Project Name _____

Section 1.a. Select the project type.

This project is a ☐ new development ☐ redevelopment ☐ retrofit BMP

Section 1.b. Attach a topographic map that outlines both the project boundary and the limits of disturbance.

Section 1.c. List the total project area and the total earth disturbance.

Total Project Area _____ ac

The area being developed under this permit registration, including portions of the site that may not be disturbed during the project.

Total Disturbed Area _____ ac

All disturbed areas directly related to construction of the entire project (offsite waste/borrow, access roads, utility installation, sediment controls etc.) that will be covered under this registration.

Section 1.d. Please read the land use category descriptions below. Then, on page 2, list the number of acres of each land use in the pre and post development states for whichever is larger, the project area or disturbed area.

Hay is land managed for the production of forage crops that are machine harvested. The forage crop may be grasses and/or legumes. Fallow land should also be included in this category.

Pasture is land managed primarily for livestock grazing.

Trampled Riparian Pasture is defined as a 35 ft. width on either side of an unfenced stream that runs through any pasture. This area will be calculated by multiplying the number of linear ft. of stream running through project by 70 ft. and then dividing the total by 43560 sq. ft. to report acres. This area will then be subtracted from the total area of land in the Pasture category.

Crop is land managed for the production of row crops and open nurseries.

Urban Impervious areas are developed lands that have a land cover that prevents infiltration of surface water. Examples include concrete, asphalt, brick, roofing, other man-made materials, compacted soils and exposed rock outcroppings.

Urban Pervious areas are developed lands that allow infiltration of surface waters. Examples include lawns and other vegetation, permeable pavements and pavers. Gravel lots and roads should be counted as pervious unless the ground underneath the stone layer is heavily compacted.

Forest land use, for the purpose of this addendum, is broader than any standard definition of forested land cover. Any land that does not fall into one of the above categories should be counted as forest. Typically this will include any wooded or open areas that are not used for agriculture and/or have not been developed. This broader definition is used to conform to the Chesapeake Bay TMDL models. The models determine the acreage of forest by subtraction from all other calculated areas.

Project Name _____

Existing Land Use (in acres)		Proposed Land Use (in acres)	
Hay		Hay	
Pasture		Pasture	
Trampled Riparian Pasture		Trampled Riparian Pasture	
Crop		Crop	
Urban Impervious		Urban Impervious	
Urban Pervious		Urban Pervious	
Forest		Forest	
Unknown Land Use			

Section 2. Stormwater Management

Is your project in a MS4 community? ☐Yes ☐No

Does this project's stormwater management plan meet a volume reduction or retention standard (choose one)?

☐1" capture ☐Other enter standard _____

☐95th percentile ☐None

Do you have any post construction stormwater management BMPs proposed? ☐Yes ☐No

If **Yes**, then complete **Section 3**

Section 3 Instructions

1. Select the BMP(s) that will be used for the project. Definitions for each BMP can be found at the end of the addendum. If the project will use more than one of a particular BMP (i.e. 3 wet ponds), please list each structure separately. Those additional BMPs can be listed at the bottom of the table or on a separate sheet of paper. Be sure to provide all requested information for each practice.

2. List the total amount of drainage area, in acres, that will flow through each BMP and the number of acres of impervious surface that will drain to that practice.

3. Locate the outlet point for the BMP. For BMPs that do not have a discernible outlet, use the approximate center point of the practice. For precision, latitude and longitude should be given to the nearest seconds. (Example: latitude 38° 18' 46", longitude 81° 34' 13"). Indicate if the coordinates reported are for the outlet or center point of that BMP.

Project Name _____

Section 3. Stormwater Best Management Practices *–BMP descriptions are on the following pages. Please list each individual structure separately. Use the empty spaces at the bottom of the table or submit additional information on a separate sheet of paper.*

Urban Stormwater BMP	Total Acres Drained	Impervious Acres Drained	Latitude Deg Min Sec	Longitude Deg Min Sec	BMP Coordinate Location
Dry Detention Ponds					☐ Outlet ☐ Center Point
Hydrodynamic Structures					☐ Outlet ☐ Center Point
Dry Extended Detention Ponds					☐ Outlet ☐ Center Point
Wet Ponds and Wetlands					☐ Outlet ☐ Center Point
Infiltration Trenches and Basins ☐Sand or Vegetation Layer ☐No Sand or Vegetation Layer					☐ Outlet ☐ Center Point
Bioretention (includes rain gardens) ☐Underdrain ☐No Underdrain ☐A/B Soils ☐C/D Soils					☐ Outlet ☐ Center Point
Permeable Pavement and Pavers ☐Underdrain ☐No Underdrain ☐A/B Soils ☐C/D Soils ☐Sand or Veg. Layer ☐No Sand or Veg. Layer					☐ Outlet ☐ Center Point
Green/Vegetated Roof ☐Extensive ☐Intensive					☐ Outlet ☐ Center Point
Filtering Practices (Sand Filters, Organic Media, Proprietary Materials)					☐ Outlet ☐ Center Point
Vegetated Open Channels/Bioswales ☐Underdrain ☐No Underdrain ☐A/B Soils ☐C/D Soils					☐ Outlet ☐ Center Point
Riparian Forest Buffers Buffer Dimensions (ft.)					☐ Outlet ☐ Center Point
Riparian Grass Buffers Buffer Dimensions (ft.)					☐ Outlet ☐ Center Point
					☐ Outlet ☐ Center Point
					☐ Outlet ☐ Center Point

Urban Stormwater Best Management Practices

These definitions will help you decide how to report your BMP(s).

