ORDINANCE No. 08-03

An Ordinance to adopt Source Water Protection Regulations.

WHEREAS, the City of Harrington (hereinafter “City”) residents rely on ground water as their sole source of drinking water; and

WHEREAS, Clean, reliable, and safe drinking water is essential to the public health, safety and welfare to the residents of the City; and

WHEREAS, the protection of existing and proposed sources of water for public consumption is critical to protection of the environment and continued economic prosperity; and

WHEREAS, the State of Delaware Source Water Protection Law of 2001 requires the City to adopt regulations governing the use of land within wellhead protection and excellent groundwater recharge potential areas in order to protect these areas from activities and substances that may harm water quality and subtract from overall water quantity.

NOW, THEREFORE, THE CITY OF HARRINGTON, KENT COUNTY, DELAWARE, HEREBY ORDAINS:

§xx-1. Title

This chapter shall be known and referred to and cited as the “Source Water Protection Ordinance.”

§xx-2. Preface

City of Harrington residents rely exclusively on groundwater as their source of drinking water for both large public water supply systems and individual domestic wells. Although the City has adequate quantities of groundwater, small amounts of pollution may contaminate large quantities of groundwater making it unfit for human consumption, putting our citizens at greater risk of illness and disease, and imposing huge costs on residents and rate payers who will be called upon to finance treatment systems or to secure alternative sources of drinking water. While a number of state environmental programs regulate various types of facilities and activities that are potential sources of contamination, county and municipal governments are responsible for controlling land use that can assist in providing some long-term groundwater protection.

§xx-3. Purpose and Intent

The purpose of this ordinance is to ensure that land use activities are conducted in such a way as to minimize the impact on and reduce the risk of contamination to, excellent groundwater recharge areas and wellhead protection areas which are the source for public drinking water in
the City of Harrington. This ordinance is intended to satisfy the requirements of the Delaware Source Water Protection Law 2001 as codified in 7 Delaware Code 60, Subchapter VI Source Water Protection, Section 6082 (a), (b), and (f).

§ 11-4. Excellent Groundwater Recharge and Wellhead Protection Area Maps

1. Maps prepared and adopted by the Delaware Department of Natural Resources and Environmental Control delineating the excellent groundwater recharge and wellhead protection areas in the City of Harrington are hereby adopted in accordance with 7 Delaware Code 60, Subchapter VI Source Water Protection, Section 6082 (a), (b), and (f). These maps shall comprise the Source Water Protection areas in the City. The geographic area of the Source Water Protection area shall be delineated in the City’s Comprehensive Plan and Official Zoning Map and is identified as Attachment A of this ordinance.

2. The Delaware Department of Natural Resources and Environmental Control periodically shall provide the City of Harrington with updated excellent groundwater recharge and wellhead protection area maps which, upon approval by the City, shall be adopted and incorporated into this ordinance.

3. The excellent groundwater recharge and wellhead protection areas must be shown on any subdivision plan and any site plan, including those required for conditional uses.

§ 11-5. Definitions

Aboveground Storage Tank (AST) means a single containment vessel greater than 250 gallons as defined in the Delaware regulations Governing Aboveground Storage Tanks. ASTs with a storage capacity greater than 12,499 gallons containing petroleum or hazardous substances, and ASTs with a storage capacity greater than 39,999 gallons containing diesels, heating fuel or kerosene are subject to the design, construction, operations, and maintenance requirements of the Delaware AST regulations.

Best Management Practices means structural, nonstructural and managerial techniques that are recognized to be the most effective and practical means to control nonpoint source pollutants yet are compatible with the productive use of the resource to which they are applied. These are used in both urban and agricultural areas.

Contamination means any physical, chemical, biological, or radiological substance that enters the hydrologic cycle through human action and may cause a deleterious effect on ground water resources.

Environmental Assessment Report documents that post-development recharge will be no less than predevelopment recharge for both water quality and quantity when computed on an annual basis. The Environmental Assessment Report at a minimum needs to include the following elements:
1. Site description of proposed development within the water resource protection area.
2. Climatic water balance comparing pre-development and post-development recharge potential for both water quantity and quality.
3. Subsurface exploration including borings, test pits, and infiltration tests.
4. Design of ground-water recharge facilities that assure water quality as well as water quantity. The design shall be performed in accordance with the DNREC Supplement to the Source Water Protection Guidance Manual for the Local Governments of Delaware: Ground-water Recharge Design Methodology dated May 2005 or as later revised.
5. Construction and maintenance considerations.

