

***COMMERCIAL / INDUSTRIAL
&
SUBDIVISION (RESIDENTIAL / RURAL)***

***LAND DISTURBANCE / VIRGINIA
STORMWATER MANAGEMENT
PROGRAM (VSMP)***

PERMIT APPLICATION PACKAGE



***FREDERICK COUNTY,
VIRGINIA***

*Department of Public Works
Attention: Karen Orndorff
107 North Kent Street, Suite 200
Winchester, Virginia 22601
(540) 665-5643 Phone
(540) 678-0682 Fax
<http://www.fcva.us/departments/public-works>*

*Appendix 1
Frederick County code, Chapter 143
<http://ecode360.com/28859214> |*

Effective date: February 15, 2018

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LAND DISTURBANCE/VIRGINIA STORMWATER
MANAGEMENT PROGRAM (VSMP)

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LAND DISTURBANCE
AND VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT
SUBMISSION CHECKLIST

This application package is designed to ensure that regulated land disturbing activities occur only after approval of an erosion and sediment control plan and/or a stormwater management plan. The erosion and sediment control application is **not** considered complete unless **all** the required information listed below is present. If any part of the required information is missing, the application will not be accepted by the Frederick County Public Works Department. **If an item listed below is not required for the proposed project, list “N/A” beside the appropriate item.**

- _____ **1.** Completed Land Disturbance Permit Application
- _____ **2.** An Erosion and Sediment Control Measures Bond will be required once the E&S Guarantee Estimate Form has been reviewed and approved. The Frederick County Monetary Guaranty Procedure Package can be found on-line at <http://www.fcva.us/home/showdocument?id=1018>
- _____ **3.** Two (2) copies of the **complete** approved plan including, but not limited to, erosion and sediment control plan, stormwater management plan complete with narrative, engineering calculations and Responsible Land Disturber (RLD) information for the project including name, contact information, certificate number and date of expiration
- _____ **4.** DEQ Stormwater registration statement & Stormwater Pollution Prevention Plan (SWPPP)
- _____ **5.** Submit copies of approval letters from VDOT and water/sewer authority (i.e. Frederick Water, City of Winchester)
- _____ **6.** Written approval from the Virginia Department of Transportation consisting of a letter and/or the VDOT temporary construction entrance permit
- _____ **7.** Copies of all applicable local, state and federal environmental permits (Army Corp of Engineers Wetlands permit, DEQ Water Protection permit, etc.) if required
- _____ **8.** Draft BMP Maintenance Agreement (for review)

Note: The applicable fee will be determined during review of the application package for all land disturbance permits. The fee shall be payable when the land disturbance permit is issued. Do not submit any fees with the initial application.

LAND DISTURBANCE PERMIT APPLICATION

DATE: _____ APPLICANT: _____

PROPERTY OWNER: _____

ADDRESS: _____

TELEPHONE: _____ E-MAIL: _____

DESIGN FIRM/DESIGNER: _____

ADDRESS: _____

TELEPHONE: _____ E-MAIL: _____

CONTRACTOR: _____

ADDRESS: _____

E-MAIL: _____

TELEPHONE: _____ / _____ (24 HOUR EMERGENCY CONTACT)

PROJECT NAME: _____

MAGISTERIAL DISTRICT: _____

PROPERTY IDENTIFICATION NUMBER: _____

TOTAL AREA OF PROPERTY: _____

AREA TO BE DISTURBED: _____

(Rounded up to nearest acre i.e. 1.2 round up to 2, fee shall be based on this acreage.)

ZONING OF PROPERTY: _____

TYPE OF PROJECT:

___ COMMERCIAL/INDUSTRIAL/SITE PLAN

___ SUBDIVISION PLAN

RESIDENTIAL/RURAL (CIRCLE ONE)

___ HYDROLOGIC UNIT (TO BE COMPLETED BY FREDERICK COUNTY)

AFTER OBTAINING A LAND DISTURBANCE PERMIT:

