Underground Storage Tanks.

G) Hazardous Waste Storage, Treatment, and Disposal Facilities, and Sanitary and Industrial Facilities as defined in *the Delaware Regulations Governing Hazardous Waste* shall not be permitted in wellhead areas.

### **Section 5 Recharge Areas.**

Recharge Areas are those areas with high percentages of sand and gravel that have "excellent" potential for recharge as determined through a Stack Unit Mapping Analysis performed originally by the Delaware Geological Survey.

A) Within Multifamily Residential, Office, Commercial, Industrial, Transportation/Utility, Institutional Uses - Development of these uses within the Town of Camden may occur provided the impervious cover of the parcel within the recharge area is 20% or less unless an environmental impact assessment report certified by a state registered professional geologist or professional engineer with a background in hydrogeology indicates that additional development would not endanger the public or the environment. In situations where the existing impervious cover of a property is over 50% and the applicant desires to re-develop the property, the gross impervious cover shall be equal to or less than the original impervious cover percentage of the original site. In areas zoned as either Commercial (C) or Industrial (I) within the Town of Camden the applicant can seek relief by submitting an environmental study and report certified by a state registered professional geologist or professional engineer with a background in hydrogeology that indicates that additional development would not endanger the public or the environment.

B) Single Family Residential Uses - New development within the Town of Camden may occur provided the impervious cover of the entire parcel within the recharge area is 20% or less unless an environmental impact assessment report certified by a state registered professional geologist or professional engineer with a background in hydrogeology indicates that additional development would not endanger the public or the environment.

C) Underground storage tanks containing petroleum products or any hazardous substances listed in 40 CFR 116 in an aggregate quantity equal to or greater than a reportable quantity as defined in 40 CFR 117 shall not be permitted in a designated recharge area. Or Underground storage tanks containing petroleum or any hazardous substances listed in 40 CFR 116 in an aggregate quantity equal to or greater than a reportable quantity as defined in 40 CFR 117 may be constructed in a designated recharge area provided the UST are constructed with double containment in accordance with the Delaware Standards for Underground Storage Tanks.

D) For all new construction, all structures shall be required to discharge roof drains into underground recharge systems or permeable surfaces. No discharge by roof drains to impervious surfaces is permitted in recharge areas.

E) Hazardous Waste Storage, Treatment, and Disposal Facilities, and Sanitary and Industrial Facilities as defined in *the Delaware Regulations Governing Hazardous Waste* shall not be permitted in wellhead areas.

**Section 6 Boundary Determination for WRPA.**

A) All subdivision and land development plans depicting development or land disturbance submitted for Town review shall be evaluated for the existence of water resource protection areas by scaling for distances shown on the Town of Camden Water Resource Protection Area Map. If existing, the boundaries of the areas shall be delineated on the plan by the applicant's engineer.

B) When there appears to be a conflict between the mapped boundary and actual site conditions, the applicant may engage the services of professional practitioners set forth in this section to prepare a report intended to determine more accurately the precise boundary of the water resource protection area, which report shall be submitted to the Town with the detailed findings necessary to indicate the location of the boundary.

C) The plan showing the boundary conflict should indicate the following:

1) A detailed topographic layout of the subdivision and/or area to be developed prepared by a land surveyor or engineer.

2) For wellhead and recharge boundary determinations, a site-specific geological and hydrogeological analysis shall be performed by a state-registered professional geologist or engineer with a background in hydro-geology and shall be based upon through site investigation and testing; and

3) Evidence derived from a site-specific investigation which may include aquifer testing, test borings, test pits, observation wells, groundwater elevations and topography surveys as appropriate for the type of water resource protection area to clearly demonstrate that the area in question does not meet the definition of a water resource protection area as defined in Section 1101.

D) The applicant is permitted to make a submission to the Town with the written approval of the Delaware Geological Survey, the University of Delaware Water Resources Agency, and the Department of Natural Resources and Environmental Control, to adjust the boundary or area designation based thereon. Such adjustments shall have the effect of exempting the subject parcel from the use regulations of this section and shall have the effect of amending the limits of the water resource protection area. The applicant will then be required to provide a notification sent to the Town indicating that they concur with the amended boundary location in order to be exempted from the requirements of this section.

**Section 7 Uniform Standards and Criteria.**

A) The following standards and criteria shall be applicable to any limited use, special use or other use requiring an environmental impact assessment permitted pursuant to this Division:

1) Stormwater management facilities shall be designed and constructed in accordance with DNREC "Delaware Sediment and Stormwater Regulations," dated January 23, 1991 or as later revised.