Dry Detention Ponds are depressions or basins created by excavation or berm construction that temporarily store runoff and release it slowly via surface flow or groundwater infiltration following storms.

Hydrodynamic Structures are devices designed to improve quality of stormwater using features such as swirl concentrators, grit chambers, oil barriers, baffles, micropools and absorbent pads that are designed to remove sediments, nutrients, metals, organic chemicals, or oil and grease from urban runoff.

Dry Extended Detention (ED) Basins are depressions created by excavation or berm construction that temporarily store runoff and release it slowly via surface flow or groundwater infiltration following storms. Dry ED basins are designed to dry out between storm events, in contrast with wet ponds, which contain standing water permanently. As such, they are similar in construction and function to dry detention basins, except that the duration of detention of stormwater is designed to be longer, theoretically improving treatment effectiveness.

Wet Ponds are depressions or basins created by excavation or berm construction that receive sufficient water via runoff, precipitation, and groundwater to contain standing water year-round at depths too deep to support rooted emergent or floating-leaved vegetation (in contrast with dry ponds, which dry out between precipitation events).

Wetlands have soils that are saturated with water or flooded with shallow water that support rooted floating or emergent aquatic vegetation. Wetlands can be restored or created. Wetland restoration is the process of returning natural/historic functions to a former wetland, while wetland creation is development of a wetland that did not previously exist on an upland or deep-water site.

Infiltration Trenches and Basins are depressions formed to trap sediment and water infiltrates the soil. No underdrains are associated with infiltration basins and trenches, because by definition these systems provide complete infiltration.

Bioretention practices, also called biofilters, grass swales or water quality swales, are excavated pits backfilled with engineered media, topsoil, mulch, and vegetation. These are planting areas installed in shallow basins in which the stormwater runoff is temporarily ponded and then treated by filtering through the bed components, and through biological and biochemical reactions within the soil matrix and around the root zones of the plants. Filtered runoff may be collected and returned to the conveyance system via an underdrain or completely infiltrated into the underlying soils. Rain gardens are bioretention structures.

Permeable Pavement and Pavers reduce runoff volume and treat water quality through both infiltration and filtration mechanisms. Water filters through open voids in the pavement surface to a washed gravel subsurface storage reservoir, where it is then slowly infiltrated into the underlying soils or exits via an underdrain. Examples include pervious concrete, porous asphalt and permeable interlocking concrete pavers.

Vegetated roofs (also known as green roofs) are alternative roof surfaces that typically consist of waterproofing and drainage materials and an engineered growing media that is designed to support plant growth. Vegetated roofs capture and temporarily store stormwater runoff in the growing media before it is conveyed into the storm drain system. A portion of the captured stormwater evaporates or is taken up by

plants, which helps reduce runoff volumes, peak runoff rates, and pollutant loads on development sites. They may be classified as extensive, semi-intensive, or intensive.

- *Extensive* green roofs have six inches or less of growing medium, are designed to be low-maintenance and are not typically designed for public access.
- *Intensive* green roofs have greater than 6 inches of substrate and are designed to be used by as a park or relaxation area.

Filtering Practices and Stormwater Filters capture and temporarily store runoff and pass it through a filter bed of either sand or an organic media. There are various sand filter designs, such as above ground, below ground, perimeter, etc. An organic media filter uses another medium besides sand to enhance pollutant removal for many compounds due to the increased cation exchange capacity achieved by increasing the organic matter. These systems require yearly inspection and maintenance to receive pollutant reduction credit.

Vegetated Open Channels also called grass swales, these structures convey stormwater runoff and provide treatment as the water is conveyed through either vegetation in the channel, subsoil matrix, and/or is infiltrated into the underlying soils. Open channels will be categorized between infiltration and conveyance (non-infiltration). With these practices no fertilization of the channel should occur.

Bioswales are vegetated open channels designed for infiltration. Open vegetated channels constructed in A/B soils with an underdrain will be classified as bioswales.

Riparian Forest Buffer is an area of trees at least 35 feet wide on one side of a stream, usually accompanied by trees, shrubs and other vegetation that is adjacent to a body of water. The riparian area is managed to maintain the integrity of stream channels and shorelines, to reduce the impacts of upland sources of pollution by trapping, filtering, and converting sediments, nutrients, and other chemicals.

Riparian Grass Buffer is an area of grasses that is at least 35 feet wide on one side of a stream that is adjacent to a body of water. The riparian area is managed to maintain the integrity of stream channels and shorelines, to reduce the impacts of upland sources of pollution.