1. Prior to initiating any land disturbing activity, it will be necessary to schedule an on-site pre-construction meeting with Public Works staff to discuss the approved erosion and sediment control/stormwater management plan. ***No pre-construction meetings will be scheduled prior to issuance of the land disturbance permit for the subject project.***
2. Phase one of erosion and sediment control measures will consist of performing only the land disturbing activity necessary to implement the erosion and sediment control measures in accordance with the approved plans.
3. Contact the Public Works department to schedule the required erosion and sediment control measures inspections as indicated by the program administrator.
4. If the erosion and sediment control measures have been installed in accordance with the approved plan, the Department of Public Works will grant approval to initiate land disturbing activity.
5. Periodic inspections will be performed by the Department of Public Works to ensure that the erosion and sediment control measures are maintained in accordance with the approved plan throughout the life of the project.
6. Once the project approaches completion, the area shall be final graded and stabilized in accordance with the approved plan. In addition, all temporary erosion and sediment control measures shall be removed and the affected areas graded and stabilized. Final certified as-built surveys shall also be submitted as required. The as-built plan shall be accompanied by a document prepared by a professional engineer or a certified land surveyor certifying that the as-built conditions meet the intent of the approved site grading plan.
7. Submit Notice of Termination General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR 10) to the Public Works Department upon completion of project. (see Permit Termination Checklist, Page 13)
8. In order for the Performance Bond/Irrevocable Letter of Credit to be refunded, a written request must be submitted to the **Department of Planning and Development** along with any applicable bond management fees. A site inspection will be conducted and the bond/letter of credit shall be released once the site fully complies with the final stabilization requirements Chapter 143 of the Frederick County Code.

FOR RESIDENTIAL SUBDIVISION PLANS ONLY:

1. Prior to issuance of building permits, the following infrastructure shall be completed and stabilized within the subdivision, subsection or phase as shown on the approved plan:
 - a) Stormwater conveyance systems, including but not limited to culverts, road surface, curb and gutter, stormwater structures, drainage swales and ditches, channel linings and all cleared areas shall be stabilized, etc.
 - b) Submittal of a certified as-built plan of the subdivision, subsection or phase, which includes but is not limited to stormwater conveyance systems, curb and gutter, drainage swales and ditches, stormwater/sediment ponds, graded areas, etc. A letter from the engineer-of-record shall be included with the as-built plan which states that the subdivision has been constructed in accordance with the approved plan.
 - c) A proposed overall lot grading plan is required by Frederick County prior to the release of building permit(s) for subdivisions. This plan shall meet the intent of the original site plan submitted by the developer. It is required that the developer provide the builder/owner a copy of the original engineered site grading plan for the particular subdivision.
 - d) It will be necessary to submit a certified as-built plan for all lots on which proposed lot grading plans were required. This certified as-built plan shall indicate the following: properly annotated boundary lines; setback lines; proposed house footprint; offsets to house; existing grading; spot shots as necessary to show positive drainage; proposed driveway; proposed floor elevation to include basement, first floor and garage; and erosion and sediment controls, if required. The as-built plan shall be accompanied by a document prepared by a professional engineer or a certified land surveyor certifying that the as-built conditions meet the intent of the approved site grading plan. The proposed lot grading plan and the as-built survey shall be submitted to the Public Works Department prior to release of the final certificate of occupancy.
2. Submittal of a certified as-built of the subdivision which contains the following items: stormwater conveyance systems, curb and gutter, drainage channels and ditches, stormwater pond. A letter from the engineer-of-record shall be included with the as-built which states that the subdivision has been constructed in accordance with the approved plan. Please note that additional as-built items related to all SWM/BMP facilities are required for termination of all VSMP permits (see Permit Termination Checklist).
3. Individual subdivision lot grading plans shall be submitted by the builder at the time of the building permit application for each lot proposed for construction.

Review Checklist

Frederick County, Virginia
Department of Public Works

Subdivision/Site Plan Name: _____
Engineer/Surveyor Name: _____
Engineer/Surveyor Phone: _____
Tax Map (PIN): _____



Note: Provide sheet number(s) for each item or indicate if not applicable.

Requirements	Sheet	N/A	FC Check
Provide a note pertaining to temporary and permanent stabilization of denuded areas.			
Provide a note pertaining to stabilization requirements for soil stockpiles.			
Provide a note stating that vegetative stabilization shall be uniform, mature enough to survive and adequate to inhibit erosion.			
Provide sediment trapping facilities as the first phase of land disturbing activity.			
Provide a note requiring that dams, dikes and diversions be stabilized immediately after construction.			
Sediment traps and basins shall be installed if necessary and in the correct location. Basins shall maintain structural integrity during 100-year 24 hour storm event. (§79-3.A.1 Frederick County Code).			
Cut and fill slopes shall be adequately stabilized. Fill slopes steeper than 3:1 will require a slope stability analysis and maintenance plan.			
Provide adequate temporary or permanent channel, flume or slope drain for all concentrated runoff down cut or fill slopes.			
Provide adequate drainage or other protection whenever water seeps from a slope face.			
Provide adequate inlet protection for all operational storm sewer inlets.			
Provide adequate channel protection for open conveyance and receiving channel, provide adequate outlet protection for pipes and channels.			
Provide measures to minimize channel damage when conducting in-stream construction.			
Install temporary stream crossings of non-erodible material			
All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met - all applicable permits shall be submitted with Land Disturbance application (§79-3.A.2 Frederick County Code).			
Provide a note stating that the bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.			
Provide appropriate notes regarding trenching practices in accordance with 4VAC50-30-40 subsection 16.			

