

**Patrick County Stormwater Management (SWM) Office**  
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## **Stormwater Management**

Effective September 22, 2014, Patrick County became responsible for implementing the local Virginia Stormwater Management Program (VSMP) due to the most recent changes to the Virginia Stormwater Management Act occurring in 2012 through the passage of House Bill 1065, also called the Integration Bill. Patrick County will hold the primary role in reviewing and approving applications for coverage under the Construction General Permit in addition to, holding a role in inspections for best management practices and enforcement. Final permit coverage will still be issued by the Department of Environmental Quality under the Construction General Permit for Stormwater Discharges from Construction Activities ([VAR10](#)). Patrick County shall issue a VSMP Authority Permit ([SWM-P01](#)) which shall authorize land-disturbing activities to begin for a construction project.

### **What is Stormwater Management?**

Stormwater Management focuses on two parts: **1) quality (pollution)** and **2) quantity (flooding and erosion)**. Let's look at both parts.

1. **Quality** - Stormwater runoff from buildings (roof-tops), roads, lawns, parking lots, sidewalks, construction sites, industrial facilities and other impervious surfaces occurs as a result of precipitation events (rain water or melting snow and ice). Simply put, it is the water during precipitation events that you commonly see running across impervious surfaces such as parking lots, roads, driveways, street gutters, coming out of roof-top downspouts, as well as the water that you don't typically notice that is running across lawns, gravel areas, and inside storm drain pipes. This stormwater goes somewhere, and that somewhere is downhill into natural or man-made channels systems and ultimately into surface waters such as streams, creeks, rivers, and lakes. Activities occurring in developed areas contaminates the stormwater runoff with pollutants such as automobile oil, grease, metals, sediment, bacteria from animal waste, nutrients, pesticides, and deposits from airborne pollutants, and if this stormwater runoff goes into streams, creeks, rivers, and lakes where do these pollutants go? You guessed it, right into those same streams, creeks, rivers, and lakes. So, what can be done to prevent this pollution from entering these surface waters and to improve the (quality) of our surface waters? The answer is "Stormwater Management".

- Let's briefly look at the effects of managing stormwater runoff versus the effects of not managing this runoff as it relates to pollution.
  - **Unmanaged** stormwater runoff from impervious surfaces carries pollutants into rivers, streams, and lakes. The amount of impervious surfaces in a watershed has been linked to the decline in the overall health, or degradation, of that watershed. Research has shown that when impervious surfaces in a watershed reaches between 10 and 25 percent,

ecological stress in that watershed becomes apparent. Beyond 25 percent impervious cover, stream stability is reduced, habitat is lost, water quality is degraded, and biological diversity is diminished.

- Managed stormwater runoff employs best management practices (BMPs) that reduces the pollutant load in stormwater runoff from development sites which in turn decreases the amount of pollution introduced into rivers, streams, and lakes, which reduces ecological stress and the level of degradation in a watershed.
2. Quantity - During residential, commercial, or industrial site development it is common for existing natural or forested areas to be cleared and replaced with impervious surfaces such as; buildings, roads, parking lots, sidewalks, and even lawns which are considered impervious because of the increase in the amount of runoff associated with these areas. As development increases within watersheds these impervious areas increase and as a result the amount (volume) and intensity (velocity/speed) of stormwater runoff can significantly increase. Rather than being soaked up by forest vegetation and infiltrated slowly into the soil, as occurs in natural areas, stormwater runoff in developed areas does not infiltrate into the soil and down into the natural ground water table but it flows freely and quickly across newly created impervious areas; thus, flowing into channels and streams with increased volume and velocity. As a result, channels and streams experience more frequent and severe flooding as well as severe erosion issues leading to the deepening and widening of the channels resulting in the degradation of downstream properties. So, what can be done to reduce the effects of the increase in volume and velocity of stormwater runoff in developed areas? Again, the answer is "Stormwater Management"
- Let's briefly look at the effects of managing stormwater runoff versus the effects of not managing this runoff as it relates to increased volumes and velocities.
    - Unmanaged stormwater runoff causes an increase in channel and stream erosion as well as an increase in flood frequency and severity. This increase in channel and stream erosion and flood frequency and severity is directly attributable to increases in stormwater runoff volumes and velocities that occur as a result of the introduction of new impervious surfaces during residential, commercial, and industrial site development. The increased erosion and stream flooding leads to the degradation of and damage to properties well downstream of a developed area.
    - Managed stormwater runoff employs best management practices (BMPs) that reduces both the volume and velocity of stormwater runoff from new development sites. These BMPs effectively slows down the runoff and allows more of the runoff to slowly infiltrate back into the ground before it leaves the site and is discharged into existing channels and streams. The use of stormwater management BMPs is an attempt to replicate as closely as possible the pre-developed (natural) condition of a site as it relates to the post-developed sites ability to soak up or infiltrate stormwater on the site. Managing stormwater runoff through the use of BMPs and reducing the amount of stormwater discharged from a site, as well as slowing the rate of discharge, can eliminate the damaging effects of increased flooding and channel erosion experienced by downstream properties.
  - Stormwater Management seeks to reduce water pollution, channel and stream erosion, and more frequent flooding through the use of Best Management Practices (BMPs) during both the construction and post-construction phases of a newly developed site. The vehicle through which stormwater management is accomplished and BMPs are employed is through the issuance of a VPDES Construction General Permit ([VAR10](#)) from the state and through the issuance of a local VSMP Authority Permit ([SWM-P01](#)) by the Patrick County SWM Authority Office.

