

# Wellhead and Excellent Groundwater Recharge Area Protection Ordinance

as developed by the

**Town of Blades, Delaware**

Whereas the Commissioners of Blades recognize the importance of and the benefits to public health by providing safe and sanitary water supply for the Town of Blades, by the establishment of Wellhead Protection Areas and Excellent Ground-Water Recharge Areas. Each wellhead area shall be established around all public water wells that are in use for potable water or proposed use for potable water.

## DEFINITIONS:

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.

CERCLA Hazardous Substances: Those substances specifically designated as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), otherwise known as the Superfund law, or those substances identified under other laws. The Superfund law includes references to other laws designating more than 800 substances as hazardous, and identifies many more as potentially hazardous due to their characteristics or circumstances of their release. For more information go to: [www.epa.gov/superfund/policy/cercla.htm](http://www.epa.gov/superfund/policy/cercla.htm)

Excellent Ground Water Recharge Area - Those areas with high percentages of sand and gravel that have excellent potential for recharge as determined by a Stack Unit Mapping Analysis performed originally by the Delaware Geological Survey.

Hazardous Substance UST System: means an underground storage tank system that contains a hazardous substance defined in 101(14) of the CERCLA (but not including any substance regulated as a hazardous waste under RCRA Subtitle C) or any mixture of such substances and petroleum, and which is not a petroleum UST system.

Hazardous Waste - Any waste defined as a hazardous waste by the State of Delaware Hazardous waste regulations or by the U.S. Environmental Protection Agency.

Impervious Cover: Surfaces providing negligible infiltration such as pavement, concrete, graded aggregate, buildings, recreation facilities (e.g. tennis courts, swimming pools, etc.).

Non-conforming Use: is an existing or permitted new development use of a lot or a building that was legal at the time of its creation or permitting that is not allowed by this chapter in the district in which it is located.

Town: The Town of Blades, Delaware.

Underground Storage Tank (UST): An UST is one or a combination of Tanks including underground Pipes, the volume of which is 10% or more belowground, as defined in the Delaware Regulations Governing Underground Storage Tank Systems. The following USTs are not subject to the design, construction, operation, and maintenance requirements of the Delaware UST Regulations: Residential Heating Fuel, Agricultural, and Residential Motor Fuel USTs less than 1,100 gallons and any UST less than 110 gallons.

Wellhead Protection Area - Those surface or subsurface areas surrounding any public water supply wells or wellfields which have been mapped by the State of Delaware DNREC or otherwise accepted by the State DNREC and documented in a final source water assessment and where the quantity or quality of ground water moving toward the 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”).

A. PURPOSE

The purpose of the Source Water Protection Area Ordinance is to ensure the protection of the public drinking water supply from contamination. The Town of Blades herein adopts the overlay maps delineating, as source water protection areas: wellhead protection and excellent ground-water recharge potential areas. To ensure the protection of these drinking water supplies, this ordinance establishes a zoning overlay to be known as the Source Water Protection Overlay. The purpose of the Source Water Protection Overlay is to protect public health and safety by minimizing contamination of aquifers, 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 state and county regulations.

The Source Water Protection Area Maps are superimposed on current zoning districts. It shall apply to all new construction, redevelopment, 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 Source Water Protection Overlay must additionally comply with the requirements of this district. Uses prohibited in the underlying zoning districts shall not be permitted in the Source Water Protection Overlay District.

B. APPLICABILITY OF WELLHEAD PROTECTION AND EXCELLENT GROUND WATER RECHARGE AREAS

Regulations pertaining to the Wellhead Protection Areas shall be applicable to all land area within each Wellhead Delineation Area as designated by the State of Delaware Department of Natural Resources and Environmental Control Source Water Assessment and Protection Program that are located within the Town of Blades municipal boundaries.

Regulations pertaining to the Excellent Ground-Water Recharge Areas shall be applicable to all land area within each Excellent Recharge Area as mapped by the Delaware Geological Survey.

C. WELLHEAD PROTECTION AND RECHARGE OVERLAY MAP

The Town of Blades shall prepare and keep current as part of the official Wellhead Protection and Recharge Map overlay zones showing lands consisting of real property within these areas.

D. USES PERMITTED IN WELLHEAD PROTECTION AND EXCELLENT RECHARGE AREAS

- 1) Uses permitted by right. Only those uses permitted in a zoning district; no additional uses shall be permitted as a right by virtue of being in Wellhead Protection Area or Excellent recharge areas.
- 2) Uses associated with the well, distribution system, treatment system or maintenance of the public water system.

