

Maryland Model Wellhead Protection Ordinance



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**Maryland Department of the Environment
Water Management Administration
Water Supply Program**

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Section 1.0 PURPOSE AND INTENT

WHEREAS, the ground water underlying the community water supply wellhead protection areas is a major source of (name of community)'s existing and future water supply; and

WHEREAS, a safe and adequate source of drinking water is of great benefit to the health and well being of the _____; and

WHEREAS, the aquifer systems supplying the community water supply wellhead protection areas, with its ground water supply, is integrally connected with numerous surface waters and streams; and

WHEREAS, accidental spills and discharges of toxic and hazardous materials can threaten the quality of such water supplies, posing public health and safety hazards; and

WHEREAS, unless preventive measures are adopted to control the discharge and storage of toxic and hazardous materials within the community water supply wellhead protection areas, further spills and discharges of such materials will predictably occur, and with greater frequency and degree of hazard by reason of increasing land development, population, and vehicular traffic within the wellhead protection areas; and

WHEREAS, agricultural and residential development can result in increased nitrogen loading to the ground water from septic systems, fertilizer application and livestock wastes; and

WHEREAS, proper siting, installation, operation, and maintenance of septic systems, agricultural operations, feedlots and animal wastes areas are necessary to prevent contamination of the ground water from excessive nitrogen and pathogenic organisms; and

WHEREAS, the purpose of this ordinance is to protect the public health, safety, and welfare through the preservation of the ground water resources of community public water supplies to ensure a future supply of safe and healthful drinking water. The designation of the wellhead protection districts, and careful regulation of development activities within these districts, can reduce the potential for ground and surface water contamination.

Section 2.0

DEFINITIONS

- A. **AQUIFER** means any formation of soil, sand, rock, gravel, limestone, sandstone, or other material, or any crevice from which underground water is or may be produced.
- B. **BEST MANAGEMENT PRACTICES (BMPs)** means a conservation or pollution control practice that manages wastes, agricultural chemicals, or hazardous materials so as to minimize movement into surface or ground waters of the State.
- C. **CONTAINMENT DEVICE** shall be defined as a device that is designed to contain an unauthorized release, retain it for cleanup, and prevent released materials from penetrating into the ground.
- D. **EPA** refers to the United States Environmental Protection Agency.
- E. **EPA STORMWATER NPDES PERMIT** shall be defined as a permit meeting the requirements of the National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges issued by EPA on November 16, 1990.
- F. **HAZARDOUS MATERIALS** means any substance that: (1) conveys toxic, lethal, or other injurious effects or which causes sublethal alterations to plant, animal, or aquatic life; or (2) may be injurious to human beings. Hazardous materials include any matter identified as a "hazardous waste" by the Environmental Protection Agency or a "controlled hazardous substance" by the Maryland Department of the Environment.
- G. **MDE** refers to the Maryland Department of the Environment.
- H. **NUTRIENT/MANURE MANAGEMENT PLAN** shall be defined as a plan prepared by a certified nutrient management consultant to manage the amount, placement, timing, and application of animal waste, fertilizer, sewage sludge, and other plant nutrients in order to prevent pollution and to maintain productivity of the soil.
- I. **ON-SITE FLOOR DRAINS** shall be defined as drains which are not connected to municipal sewer or stormwater systems and which discharge directly to the ground or septic system.
- J. **OWNER** shall be defined as a property owner or his duly authorized agent or attorney, a purchaser, devisee, fiduciary, and any other person having vested or contingent interest in the property of question.
- K. **PERSON** shall be defined as any natural person, individual, public or private corporation, firm, association, joint venture, partnership, municipality, government agency, political subdivision, public officer, owner, lessee, tenant, or any other entity whatsoever or any combination of such, jointly or severally.