Excellent Groundwater Recharge Areas means those areas with high percentage of sand and gravel that have "excellent" potential for recharge as determined through a Stack Unit Mapping Analysis delineated by the Delaware Geological Survey and presented in the Report of Investigations No. 60, Ground-water Recharge Potential Mapping in Kent and Sussex Counties, Delaware, Geological Survey, 2004. Excellent Groundwater Recharge Areas are delineated on the excellent groundwater recharge area maps described in this ordinance.

Green Technology Best Management Practices (BMP's) means those practices that achieve stormwater management objectives by applying the principles of filtration, infiltration and storage most often associated with natural vegetation and undisturbed soils while minimizing a reliance on structural components. They may also be constructed using an imported soil medium and planted with vegetation designed to promote the natural hydrologic process. These practices include, but are not limited to, vegetative filtration, riparian buffer plantings, bio-retention areas, vegetative flow conveyance, as well as recharge and surface storage in undisturbed natural areas.

Ground Water means the water contained in interconnected pores located below the water table in an unconfined aquifer or located in a confined aquifer.

Hazardous Waste means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may cause or significantly contribute to an increase in mortality, or an increase in serious irreversible or incapacitating illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. Without limitation, included within this definition are those hazardous wastes described in Sections 261.31, 261.32, 261.33 of the Delaware Regulations Governing Hazardous Waste.

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

Impervious Cover means the sum of parking lots, roads, buildings, sidewalks, or other created surfaces through which rainwater cannot pass or infiltrate the soil.

Land Disturbing Activity means a land change or construction activity for residential, commercial, industrial, and institutional land use.
Leadership in Energy and Environmental Design (LEED) is a rating system developed and administered by the U.S. Green Building Council based in Washington D.C. It is designed to promote design and construction practices that increase profitability while reducing the negative environmental impacts of buildings and improving occupant health and well-being. The LEED rating system offers four certification levels for new construction which includes Certified, Silver, Gold and Platinum, corresponds to the number of credits accrued in five green design categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources and indoor environmental quality. LEED standards cover new commercial construction and major renovation projects, interiors projects and existing building operations.

On-site Wastewater Treatment and Disposal System means conventional or alternative, wastewater treatment and disposal systems installed or proposed to be installed on land of the owner or on other land to which the owner has the legal right to install the system.

Public Water Supply Well means any 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.

Public Drinking Water System means a community, non-community, or non-transient non-community water system, which provides piped water to the public for human consumption. The system must have at least 15 service connections or regularly serve at least 25 individuals daily for at least 60 days.

Runoff means that portion of precipitation or snow melt that has not evaporated or infiltrated into the soil, but flows on land or impervious surfaces.

Source Water Protection Overlay Zone means Wellhead Protection Areas and Excellent Ground Water Recharge Areas.

Stormwater means the runoff of water from the surface of the land resulting from precipitation or snow or ice melt.

Stormwater Management means: 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 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 upon the land.

Underground Storage Tank (UST) means one or a combination of Tanks including underground pipes, the volume of which is 10% or more below ground, as defined in the Delaware Regulations Governing Underground Storage Tank Systems, dated March 12, 1995. 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.
Water Quality means those characteristics of stormwater runoff from an impervious surface or a land disturbing activity that relate to the chemical, physical, biological, or radiological integrity of water.

Water Quantity means:
1) Those characteristics of stormwater runoff that relate to the volume of stormwater runoff to downstream-gradient areas resulting from land disturbing activities.
2) Those characteristics of stormwater that relate to the volume of stormwater that infiltrates the land surface and enters the underlying aquifer.

Wellhead Protection Areas mean the surface and subsurface area surrounding a water well or well field supplying a public water system through which contaminants are likely to reach such well, or well field. Wellhead protection areas are delineated on the wellhead protection area maps described in this ordinance.

§xx-6. Applicability

1. All major subdivisions, conditional use site plans, site plans, and revised subdivision or site plans received for approval or re-approval by the Planning Commission shall meet the requirements set forth herein prior to approval, except as provided in Subsection xx-8. Exemptions, below.

2. All public drinking water well systems constructed after the effective date of this ordinance are required to comply with this ordinance.

3. For developments that are located partially in either a Tier 1 or Tier 2 Source Water Protection Area, only those areas in a Source Water Protection Area are required to comply with this ordinance; and

4. Existing developed land which is located in either Tier 1 or Tier 2 Source Water Protection areas will be treated as a nonconforming use.

5. The uses and bulk standards which govern the underlying zoning designations attached to the properties within the Source Water Protection Area shall apply in all instances except where uses are specifically prohibited by this section and except pertaining to impervious cover. Where issues of impervious cover are concerned, the provisions of the Source Water Protection Area are the governing provisions, overriding the existing zoning for the property.