## Who Must Apply for Permit Coverage?

- Operators of construction activities resulting in land-disturbance equal to or greater than one acre ( $\geq 1$  acre).
- Operators of construction activities resulting in land disturbance less than one acre ( $< 1$  acre) that are part of a larger common plan of development or sale (e.g., subdivision) that ultimately disturbs one or more acres ( $\geq 1$  acre). A larger common plan of development or sale is a contiguous area where separate and distinct construction activities may be taking place at different times on different schedules. General permit coverage is required if one or more acres ( $\geq 1$  acre) of land will be disturbed, regardless of the size of the individually owned or developed sites. For example, if a developer buys a 20-acre lot and builds roads with the intention of building homes or other structures in the future, or if the land is parceled off or sold, and construction occurs on plots that are less than an acre by separate independent builders, these activities would still be subject to stormwater permitting requirements. A larger common plan of development or sale applies to various types of land development including but not limited to residential, commercial, and industrial use.
- The following is a partial list of common activities that are **exempt** from permit coverage.
  - Clearing of lands specifically for agricultural purposes and the management, tilling, planting, or harvesting of agricultural, horticultural, or forest crops, livestock feedlot operations, or as additionally set forth by the State Board of regulations, including engineering operations as follows: construction of terraces, terrace outlets, check dams, desilting basins, dikes, ponds, ditches, strip cropping, lister furrowing, contour cultivating, contour furrowing, land drainage, and land irrigation; however, this exception shall not apply to harvesting of forest crops unless the area on which harvesting occurs is reforested artificially or naturally in accordance with the provisions of Chapter 11 of Title 62.1 of the Code of Virginia or is converted to bona fide agricultural or improved pasture use as described in Subsection B of Article 9 of Chapter 11 of Title 62.1 of the Code of Virginia.
  - Activities under a State or Federal reclamation program to return an abandoned property to an agricultural or open land use.
  - Routine maintenance that is performed to maintain original line and grade, hydraulic capacity, or original construction of the project. The paving of an existing road with a compacted or impervious surface and re-establishment of existing associated ditches and shoulders shall be deemed routine maintenance.
  - Conducting of land-disturbing activities in response to a public emergency where the related work requires immediate authorization to avoid imminent endangerment to human health or the environment.
  - Land-disturbing activities that disturb less than 1 acre of land ( $< 1$  acre) that are not part of a larger common plan of development or sales (e.g. – subdivision).