**Section 8 Nonconforming uses.**

Nonconforming uses may continue to wellhead resource protection and recharge protection areas in the form in which they existed at the time of the adoption of this article, unless they pose a direct hazard to the city's water supply, as determined by the Town Manager upon advice from the Delaware Division of Public Health, or are causing some foreign substances (oil, salts, chemicals, or other substances) to be introduced into the city's water supply, as determined by the Town Manger upon advice from DNREC's Division of Air and Waste Management and Division of Water Resources. In the latter case, the building department shall issue a mandatory cease and desist to stop the offending activity within the area. Nonconforming existing underground or above-ground storage of oil, petroleum and petroleum products shall require secondary containment pursuant to the State of Delaware regulations governing underground storage tanks or for above-ground storage of petroleum products secondary containment facilities capable of capturing the material stored on the site, for existing facilities that are either proposed to be upgraded or replaced.

### **Section 9 Environmental Impact Assessment Report.**

New development in WRPAs may exceed the 20% impervious cover threshold within recharge WRPAs , but be no more than 50% impervious, provided the applicant submits an environmental assessment recommending a climatic water budget and facilities to augment recharge. The environmental assessment must document that post development recharge will be no less than predevelopment recharge when computed on an annual basis. Commonly, the applicant offsets the loss of recharge due to impervious cover by constructing recharge basins that convey relatively pure rooftop runoff for infiltration to ground water. Refer to Supplement 1 entitled "Ground- Water Recharge Design Methodology" for the details of how to design recharge facilities in Delaware water resource protection areas. A) If a proposed use requires an environmental impact assessment report, the applicant shall have such a report certified by a professional engineer, geologist or other certified professional in the applicable environmental discipline. Mitigation cannot be used where the conflict can be avoided or minimized. The report shall contain the following criteria, given in order of preference:

- 1) Site character. The report shall identify all potential on-site sensitive environmental concerns.
- 2) Avoidance. Alternative sites or routes shall be identified that would not damage the resource or result in less resource damage. Reasons shall be provided explaining why using these sites is impossible or infeasible versus that proposed.
- 3) Minimization. The applicant shall demonstrate that the plan minimizes the impact of the activity, route, or use on the resource. The applicant shall also demonstrate that the areas impacted shall be lowest quality and result in the least damage to the resource.
- 4) Mitigation. A mitigation plan shall be submitted indicating mitigation activities. On-site replacement is the most acceptable form of mitigation. However, mitigation can include restoration and enhancement after the use is abandoned. Mitigation by replacement on another site shall be at a ratio of two to one (2:1). Mitigation may also include enhancement; this ratio shall be four to one (4:1). Final Town approval is required for all other forms of mitigation not consistent with this section.

### **Section 10. Enforcement.**

This article shall be enforced by the Town Code Enforcement Officer with the assistance of the Land Use Administrator. No building permit shall be issued for the construction of

any building or structure, or for any use in violation of the provisions of these regulations.

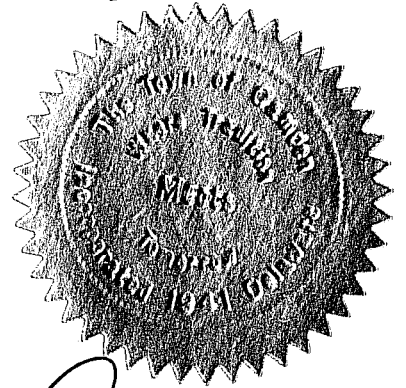
**Section 11. Effective date.**

This article shall become effective upon adoption by town council, except that subdivisions and/or building permits approved prior to this date shall be exempt from the provisions of this article, except as otherwise regulated herein.

**ENACTED AND ORDAINED THIS 8<sup>th</sup> DAY OF January, 2007**

Town Council Members voting:

SEAL



APPROVED AS TO FORM:

*Cum*

Town Solicitor

*Robert A. Mooney*  
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Mayor Robert A. Mooney

*James O. Plumley III*  
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Vice-Mayor James O. Plumley, III

ATTEST:

*Donald H. McInerney*  
\_\_\_\_\_

Town Manager

*Robert Hawkins*  
\_\_\_\_\_  
Councilman Robert Hawkins

*Richard Snyder*  
\_\_\_\_\_  
Councilman Richard Snyder

*Mark Babbitt*  
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Councilman Mark Babbitt

1<sup>st</sup> reading: 12/4/06

2<sup>nd</sup> reading: 1/8/07

Public Hearing: 1/8/07

Adopted: 1/8/07