§xx-7. Source Water Protection Overlay Zone Standards

Notwithstanding all applicable provisions contained in the City of Harrington General Code and all applicable State and Federal regulations the following requirements shall apply:

1. Tier 1 — Surface area extending 100' radius around the wellhead.
a. Impervious cover shall be prohibited on lands located in a Tier 1 area with the exception of buildings and access associated with the well and related treatment and distribution facilities.

b. The natural runoff flowing into a Tier 1 area shall be allowed and all new stormwater run-off shall be diverted around the Tier 1 area.

c. The following uses are prohibited in Tier 1 areas:
   i. On-site community wastewater treatment and disposal systems.
   ii. Underground storage tanks as regulated by DNREC.
   iii. Aboveground storage tanks as regulated by DNREC.
   v. Mines/gravel pit.

2. Tier 2 — Remaining surface area of the wellhead protection area outside of Tier 1 and excellent groundwater recharge areas.

   a. New development in Tier 2 Source Water Protection Areas may not exceed 35% gross impervious cover.

   b. New development may exceed the 35% gross impervious cover threshold up to the limits for gross impervious cover set within the zoning code provided that either all stormwater is:

      i. Treated according to Green Technology Best Management Practices to remove contaminants; and

      ii. Directed into either underground recharge systems or into permeable surfaces within the excellent groundwater recharge area.

      OR

      i. The project is LEED certified (Leadership in Energy and Environmental Design) in the sustainable sites category.

   c. New development may exceed the 35% gross impervious cover threshold if the applicant demonstrates through an environmental assessment report prepared by a registered professional geologist, or registered professional engineer familiar with the hydrogeologic characteristics of Kent County.
and the City of Harrington, using climatic water budget that the post-development recharge quantity will meet or exceed the pre-development recharge quantity.

d. For all new construction, all structures except for residential dwellings shall be required to discharge roof drains into underground recharge systems or into permeable surfaces. No discharge by roof drains to impervious surfaces except for residential dwellings is permitted in excellent groundwater recharge areas.

e. The following uses are prohibited in Tier 2 Source Water Protection Areas:

i. On-site community wastewater treatment and disposal systems.

ii. Underground storage tanks as regulated by DNREC.

iii. Chemical processing/storage facility.


v. Mines/gravel pit.

f. Stormwater shall be treated with best management practices that include, but are not limited, to vegetative filter strips, water quality inlets, stormwater wetlands, wet extended detention ponds, bioretention swales and sand filters, to remove contaminants.

§18-8. Exemptions

The following are exempt from the requirements of this ordinance:

1. Private residential wells serving individual households

2. Wells used for agricultural purposes

3. Replacement wells

4. Minor subdivisions

5. Designated well areas in existing recorded subdivisions

6. Revisions to recorded subdivision plans that do not result in the creation of additional lots

7. Minor changes or alterations to approved site plans
8. Conditional use applications not requiring site plan review

9. Site plans exempted from review by the Planning Commission (Category B, Administrative Reviews)

10. Improvements to existing residential lots, including additions to existing one-family dwellings, the placement of sheds, and fences; and

11. Subdivision and land development projects that have been submitted for concept or preliminary plan approval by the Planning Commission.

12. Properties for which the owner has filed a request for annexation prior to December 31, 2007, provided, that, the owner submits an application for concept plan or preliminary plan approval within 120 days of annexation and proceeds diligently through the planning process.

§XX-9. Severability

The provisions of this Ordinance are severable and if any of its provisions or any sentence, clause, or paragraph or the application thereof to any person or circumstance shall be held unconstitutional or violative of the Laws of the State of Delaware by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions which can be given effect without the invalid provision or application.

§XX-10. Effective Date

This Ordinance shall be effective December 31, 2008.

Repealer: All ordinances and parts of ordinances inconsistent with the provisions of this Ordinance are hereby repealed.

SO ORDAINED by the majority of Council Members present at a regular session of Harrington City Council, to be effective upon signing.

First Reading: July 7, 2008
Public Hearing and Second Reading: August 4, 2008
Published: The Gunn - 7/16/08 - 7/18/08 - DSN - 7/13/08 & 7/27/08

[Signature]
Robert E. Price, Jr., Mayor
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Vice-Mayor

Wayne Porter
Council Member

Kenneth Stibbs
Council Member

John Baynard
Council Member

Leonard Englehart
Council Member

David Adams
Council Member

Attest: Carolyn Porter, Clerk of Council

Date of Adoption: 8-4-08