

Ordinance No. 09-03-01

Introduced: March 2, 2009

AN ACT TO ADOPT STANDARDS FOR THE PROTECTION OF SOURCEWATER WITHIN THE TOWN OF MIDDLETOWN

WHEREAS, the Mayor and Council of Middletown are interested in protecting the quality and quantity of the Town's drinking water supply for its citizens; and

WHEREAS, pursuant to Delaware Code Title 7, Chapter 60, subsection 6082, the Delaware General Assembly has put in place requirements which mandate certain municipalities, including the Town of Middletown, to adopt standards concerning the source water assessment, protection of wellheads and excellent ground-water recharge potential areas, related to public drinking water supplies; and

WHEREAS, these standards shall serve the public interest if approved and adopted by the Town Council.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and Council of the Town of Middletown:

Section 1. That Chapter 150 of the Code of Ordinances, Town of Middletown, Delaware, is hereby amended by adding thereto a new Section 9 to read as follows:

“Section 9: Source Water Protection Area Standards

Section 9-1: Intent

The intent of this ordinance is to protect the quality and quantity of ground water in wellhead and recharge resource protection areas during new development in the Town of Middletown. This ordinance is designed to meet the requirements of the 2001 Delaware Source Water Protection Law.

Section 9-2: Definitions

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

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

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

Best Management Practices. That combination of conservation measures, structures, vegetation or management practices, that reduces or avoids adverse impacts of development on the site and adjoining site's land, water, or waterways and waterbodies.

Detention/Retention Basin. A natural or man-made structure designed as a temporary holding basin for water. Water may be detained to minimize flooding downstream, or retained to increase aquifer recharge.

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

Drainage Facility. Any system of artificially constructed drains, including open channels and separate stormwater sewers, used to convey storm, surface, or groundwater, either continuously or intermittently, to natural water courses.

Environmental Report. Any study, report or application required by this Code, such as floodplains, water resource protection areas and wellheads.

Grading. The excavating, filling (including hydraulic fill) or stockpiling of earth materials, or any combination thereof, including the land in its excavated or filled condition.

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

Infiltration. The passage or movement of water through the soil profile.

Mitigation. Any action taken to lessen the specified undesirable impacts of a proposed land use or land disturbance activity, including those which would adversely affect the health or longevity of a natural feature, pose a visual intrusion or conflict, or otherwise be deemed incompatible with surrounding properties.

National Geodetic Vertical Datum (NGVD). Elevations referenced to mean sea level datum of the 1929 or 1988 U.S. Geologic Survey.

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. They were delineated using methodology described in a report prepared by the Delaware Geologic Survey entitled "Delineation of Ground-Water Recharge Resources Protection Areas in the Coastal Plain of New Castle County, Delaware," dated January 1993 ("recharge resource area").

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.

Surface water. Natural or artificial bodies of water greater than one (1) acre in extent at the normal annual water level, as depicted on U.S.G.S. topographic quadrangles and/or as determined by on-site surveys by a registered surveyor, landscape architect or engineer. Excluded from this definition are retention basins or other stormwater management facilities, farm ponds or other facilities associated with agricultural operations, sewage lagoons and other facilities for which normal maintenance and repair is necessary.

Variance. Relief from the standards of this Ordinance.

Water Resource Protection Area. Water resource protection areas in Middletown are Class A Wellhead and Recharge areas. All such areas are as depicted on the three map series “Water Resource Protection Areas for the City of Newark, City of Wilmington, New Castle County, Delaware,” prepared by the University of Delaware Water Resources Agency dated 2001, revised 2006, or as later revised. The WRPA maps are available at www.wr.udel.edu.

Water Table. The level below the surface at which the ground is saturated by water.

Wellhead, Class A. The wellhead water resource areas are surface and subsurface areas surrounding public water supply wells or wellfields where the quantity or quality of groundwater moving toward such wells or wellfields 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”). The Class A wellhead zone shall include the area within a three hundred (300) foot radius circle around all public water supply wells which are classified as community water systems, as defined by section 22.157 (public water systems), in the State of Delaware Regulations Governing Public Drinking Water Systems.

Section 9-3: Water Resource Protection Areas (WRPA)

Water resource protection areas are Class A Wellheads and Recharge Areas. All such areas are as depicted on the three map series “Water Resource Protection Areas for the City of Newark, City of Wilmington, New Castle County, Delaware,” prepared by the University of Delaware Water Resources Agency dated 2001, revised 2006, or as later revised (www.wr.udel.edu). These areas shall be protected as required by the following sections to protect the Town’s water supply resources from contamination and pollution.

Section 9-4: Wellheads Class A

Areas within three hundred (300) feet of the public water supply well shall be one hundred (100) percent open space, except for buildings and access associated with the well distribution and treatment facilities.