- L. **PESTICIDE** shall be defined as any substance or mixture of substances intended for: (1) preventing, destroying, repelling, or mitigating any pest; (2) use as a plant regulator, defoliant, or desiccant; or (3) use as a spray adjuvant such as a wetting agent or adhesive.
- M. **RULES AND REGULATIONS OF MDE** shall be defined as official publications of MDE with standards and requirements for protection of ground water resources.
- N. **UNDERGROUND INJECTION WELL** shall be defined as a bored, drilled, driven or dug well whose depth is greater than the largest surface dimension, through which fluids enter the subsurface; or, an improved sinkhole; or, a subsurface fluid distribution system.
- O. **UNDERGROUND STORAGE TANK** means an underground storage tank, connected piping, underground ancillary equipment, and containment system, if any.
- P. **WELLHEAD PROTECTION DISTRICT** means that land area overlying the aquifer which contributes water to a public water supply well under the permitted withdrawal rate (average annual) and average annual recharge conditions that can be anticipated based on historical data. It is bounded and may be influenced by the ground water divides which result from pumping the well and by the contact of the aquifer with less permeable geologic boundaries. In all cases, the Wellhead Protection District shall extend upgradient to its point of intersection with prevailing hydrogeologic boundaries (a ground water flow divide, a contact with geologic formations, or a recharge boundary), or be limited by time-of-travel. The Wellhead Protection District shall be reviewed and approved by MDE.

The Wellhead Protection District may include two (2) zones of protection, with Zone 1 being the most restrictive. Zone 1 is based on a 1 year time of travel, fixed radius or other assessment of an area most closely connected to the water supply. Zone 2 is based on a 10-year¹ time of travel or by hydrogeologic boundaries. The boundary of Zone 3, when delineated, encompasses the total land area that is determined to provide recharge to a public water supply well.
- Q. **YARDING AREAS** shall be defined as a pen or other outdoor area used for the feeding and care of livestock or poultry.

Section 3.0

AUTHORITY

¹ A 20 or 25 year time of travel may be used to mark the edge of Zone 2, if numerical modeling with particle tracking is used to delineation the wellhead protection area.

Section 3.1

Enabling Statute

***** For Use by Jurisdictions Empowered under Article 66B ***
of the Annotated Code of Maryland, as follows:**

1. All non-charter (including code home rule*) counties:

Allegany*	Garrett
Calvert	Kent*
Caroline*	Queen Anne's*
Carroll	St. Mary's
Cecil	Somerset
Charles	Washington
Dorchester	Worcester*
Frederick	

2. Baltimore City.

3. All incorporated municipalities lying outside Montgomery and Prince George's Counties.

4. The incorporated municipalities of Barnesville, Brookeville, Gaithersburg, Laytonsville, Poolesville, Rockville, and Washington Grove in Montgomery County, and the City of Laurel in Prince George's County.

B. **WHEREAS**, the _____ has duly adopted within the Comprehensive Plan, after public notice and hearing, a Sensitive Areas Plan element in accordance with §3.05 of Article 66B of the Annotated Code of Maryland; and

WHEREAS, § 3.05 of Article 66B requires protection of streams and their buffers, 100-year floodplains, habitats of threatened and endangered species (habitat), and steep slopes; and

WHEREAS, § 3.05 (a)(2) of Article 66B authorizes protection of additional types of sensitive areas; and

WHEREAS, the _____ has determined through the Sensitive Areas element of the Comprehensive Plan that, in addition to streams and their buffers, 100-year floodplains, habitats of threatened and endangered species, and steep slopes, wellhead protection areas are in need of special protection; and

WHEREAS, § 4.01 of Article 66B empowers the _____ with the authority to regulate and restrict land use for the purpose of promoting the health, safety and general welfare of the community; and

WHEREAS, Section 1428 of the Federal Safe Drinking Water Act Amendments of 1986 requires that each state develop a wellhead protection program to protect public water supplies from contamination from contamination; and

WHEREAS, the Maryland Department of the Environment (MDE) has developed a wellhead protection program, approved by EPA, which identifies that local governments have responsibility for developing programs, including regulations and management controls, to protect public water supplies from contamination.