Requirements	Sheet	N/A	FC Check
Provide a note requiring cleaning/removal of any sediment on public or private roadways.			
Provide a note requiring that all temporary controls be removed within 30-days once no longer needed; trapped sediment must be removed and stabilized.			
Provide adequate protection from erosion and sediment deposition for downstream properties and waterways.			
Demonstrate that concentrated stormwater runoff leaving the site discharges directly into an adequate natural or manmade channel.			
Demonstrate that two (2)-year runoff from the site does not overtop banks of natural channels and does not cause erosion.			
Demonstrate that discharge into the previously constructed man-made channels are not overtopped by a ten (10)-year storm and the two (2)-year storm does not cause erosion			
Demonstrate that closed storm sewer systems contain the ten (10)-year storm. Provide calculations and show ten (10)-year HGL in the storm sewer profiles.			
If offsite improvements are proposed, provide evidence of obtained easements, etc.			
Provide an analysis of the existing and ultimate characteristics of the watershed.			
Provide responsible party and maintenance plan for the proposed detention facilities to include access, what is to be maintained?, how often?, who pays?			
Provide energy dissipaters at the outfall of all detention facilities.			
Provide calculations demonstrating that onsite ditches are adequate.			
All sheet flow leaving the site shall be at or below pre-developed rates or it must be diverted to an adequate channel, pipe system or detention facility.			
All calculations and assumptions shall pertain to the entire development and its ultimate build-out.			
All measures utilized shall minimize the impact on waters of the State.			
Project description - Describe the nature and purpose of the land disturbing activity and area (acres) to be disturbed.			
Existing Site Conditions - Provide a description of the existing topography, vegetation and drainage.			
Adjacent Areas - Provide a description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.			
Off-site areas - Describe any off-site land-disturbing activities that will occur.			
Soils - Provide a brief description of the soils on the site giving such information as soil name, mapping unit, erodibility, permeability, depth, texture and soil structure.			
Geology - Provide a brief description of the geology on the site related to construction; i.e. methods of removal, use as engineered fills, Karst potential, etc.			

Requirements	Sheet	N/A	FC Check
Critical areas - Provide a description of areas on the site which have potentially serious erosion problems.			
E&S control measures - Provide a description of the methods which will be used to control erosion and sedimentation on the site.			
Permanent stabilization - Provide a brief description, including specifications, of how the site will be stabilized after construction is completed.			
Stormwater runoff narrative - Will the development of the site cause an increase in peak runoff rates? Will it cause flooding? Describe the strategy to control stormwater runoff.			
Calculations - detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc. Include calculations for pre- and post-development runoff			
Provide a vicinity map.			
Provide a North arrow and scale on all plan sheets.			
Delineate the proposed limits of clearing and grading.			
Show and label existing contours.			
Show and label final contours.			
Show existing vegetation.			
Show boundaries of different soil types.			
Show existing drainage patterns including the acreage of each drainage area.			
Label areas with potentially serious erosion problems.			
Show and label all proposed site improvements.			
Label all storm pipe systems on grading plan sheets (pipe size, material, structure numbers).			
Show elevations for the proposed basement floor, first floor and garage slab for all buildings and finished grade elevations at building corners.			
Show location of all retaining walls with elevations for proposed top and bottom of walls.			
Conveyance system protection and flood protection analysis provided at every discharge point of concentrated flow originating from site improvements.			
Show location of all erosion and sediment control measures using VESCH standard symbols.			
Show all off-site land disturbing activities and erosion and sediment control measures. Provide letter of permission or show temporary construction easements as necessary.			
Provide stage-storage, stage-discharge and routing data for all SWM/BMP ponds.			
Provide VRRM spreadsheet data.			