E. PROHIBITED USES, THE FOLLOWING ARE SPECIFICALLY PROHIBITED.

- 1) Any use other than those associated with the well, distribution system, treatment system or maintenance of the public water system within a one-hundred and fifty (150) foot radius around the wellhead.
- 2) Surface use of hazardous materials, including commercial use of agricultural pesticides, herbicides, or fertilizers in concentrations greater than the manufacturer's or USDA recommendations.
- 3) Disposal, storage or long-term parking of vehicles including repair shops.
- 4) Impervious surfaces such as buildings, street, parking lots, driveways and walks should not exceed 50% impervious cover except within the 150' radius of a wellhead where impervious surfaces shall be limited to the buildings, treatment and maintenance facilities as well as access associated with the wellhead facilities. New development may exceed the 50% impervious cover threshold within Wellhead Protection Areas and Excellent Recharge Areas, provided the applicant submits an Environmental Assessment Impact Report (See Environmental Assessment Impact Report Section G below). Any Environmental Assessment Impact Report is subject to review and approval by the Town and the State DNREC.
- 5) Sanitary landfills;

- 6) Dry cleaning facilities;
- 7) Chemical processing/storage facilities;
- 8) Gas stations;
- 9) Electrical/electronic manufacturing facilities;
- 10) Junk/scrap/salvage yard;
- 11) Machine shop;
- 12) Metal plating/finishing/fabricating facility;
- 13) Permanent sheet or treated timber pilings;
- 14) Wood preserving/treating facility;
- 15) Hazardous Waste storage or disposal sites including Hazardous Substance UST Systems storage or disposal sites.
- 16) Storm water infiltration basins, if feasible, unless adequate best management practices approved by the State DNREC are used;
- 17) Underground Storage Tanks (UST) not compliant with regulations set forth by the State DNREC. USTs shall be permitted in a designated wellhead area if they are designed, constructed, maintained, and operated in accordance with the *Delaware Regulations Governing Underground Storage Tank Systems*, dated March 12, 1995 or as later revised. (NOTE: Regulated USTs must be constructed with secondary containment of the tanks and piping and must have continuous monitoring for releases.);

F. REGULATIONS GOVERNING DEVELOPMENT

- 1) Identification on Development Plans
  - i. Development plans shall delineate the locations of Wellhead-Protection and Excellent-Recharge Areas with impervious and non-impervious areas outlined. A statement by a Delaware Registered Professional Engineer and/or Professional Geologist shall be provided, verifying the accuracy of the delineation.
  - ii. If a tract proposed for development contains no Wellhead-Protection and Excellent-Recharge Areas, the plan shall include a statement affirming this from a Delaware Registered Professional Engineer and/or Professional Geologist.
- 2) The developer shall provide documentation as to measures taken to safeguard

Wellhead-Protection and Excellent-Recharge Areas potentially affected by the development.

#### G. ENVIRONMENTAL IMPACT ASSESSMENT REPORT

New development in Blades may exceed the 50% impervious cover threshold within Excellent Ground Water Recharge Potential Areas provided the applicant submits an Environmental Impact Assessment Report including a climatic water budget and system to augment recharge that assures water quality as well as quantity. The Environmental Impact Assessment Report 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 pretreated 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 source water protection areas.

A Delaware Registered Professional Engineer and/or Professional Geologist must prepare the Environmental Impact Assessment Report, usually containing the following elements of planning, design, construction, and maintenance of ground-water recharge facilities:

- 1) Site description of proposed development within the water resource protection area
- 2) Climatic water balance comparing predevelopment and post-development recharge potential
- 3) Subsurface exploration including seasonal water table, borings, test pits, and infiltration tests
- 4) Design of ground-water recharge facilities that assure water quality as well as quantity
- 5) Construction and maintenance considerations

#### H. NONCONFORMING USES

1. Nonconforming uses may continue in wellhead protection areas and excellent ground-water recharge potential areas in the form in which they existed at the time of the adoption of this ordinance, unless they pose a direct hazard to the Town's water supply, as determined by the Town 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 Town's water supply, as determined by the Town upon advice from DNREC's Division of Air and Waste Management and/or Division of Water Resources. In the latter case, the Town shall have the authority to 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 proposed either to be upgraded or replaced. For more information go to:

Nonconforming uses may be allowed, in accordance above, if plans for new construction, redevelopment, or expansion of existing buildings and new or expanded uses have been submitted to the Town by an applicant prior to the adoption date of this ordinance.

#### I. PENALTIES

Any person or entity violating any rule, order, or condition imposed in an approved plan or other provision of these regulations shall be fined not less than \$200 or more than \$2,000 for each offense. Each day that the violation continues shall constitute a separate offense. The Justice of the Peace Courts shall have jurisdiction of offenses brought under this subsection.

Any person who intentionally, knowingly, and after written notice to comply, violates or refuses to comply with any notice issues pursuant to these regulations shall be fined not less than \$500 or more than \$10,000 for each offense. Each day the violation continues shall constitute a separate offense. The Superior Court shall have jurisdiction of offenses brought under this subsection.

#### J. REPLACEMENT AND NEW WELLS

The replacement of any existing public water supply well that was not required to meet this wellhead protection requirement at the date of its original installation and that has failed shall be exempt from meeting this wellhead protection requirement.

Nothing in this ordinance shall prohibit the Town from locating new wells inside or outside the municipal boundaries as may be in the best interests of the Town and thereby create new WHP zones and/or non-conforming uses.

PASSED AND ADOPTED on its third and final reading at a public meeting of the Town of  
Blades Town Council, Sussex County, Delaware, held on the 8<sup>th</sup> day of

June, 2009.

[Signature]

Mayor Michael J Smith

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Date

Attest: [Signature]

Town Administrator

June 8<sup>th</sup>, 2009

Date