***** For Use by Jurisdictions Empowered Under Articles 25A and 28 ***
of the Annotated Code of Maryland, as follows:**

1. Charter Counties delegated by Article 25A:

Anne Arundel	Howard
Baltimore	Talbot
Harford	Wicomico

2. Charter Counties delegated by Article 28:

Montgomery	Prince George's
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3. Incorporated towns within Montgomery and Prince George's Counties.

B. **WHEREAS**, the _____ has duly adopted Zoning Regulations for the purpose of protecting the health, safety, and welfare of its residents; and

WHEREAS, § 3.05(a)(1)(vi) and (viii) of Article 66B requires jurisdictions empowered under Articles 25A and 28 of the Annotated Code of Maryland to require a sensitive area element that contains goals and standards to protect sensitive areas; and

WHEREAS, § 3.05 of Article 66B requires protection of streams and their buffers, 100-year floodplains, habitats of threatened and endangered species (habitat), and steep slopes; and

WHEREAS, § 3.05 of Article 66B authorizes protection of additional types of sensitive areas; and

WHEREAS, the _____ has determined through the Sensitive Areas element of the Comprehensive Plan that, in addition to streams and their buffers, 100-year floodplains, habitats of threatened and endangered species, steep slopes, and wellhead protection areas are in need of special protection; and

WHEREAS, § 4.01 of Article 66B empowers the _____ with the authority to regulate and restrict land use for the purpose of promoting the health, safety and general welfare of the community; and

WHEREAS, Section 1428 of the Federal Safe Drinking Water Act Amendments of 1986 requires that each state develop a wellhead protection program to protect public water supplies from contamination; and

WHEREAS, the Maryland Department of the Environment (MDE) has developed a wellhead protection program, approved by EPA, which identifies that local governments have responsibility for developing programs, including regulations and management controls, to protect public water supplies from contamination.

*** * * For Use by Jurisdictions Empowered under Public * * ***
Local Laws, as follows:

1. LaVale, an unincorporated community in Allegany County.

B. **WHEREAS**, the _____ has duly adopted Zoning Regulations for the purpose of protecting the health, safety, and general welfare of its residents; and

WHEREAS, § 3.05(a)(1)(vi) and (viii) of Article 66B requires a sensitive area element that contains goals and standards to protect sensitive areas; and

WHEREAS, § 3.05 of Article 66B requires protection of streams and their buffers, 100-year floodplains, habitats of threatened and endangered species (habitat), and steep slopes; and

WHEREAS, § 3.05(a)(2) of Article 66B authorizes protection of additional types of sensitive areas; and

WHEREAS, the _____ has determined through the Sensitive Areas element of the Comprehensive Plan that, in addition to streams and their buffers, 100-year floodplains, habitats of threatened and endangered species, and steep slopes, wellhead protection areas are in need of special protection; and

WHEREAS, § 4.01 of Article 66B empowers the _____ with the authority to regulate and restrict land use for the purpose of promoting the health, safety and general welfare of the community; and

WHEREAS, Section 1428 of the Federal Safe Drinking Water Act Amendments of 1986 requires that each state develop a program to protect public water supplies from contamination; and

WHEREAS, the Maryland Department of the Environment (MDE) has developed a wellhead protection program, approved by EPA, which identifies that local governments have responsibility for developing programs, including regulations and management controls, to protect public water supplies from contamination.

Section 3.2 Severability

Should any section, paragraph, sentence, clause, or phrase of this ordinance be declared unconstitutional or invalid for any reason, the remainder of this ordinance shall not be affected and remain in full force.

Section 3.3 Amendments

This ordinance or any part thereof may be amended from time to time in accordance with the procedures as established by law.