Requirements	Sheet	N/A	FC Check
Drainage area map showing individual and cumulative drainage area contributing to each point of concentration.			
Provide a maintenance schedule including regular inspection and repair of erosion and sediment control measures.			
Provide the Responsible Land Disturber signature block on the plans.			
Provide a seeding schedule in accordance with VESCH standard 3.31 and 3.32.			
Provide a 20-foot drainage easement for all concentrated flows within on- or off-site residential lots.			
Provide a minimum of 2% slope on grass channels. If less than 2%, provide an alternative design.			
Any area in which drainage collects from more than three (3) lots shall be placed within a platted drainage easement.			
All silt fence shall be wire reinforced.			
Drop Inlets in areas accessible to the public will require an appropriately sized grate opening. Please specify the grate type in the plans.			
Ensure that the backwater condition for the post-developed 100-year storm does not impact adjacent properties.			
Show the location and extent of the overland relief flow paths provided for SWM conditions and to clear buildings for the 100-year storm.			
Provide the dewatering structure details for the proposed sediment basins. The details shall include elevations, type of structures, pipe sizes, etc.			

Engineer's Signature

Date

Frederick County, Virginia
Fee schedule for VSMP/ VESCP permits
(Effective July 1, 2014)

Table 1: Fees for coverage under the VSMP Construction General Permit/ VESCP

Type of Permit	Total Fee Paid by Applicant
VESCP permit fee if VSMP permit not required or VSMP General/ Stormwater Management – Small construction Activity/Land Clearing (Areas within common plans of development or sale with land disturbance less than 1 acre Except for single family detached residential structures.)	\$290
VSMP General / Stormwater Management - (Single Family detached residential structures within or outside a common plan of development or sale with land disturbance acreage less than 5 acres)	\$209
VSMP General / Stormwater Management - Small Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 1 acre and less than 5 acres)	\$2,700
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 5 acres and less than 10 acres)	\$3,400
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 10 acres and less than 50 acres)	\$4,500
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 50 acres and less than 100 acres)	\$6,100
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 100 acres)	\$9,600

A. Fees for the modification or transfer of coverage under the VSMP Construction General Permit issued by the Administrator shall be imposed in accordance with Table 2. If the permit modifications result in changes to stormwater management plans that require additional review by the Administrator, such reviews shall be subject to the fees set out in Table 2 based on the total disturbed acreage of the site. Modifications resulting in an increase in total disturbed acreage shall pay the difference in the initial state permit fee paid and the state permit fee that would have applied for the total disturbed acreage in Table 1.

Table 2: Fees for the modification or transfer of registration statements for the VSMP Authority Permit for Discharges of Stormwater from Construction Activities

Type of Permit	Fee Amount
VSMP General / Stormwater Management - Small Construction Activity/Land Clearing (Areas within common plans of development or sale with land disturbance acreage less than 1 acre, (also includes single-family detached residential structures within or outside a common plan of development or sale with land disturbance acreage less than 5 acres)	\$20
VSMP General / Stormwater Management - Small Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 1 acre and less than 5 acres)	\$200
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 5 acres and less than 10 acres)	\$250
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 10 acres and less than 50 acres)	\$300
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 50 acres and less than 100 acres)	\$450
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 100 acres)	\$700

B. Permit maintenance fees. (9VAC25-870-830):

1. The following annual permit maintenance shall be imposed in accordance with Table 3, including fees imposed on expired permits that have been administratively continued. With respect to the VSMP Authority Permit, these fees shall apply until the permit coverage is terminated.
2. VSMP Authority Permit coverage maintenance fees shall be paid annually to the VSMP Authority, by the anniversary date of VSMP Authority General Permit coverage, in accordance with Table 3. No VSMP Authority permit will be reissued or automatically continued without payment of the required fee. VSMP Authority permit coverage maintenance fees shall be applied until a Notice of Termination is effective.

Table 3: VSMP Authority Permit Maintenance Fees

Type of Permit	Fee Amount
VSMP General / Stormwater Management - Small Construction Activity/Land Clearing (Areas within common plans of development or sale with land disturbance acreage less than 1 acre, also includes single family detached residential structures within or outside a common plan of development or sale with land disturbance acreage less than 5 acres.)	\$50
VSMP General / Stormwater Management - Small Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 1 acre and less than 5 acres)	\$400
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 5 acres and less than 10 acres)	\$500
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 10 acres and less than 50 acres)	\$650
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 50 acres and less than 100 acres)	\$900
VSMP General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 100 acres)	\$1,400

C. The fees set forth in subsections A-C, above, shall apply to:

1. All persons seeking coverage under the VSMP Authority Permit or VESCP permit if VSMP not required.
2. All permittees who request modifications to or transfers of their existing registration statement for coverage under a VSMP Authority Permit.
3. Persons whose coverage under the VSMP Authority Permit has been revoked shall reapply for an Individual Permit for Discharges of Stormwater from Construction Activities.
4. Permit and permit coverage maintenance fees outlined under Section may apply to each VSMP Authority Permit holder.