## Do Single-Family Detached Residential Structures have to obtain a permit?

- Single-family detached residential structures that **disturb less than one acre of land ( $< 1$  acre)** and that **are not part** of a larger common plan of development or sale (e.g., subdivision), including additions or modifications to existing single-family detached residential structures, **do not require** permit coverage.
- Single-family detached residential structures that **disturb less than one acre of land ( $< 1$  acre)** and that **are part** of a larger common plan of development or sale (e.g., subdivision) **require** permit coverage. In addition, single-family detached residential structures that disturb **equal to or greater than one acre ( $\geq 1$  acre)** of land **require** permit coverage. Operators of these land-disturbing activities are authorized to discharge under the VAR10 Construction General Permit but are not required to submit a [VAR10 Registration Statement](#); instead, the operator will be given a [VAR10 Coverage Letter](#). Operators must also comply with the terms and conditions of the [VAR10 Construction General Permit](#) including the

preparation and implementation of a Stormwater Pollution Prevention Plan ([SWPPP](#)). Operators of these type activities are also required to obtain a VSMP Authority Permit ([SWM-P01](#)) from the Patrick County SWM Office. Single-family detached residential structures that disturb less than five acres of land (<5 acres) are not required to submit a stormwater management plan, operators can submit to the county an executed [Agreement in Lieu of a Plan](#). Single-family detached residential structures that disturb equal to or greater than 5 acres shall be required to submit a stormwater management plan for approval.

## What is a Stormwater Pollution Prevention Plan (SWPPP)?

- A Stormwater Pollution Prevention Plan or more commonly known as SWPPP, pronounced “SWIP”, is a site specific plan identifying potential sources of stormwater pollution at the construction site. The plan will describe the Best Management Practices (BMPs) to reduce pollutants in stormwater discharges from the construction site. The reduction of pollutants is often achieved by controlling the volume of stormwater runoff (e.g., taking steps to allow stormwater to infiltrate into the soil). It also identifies procedures the operator will implement in order to comply with the terms and conditions of a construction general permit, as well as for complying with the requirements of the Federal Clean Water Act. The SWPPP must be prepared prior to the submission of a VAR10 and SWM-P01 Permit Registration Statement ([Form SWM-003](#)). For a more detailed look at what goes into a SWPPP please see the [SWPPP Development Guide](#).

## What is the process for obtaining a Permit?

- Permits shall not be issued until the following items have been submitted to and approved by the Patrick County SWM Office:
  - ✓ Permit application ([Form SWM-001](#)) that includes 2 copies (1 paper, 1 electronic) of the following.
    - ✓ An Erosion and Sediment Control (ESC) Plan or where the activity results from the construction of a single-family residence, an Agreement in Lieu of a Plan ([Form LDA-003](#)).
    - ✓ A Stormwater Management (SWM) Plan that meets the requirements of Section 1-6 of the [Ordinance](#) or where the activity results from the construction of a single family residence, an Agreement in Lieu of a Plan ([Form SWM-005](#)).
    - ✓ SWM Plan and ESC Plan Supporting Calculations.
    - ✓ SWM Plan “Grandfathering” Documentation, if applicable.
    - ✓ A completed SWM Plan Submitter’s Checklist ([Form SWM-002](#)) and ESC Plan Submitter’s Checklist ([Form LDA-005](#)).
    - ✓ A completed VAR10 and SWM-P01 Permit Registration Statement ([Form SWM-003](#)) (original, signed, dated).
  - ✓ Construction General Permit Fee Form ([Form SWM-004](#)) with required permit fee and bond.
  - ✓ In addition, no VSMP Authority Permit ([SWM-P01](#)) shall be issued until a permit application and attendant materials and supporting documentation demonstrate that all land clearing, construction, disturbance, land development, and drainage will be done according to the approved stormwater management plan.
  - ✓ A VSMP Authority Permit ([SWM-P01](#)) must be issued by the Patrick County SWM Office prior to the issuance of grading ([LDA-004](#)), building, or other local permits.
  - ✓ Construction record drawings for permanent stormwater management facilities must be submitted to the Administrator upon completion of construction. Record drawings shall be appropriately sealed and signed by a professional registered by the Commonwealth of Virginia, certifying that

stormwater management facilities have been constructed according to approved plans. Construction record drawings may not be required for stormwater management facilities associated with single-family residences as per the County's [SWM Ordinance](#) Section 1-10(b) (c).

- ✓ Single-Family Residential Operators need only to submit a Permit Application ([Form SWM-001SF](#)), a General Permit Fee Form ([Form SWM-004](#)), and an Agreement in Lieu of a Plan ([Form SWM-005](#)).