Section 4.0

APPLICABILITY

- A. This Ordinance applies to all land uses and activities located or proposed within the area delineated as the Wellhead Protection District in _____ on a map available for inspection at the office of the _____ and as defined in the definitions section of the ordinance. The Wellhead Protection District consists of Zone 1, Zone 2, and Zone 3, (select all that apply) described in 5.0 below.
- B. This Ordinance is supplementary to other laws and regulations. Where this Ordinance or any portion thereof imposes a greater restriction than is imposed by other regulations, the provisions of this Ordinance shall control.

Section 5.0

EXTENT AND DESIGNATIONS

- A. The Wellhead Protection District includes differing zones of protection as recommended by MDE. Wellhead Protection Districts may include 1, 2, or 3 zones of protection.

For each community this section will need to be customized. The text then needs to describe what each of the zones represent and what method was used to delineate the area. Several possibilities are described below.

If only one zone of protection:

1. The wellhead protection area (WHPA) delineated represents the recharge area for (name of supply source and location) supply. The boundaries of the WHPA are based on ground water flow direction and ground water divides inferred from topography and groundwater discharge areas, changes in formation type, permitted withdrawal rates, linear features (fracture traces) and a calculated down gradient zone of contribution using the average annual withdrawal rate. A detailed explanation and basis for the delineation is described in (title and date of report with author). MDE has indicated its approval of this area as being consistent with the requirements of Section 1428 of the Safe Drinking Water Act by letter dated _____.

If there are two zones of protection:

1. Zone 1 represents the area bounded by a ground water travel time of 1 year to (name of supply source and location) as determined by a modular semi-analytical ground water flow model (such as WHPA Code Version 2.2, Huyakorn and Blandford). All input values and boundary conditions are documented in (title and date of report with author). MDE has indicated its approval of this area as being consistent with the requirements of Section 1428 of the Safe Drinking Water Act by letter dated _____.
2. Zone 2 represents an area bounded by a ground water travel time of 10 years to name of supply source and location as determined by a modular semi-analytical ground water flow model (such as WHPA Code Version 2.2 Huyakorn and Blandford). All input values and boundary conditions are documented in (title and date of report with author). MDE has indicated its approval of this area as being consistent with the requirements of Section 1428 of the Safe Drinking Water Act by letter dated _____.

If there is a third zone of protection:

3. Zone 3 represents that area between the 10-year time of travel boundary and the boundary of the ultimate recharge area to (name of supply source and location). This area was determined by applying a numerical ground water flow model and particle tracking routine (provide model reference). The model grid size, boundary locations, input parameters and calibration results are all described in detail in (title and date of report with author). MDE has indicated its approval of this area as being consistent with the requirements of Section 1428 of the Safe Drinking Water Act by letter dated _____.
- B. The maps delineating the Wellhead Protection District and Zone(s) (1,1&2,or 1,2&3) are entitled (title and date) and are incorporated herein and made a part of this Ordinance.

The maps shall be on file and maintained by _____. Accurate copies of these maps shall be made available for review by the public.

- C. In determining how properties within the Wellhead Protection District depicted on the (title and date of map) are affected by the requirements of this ordinance the following rules shall apply:
1. Properties located wholly within one zone as reflected on (title and date of map) shall be governed by the restrictions applicable to that Zone.
 2. Properties having parts lying within more than one zone as reflected on the (title and date of map) shall be governed by the restrictions applicable in each zone.
 3. Where the boundary line between two zones passes through a building, the entire building shall be considered to be in that zone in which more than fifty (50) percent of the floor space of the building is situated.
- D. The boundary of the Wellhead Protection District or individual zones within the District may be modified should additional information or analysis be provided that shows that the current boundary lines no longer appropriately reflects the criterion which they purport to represent.