- A. The protection area around the well may be reduced to a one hundred and fifty (150) foot radius provided a hydrogeological report, prepared by a Delaware Registered Geologist and submitted to the satisfaction of the Delaware Geological Survey and the DNREC, is prepared. The report must certify that (1) the minimum 60-day time of travel from a point to the public water supply well is maintained and (2) the well draws from a confined aquifer.

- B. The natural runoff flowing into wellhead areas shall be allowed and all new stormwater runoff shall be diverted around the wellhead protection areas wherever practical.
- C. The stormwater systems discharge to wellhead WRPA's shall be by sheet flow 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 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 one (1) acre and the minimum lot area for a public well drawing from an unconfined aquifer shall be two (2) acres.
- F. This section does not apply in instances where the wellhead was constructed prior to December 31, 2007. All existing wellheads constructed prior to December 31, 2007, are considered "grandfathered" and the regulations of this section shall not apply.

Section 9-5: Recharge Areas

Recharge areas are those areas with high percentages of over 90 percent sand and gravel that have "excellent" potential for recharge as determined through a Stack Unit Mapping Analysis performed originally by the Delaware Geological Survey. All such areas are as depicted on the three map series "Water Resource Protection Areas for the City of Newark, City of Wilmington, New Castle County, Delaware," prepared by the University of Delaware Water Resources Agency dated 2001, revised 2006, or as later revised (www.wr.udel.edu). These areas shall be protected as required by the following sections to protect the Town's water supply resources from contamination and pollution:

- A. Appropriate safeguards based on applicable federal, state, and local regulations shall be required to be implemented to prevent release and/or discharge into the environment resulting from the use, storage, or treatment of hazardous substances, as defined in CERCLA §101(14).
- B. The underground and aboveground storage of oil, petroleum, and petroleum products shall be permitted provided secondary containment is provided capable of capturing the material stored on-site pursuant to all applicable state, federal and local regulations regulating underground and aboveground storage tanks.
- C. For development in the recharge areas, the volume and quality of groundwater recharge shall be maintained at predevelopment levels based on the approval of the Town Engineer or Engineering Consultant of the appropriate engineering and hydrogeological studies submitted by the applicant. All

infiltration facilities shall be designed in accordance with the most current version of the Delaware Sediment and Stormwater Regulations.

- D. The Historic District, as designated on the Town of Middletown Zoning Map, shall be exempt from the requirements and restrictions of this ordinance.
- E. No roof drains may be directly connected to the storm sewer system or splash onto pavement.

Section 9-6: 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 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 a Delaware licensed professional engineer or land surveyor 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 hydrogeology and shall be based upon thorough site investigations 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 this section.
- D. The applicant is permitted to make a submission to the Town of Middletown 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 Mayor and Council of the Town of Middletown shall make the final determination concerning any adjustment based on advice from the Delaware Geological Survey, the University of Delaware Water Resources Agency, and the Town Engineer or Engineering Consultant.

Section 9-7: Existing Development

Parcels, units, and lots which have been lawfully improved and/or have received site plan approval as of the effective date of this ordinance which are located within a designated Class A Wellhead or Recharge Area shall be considered a legal nonconforming use.

Such uses may continue in the Class A Wellhead or Recharge Area 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 aboveground storage of oil, petroleum, and petroleum products shall require secondary containment pursuant to the State of Delaware regulations governing underground storage tanks or for aboveground 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.

Section 9-8: Effective Date

A. The requirements of this ordinance shall become effective upon adoption by the Mayor and Council of the Town of Middletown. All plans that have received record plan approval prior to the date of adoption and any resubdivisions thereof that do not increase gross floor area by more than five percent shall be exempt from the provision of this ordinance, except as otherwise regulated herein.

B. Individual parcels which are part of a master plan that has received record plan approval prior to the date hereof, or are part of a master plan which prior to the date hereof has been reviewed by PLUS and for which infrastructure has been installed or for which infrastructure contributions have been made, shall be exempt from the requirements of this Section 9 to the extent necessary to permit the amount of development which could have occurred on such parcel prior to the adoption of this Section; however, such parcels shall be required to comply to the extent such compliance does not reduce permitted or planned development by more than five percent.”

Section 2. If any provision of this Act or the application thereof to any person or circumstance is held invalid for any reason, the invalidity shall not effect the other provisions or any other application of this Act which can be given without the invalid provision or application, and, to this end, all the provisions of this Act are declared to be severable.

ADOPTED THIS _____ DAY OF _____, 2009.

(SEAL)

Kenneth L. Branner, Jr., MAYOR

ATTESTED TO BY:

CLERK, TOWN OF MIDDLETOWN