## VAR10 and SWM-P01 Stormwater Permit Forms

**Construction General Permit Application Submission Worksheet** ([Form SWM-001](#)) to be completed by the operator, or their designated agent, when applying for coverage under the Construction General Permit VAR10 and VSMP Permit SWM-P01.

**Single-Family Residence VSMP Permit Application** ([Form SWM-001SF](#)) to be completed by the operator/property owner, or their designated agent, when applying for coverage under the Construction General Permit VAR10 and VSMP Permit SWM-P01 for the construction of single-family detached residential structures.

**Plan Submitter's Checklist for SWM Plan** ([Form SWM-002](#)) to be completed by the person responsible for preparing the operator's SWM Plan.

**Plan Submitter's Checklist for ESC Plan** ([Form LDA-005](#)) to be completed by the person responsible for preparing the operator's ESC Plan.

**Construction General Permit Registration Statement** ([Form SWM-003](#)) to be completed by the operator when applying for coverage under the Construction General Permit VAR10 and VSMP Authority SWM-P01.

**Construction General Permit Fee Form** ([Form SWM-004](#)) to be completed by the operator, or their designated agent. This form should be submitted once all submittal items have been reviewed and approved by the Patrick County SWM Office but prior to the time of submission of a VAR10 Construction General Permit Registration Statement to DEQ. Also to be completed by the operator, or their designated agent, prior to the submission of a Notice of Permit Modification, Notice of Transfer of Ownership, Annual Maintenance, and Permit Reissuance.

**Agreement in Lieu of a SWM Plan** ([Form SWM-005](#)) to be completed by the operator of a construction activity that involves the construction of a single-family detached residential structure when applying for coverage under the Construction General Permit VAR10 and SWM-P01.

**Single-Family Residence Stormwater Pollution Prevention Plan (SWPPP)** ([Form SWM-006](#)) required to be developed and maintained at the construction site along with a copy of the VAR10 General Permit Coverage Letter. The operator has the responsibility for developing, implementing, and maintaining the SWPPP and committing the resources necessary to prevent pollution. Periodic site inspections for compliance with the VAR10 Construction General Permit, including SWPPP review, will be conducted by the Patrick County VSMP Authority Office.

**VAR10 Construction General Permit for Single-Family Residential Structures** ([Coverage Letter](#)). This letter states that operators of a single-family residence construction site are authorized to discharge stormwater under the VAR10 Construction General Permit. Operators of these type of activities must still obtain a separate Patrick County SWM-P01 Permit which authorizes the operator to begin land-disturbing activities.

**Patrick County VSMP Authority Permit SWM-P01** ([Form SWM-007](#)) issued by the Patrick County SWM Office once all required submittal items have been; received and approved; Permit Fee has been received; performance bond has been submitted; and VAR10 Permit Coverage has been obtained.

**VAR10 Construction General VPDES Permit** ([VAR10 CGP](#)) state permit issued by DEQ. This permit will not be issued until: a completed Registration Statement (Form SWM-003) from the operator has been submitted to the Patrick County SWM Office; proper fee amount has been paid; and performance bond has been submitted.

**Notice of Termination** ([Form SWM-008](#)) must be submitted when an operator no longer wishes to be covered under a VAR10 and SWM-P01 Construction General Permit.

**Transfer of Ownership Agreement** ([Form SWM-009](#)) must be submitted when the original operator wishes to transfer ownership of a VAR10 and SWM-P01 Construction General Permit to another operator who is in agreement with the transfer of ownership.

**SWM-P01 General Permit Project Completion Form** ([Form SWM-010](#)) must be filled out and submitted when an operator considers the activity to be complete and no longer wishes to be covered under a SWM-P01 Construction General Permit.

*\*All Permit Forms are available in person at the Patrick County SWM Office located on the second floor of the Patrick County Veterans Memorial Building at 106 Rucker Street, Stuart VA 24171.*

*The information contained herein is a general guide to the Patrick County Stormwater Management Permit requirements, for complete requirements please refer to the [Patrick County Stormwater Management Ordinance](#). A copy of the ordinance is available at the Patrick County SWM Office or it can be downloaded from Patrick County's governmental website.*

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