Procedures for modification of such boundaries shall be as follows:

1. The applicant wishing a change in boundary shall provide the evidence to the Zoning Commissioner. The applicant shall petition the Zoning Commissioner for a special hearing/District Reclassification and be required to present detailed hydrogeologic and hydrologic information to the Board of Appeals indicating where in fact the new boundary line should be drawn. The applicant shall provide (No. of copies) copies of all reports and maps to the Zoning Commissioner for a technical review of geologic and hydrologic, and any other relevant information. Maps shall be submitted on the same scale or more detailed as the official Wellhead Protection District Maps.
2. The Zoning Commissioner shall seek competent technical advice of such a change request. The (name of community) wellhead protection planning team shall be given a copy of the information given to the zoning commissioner and be granted adequate time to comment on the proposed change.
3. The burden of proof shall be on the applicant to show that the current boundaries do not represent the criterion which they purport to represent.
4. If after receiving written advice from the (name of community) planning team and/or other technical advisors, and the Zoning Commissioner believes that the proposed change has merit, all property owners potentially affected by the changes shall be sent

notices indicating the proposed change. An opportunity for public comment of sixty (60) days after notices are sent shall be provided.

5. After close of the comment period the Zoning Commissioner shall make his decision.
6. Any maps so revised shall be incorporated and made part of this Ordinance and kept on file and available to the public for review by (name of appropriate agency).

Section 6.0

USE REGULATIONS

Section 6.1 **Permitted Uses**

The following uses shall be permitted:

- A. Conservation of soil, water, plants, and wildlife;
- B. Outdoor recreation, nature study, boating, fishing, and hunting where otherwise legally permitted;
- C. Foot, bicycle, and/or horse paths, and bridges;
- D. Normal operation and maintenance of existing water bodies and dams, splash boards, and other water control, supply and conservation devices;
- E. Maintenance, repair, and enlargement of any existing structure, subject to Section 6.2 prohibited uses;
- F. Residential development, subject to Section 6.2 prohibited uses;
- G. Farming, gardening, nursery, conservation, forestry, harvesting, and grazing, subject to Section 6.2 prohibited uses; and
- H. Construction, maintenance, repair, and enlargement of drinking water supply related facilities such as, but not limited to, wells, pipelines, aqueducts, and tunnels. Underground storage tanks related to these activities are not categorically permitted.

Section 6.2 **Prohibited Uses**

The following uses are prohibited or conditional within the designated protection zone(s):

	<u>Zone 1</u>	<u>Zone 2²</u>
A. Bulk Storage of Hazardous Materials, except the following ³ :	X	Cu
1. Materials needed for normal household use, outdoor maintenance, and heating of a structure;		
2. Waste oil retention facilities required by statute, rule, or regulation;		
3. Materials needed for emergency generators; or		
4. Materials used in Water Treatment Plants.		
B. Dry Cleaning Establishments, Coin or Commercial Laundries	X	Cu
C. Garage, Service Station	X	Cu
D. Heavy Manufacturing Uses	X	X
E. Junk Yards	X	X
F. Yarding Area	X	Cu ⁴
G. Manure Piles, Animal Waste Pits, Lagoons, and Sewage Sludge Storage Facilities	X	Cu
H. Metal Plating Establishments	X	X
I. On-site Wastewater Disposal	X	Cu ⁵

² *These prohibitions and conditional uses may also apply to Zone 3 areas. The decision should be based on vulnerability of the specific area to the category of use.*

³ *Secondary containment and release detection standards for inground tanks and above ground tanks found later in this manual apply to the exceptions permitted in Zone 1 of the wellhead protection district.*

⁴ *Counties/municipalities may require nutrient management plans through local regulation or other non-zoning by law/ordinance. Local requirements must be consistent with MD.1/SCD standards.*

⁵ *Counties/municipalities should consider requiring commercial and residential developments within this Zone to be serviced by public sewer. For all lots subdivided which propose on-site wastewater disposal, the intention is to ensure that the nitrate-levels do not exceed 10 mg/l. In some instances on-site systems that maximize nitrogen removal may required.*

J.	Open Burning Sites and Dumps	X	X
K.	Quarries and Mining Operations	X	X
L.	Storage of Deicing Chemicals	X	Cu
M.	Disposal of Fuels or Hazardous Materials	X	X
N.	Sanitary Landfills and Rubble Fills	X	X
O.	Bulk Storage and Mixing of Pesticides and Fertilizers ⁶	X	Cu
P.	Underground Injection Wells	X	Cu ⁷
Q.	Underground Storage Tanks	X	Cu
R.	Uses which involve, as a principal activity, the manufacture, storage, use, transport, or disposal of hazardous materials	X	X
S.	Uses which involve hazardous materials in quantities greater than those associated with normal household use ⁹	X ⁸	Cu
T.	Underground pipelines ¹⁰ carrying hazardous	X	Cu

Process wastewater that contain hazardous materials above drinking water standards or otherwise to harm to the water supply should be prohibited from on-site disposal.

⁶New standards and guidelines adopted by Maryland Department of Agriculture should be referenced as a condition for special exception.

⁷Process wastewater that contain hazardous materials above drinking water standards or otherwise cause harm to the water supply should be prohibited from on-site disposal.

⁸This prohibition does not apply to uses permitted in Section 6.2.1.

⁹Normal household use does not imply that it is acceptable to dispose of hazardous material through the home's plumbing system.

¹⁰ Counties and local governments may be pre-empted from regulating the location of pipelines used in interstate commerce.

8. A description of the best management practices which will be followed during the construction of the facility to ensure that hazardous materials are not released to the ground water.
9. An emergency plan indicating the procedures which will be followed in the event of a spill of a hazardous material to control and collect the spilled material to prevent the substance from reaching the ground water.
10. A hydrologic assessment for properties with greater than 50% planned impervious surfaces (building footprints, sidewalks, and transportation surfaces) to determine the ground water recharge rate after site development is completed. The assessment will also estimate the ground water recharge rate prior to development.

B. The _____ shall obtain advice from all appropriate local agencies to assess whether the wellhead protection area will be protected from contaminants which pose an adverse effect on the health or comfort of persons. In making their determination, the _____ shall give consideration to the simplicity, reliability, and feasibility of the control measures proposed and the degree of threat to drinking water quality which would result if the control measures failed. _____ shall then issue a written decision. In order for the area to be approved, it must be shown that the use:

1. Will protect the water supply from contaminants used on the property which pose an adverse effect on the health or comfort of persons;
2. Will not cause the average ground water quality on the property to violate drinking water standards promulgated by MDE and the EPA; or
3. Will maintain recharge of water to the water supply aquifer consistent with rates prior to development.¹¹

A request may not be approved until all comments provided by local agencies have been addressed by the applicant to the satisfaction of _____.

C. _____ may deny the Conditional Use if it is determined that the Conditional Use would not meet the requirements outlined in 6.3.B. above. The _____'s decision shall be made in writing to the applicant.

Section 6.4 Nonconforming Uses

¹¹***No more than a 20% drop in recharge rates is recommended as a standard.***

Non-conforming uses lawfully in existence within the Wellhead Protection District may continue to exist in the form in which they existed at the time on this Ordinance is adopted. Changes in title or right to possession shall not effect continuation of an existing use.

In the event a non-conforming use poses a direct hazard to the public water supply, _____ may take any action permitted by law to abate the hazard.

Section 6.5 **Variances**

Variances to the provisions of this ordinance may be granted by _____, following a public hearing, provided that a strict interpretation of the Ordinance deprives such property of privileges or safety enjoyed by other similarly situated property within the Wellhead Protection District. Applications for Variances must be presented to the _____.

Section 6.6 **Exemptions**

The following activities are exempt from regulation under this ordinance:

1. Transportation of Hazardous Material- The transportation of any Hazardous Material through the Wellhead Protection District shall be exempt from the provisions of this ordinance.
2. Application of Pesticides- The application of pesticides in recreation, agriculture, pest control, and aquatic weed control activities shall be exempt from the provisions of this ordinance provided that:
 - a. The application is in strict conformity with the use requirement as set forth in the substances EPA registries. A pesticide can only be used according to its labeling and according to pertinent federal and state laws.
 - b. The application of pesticides shall be noted in the records of an applicator certified by the Maryland Department of Agriculture. Records shall be kept of the date and amount of these substances applied at each location and said records shall be available for inspection.
3. Underground Storage of Oil(s)- The underground storage of oil(s) used for heating fuel shall be exempt from the provisions of this ordinance if the tank used for storage is located within an enclosed structure (i.e., secondary containment or any currently approvable containment technology) sufficient to contain leakage of oil from the environment and to provide routine access for visual inspection (e.g., cement-floored basement), and sheltered to prevent the intrusion of precipitation. Any tank used for the underground storage of oil that is out of service for more than one year shall be removed. Liquid residue shall be removed and all connecting piping securely capped or plugged.
4. Aboveground Storage of Oil(s)- The aboveground storage of oil(s) used for heating fuel shall be exempt from the provisions of this ordinance provided that the tank used for storage is: 1) located on an impervious pad or container of sufficient volume to capture and contain spills

and leakage of oil from entering the environment, 2) sheltered to prevent the intrusion of precipitation and, 3) located in a manner that allows for routine visual inspection. Aboveground storage of oil shall be located as far away from the public water supply wells as possible.¹²

Section 6.7 Performance Plan Standards

All activities that are designated conditional uses shall meet the following design and operation guidelines.

- A. Containment of hazardous materials. Leak-proof trays under containers, floor curbing, or other containment systems to provide secondary liquid containment shall be installed. The containment shall be of adequate size to handle all spills, leaks, overflows, and precipitation until appropriate action can be taken. The specific design and selection of materials shall be sufficient to contain any hazardous material at the location and prevent escape to the environment. These requirements shall apply to all areas of use, production, and handling, to all storage areas, to loading and off-loading areas, and to aboveground and underground storage areas. Because State and federal governments already regulate hazardous materials nothing in this ordinance shall be applied in a way to prevent a person from complying with State and federal requirements.
- B. All underground tanks(s) and piping systems shall meet the requirements of COMAR 26.10.05.03.C 1-4 for secondary containment, double wall tanks, liners, vaults and underground piping.
- C. Dry cleaning establishments shall not discharge to the ground or subsurface any wastewater that was in contact with the organic solvents used in dry cleaning process.

As specified in A. above, secondary containment is required for areas when dry cleaning solvent is stored, used and transferred.

- D. Infiltration of stormwater runoff that has come in contact with the pavement surfaces shall not be permitted at gasoline service stations. Waste from service stations' work areas is not permitted to be discharged to the ground or subsurface.
- E. All sewage sludge and animal waste holding facilities shall be constructed so as not to allow the waste material to leach into the ground water. All inground facilities shall use low permeability liners constructed to meet one of the standards specified below:
 - a. one foot of clay with a permeability less than 10^{-7} cm/sec, or
 - b. two feet of clay with a permeability less than 10^{-6} cm/sec or
 - c. two feet of compacted soil with a permeability less than 10^{-5} cm/sec, and

¹² ***Homeowners are exempt, consistent with COMAR 26.10, Oil Pollution and Tank Management.***

a manmade liner, 30 mil thick, and permeability less than 10^{-7} cm/sec.

- F. Agricultural operations with yarding areas shall follow nutrient management plans for nitrogen. Waste application rates for all sites within the wellhead protection district are to be designed to not exceed crop requirements and therefore minimize nitrate discharge to ground water.
- G. All facilities with wastewater disposal greater than 5,000 gpd shall have a State discharge permit. All developments with on-site disposal shall be designed so that the average $\text{NO}_3\text{-N}$ concentration of the water recharging the surficial ground water aquifer under the property shall not exceed 10 milligrams per liter.
- H. All de-icing chemicals (salt piles and sand/salt mixes) must be stored under roof and protected from precipitation by a permanent cover. Runoff from mixing and loading areas may not be discharged to the subsurface.
- I. All facilities with bulk storage of pesticides must show evidence of compliance with Maryland Department of Agriculture requirements.
- J. All tanks of liquid fertilizers must have secondary containment of at least 110% of the largest tank within the contained area. All dry fertilizer storage must be under a permanent cover and protected from rainfall.
- K. All facilities with underground injection wells must show evidence of compliance with all applicable MDE permits, consent orders, or other State actions, regarding the underground disposal of wastes.
- L. All underground pipelines carrying hazardous materials shall be equipped with operable secondary release detection equipment and be protected against corrosion.
- M. All excess hazardous materials from the construction of any facility shall not be released to the environment and shall be removed from the property, unless such materials are incorporated into a contained hazardous materials storage area.
- N. At all facilities practicing stormwater infiltration the following design standards shall apply:
 - 1. Stormwater management facilities including drainage swales, detention ponds, and retention ponds shall be designed in a manner to provide optimal protection of the ground water resources. Uses of grass swales, open shoulder roads and grass filter strips shall be considered as first options in plan development.
 - 2. At least four feet of soil material is required between the top of bedrock surface or high water table (whichever is higher) and the bottom of any stormwater infiltration pond or system.

3. Stormwater infiltration shall be prohibited in areas receiving runoff from handling and mixing areas of hazardous materials.
 4. At least 80% of the predevelopment recharge rate shall be preserved following development. The design shall be made to ensure that this rate can be maintained over the life of the facility.
- O. Reporting of Spills. Any spill of a hazardous material shall be reported by the facility owner by telephone to the water supplier, within two (2) hours of discovery of the spill. Clean-up shall commence immediately upon discovery of the spill. A written report detailing the steps taken to contain and clean up the spill and preventing a recurrence shall be submitted to the water supplier within five (5) working days of the spill.
- P. Monitoring for Hazardous Materials in Ground Water. If required by the _____, ground water monitoring well(s) shall be installed at the expense of the facility owner or operator in accordance with an approved ground water monitoring plan. The permittee shall be responsible for developing an approved ground water monitoring system. Samples shall be analyzed by a State-certified laboratory and the results reported to _____.
- Q. Alterations and Expansion. The _____ shall be notified in writing prior to the expansion, alteration, or modification of any activity that is subject to a Conditional Use. Approval by _____ is required before the activity subject to a Conditional Use can begin. The landowner or representative shall submit an explanation of the change in activity and the information as required by this ordinance above.

Section 7.0 ADMINISTRATION REQUIREMENTS

Section 7.1 Subdivision and Land Development Review

All subdivision proposals and other proposed new development plans within the Wellhead Protection District shall be reviewed by _____ for compliance with the provisions of this ordinance. It shall be the responsibility of the _____ to recommend approval, disapproval, or approval with modifications of the proposed subdivision or development plan.

Section 7.2 Notice of Violation

Whenever it is determined that there is a violation of this ordinance, A Notice of Violation shall be issued. The Notice of Violation shall:

1. Specify the violation or violations in writing.
2. Specify the length of time available to correct the violation.
3. Clearly state any penalties associated with the subject violation.
4. Provide a description of any rights of appeal.

Section 7.3 Stop Work Orders

The _____ is authorized to issue cease and desist orders whenever it becomes aware of violations of this ordinance.

Section 7.4 Penalties

All costs incurred by the _____, including engineering and attorney's fees for enforcing this ordinance shall be paid by the owner who violated the provisions of this ordinance.

A penalty of up to \$1,000 may be levied for any violation of this ordinance.

Section 8.0

FEES

Fees Established by Resolution

All fees for review of Subdivision and Land Development Plans shall be established by resolution of the appropriate local governing body. Fees established shall be reviewed annually and adjusted as required. The fees shall include reasonable costs involved with the implementation of this ordinance and may include Administrative and professional staff review costs.