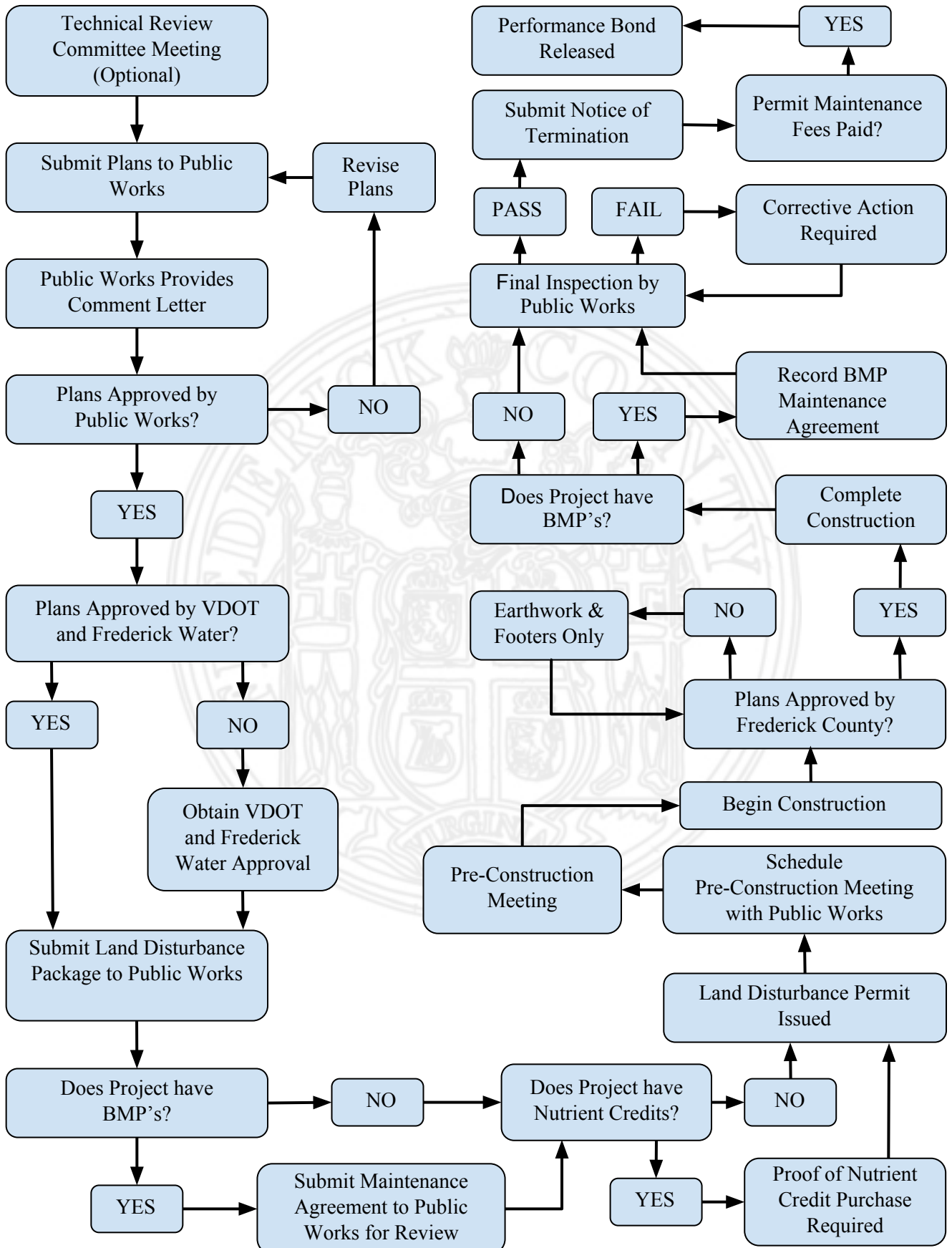
CI. No VSMP Authority Permit application fees will be assessed to Permittees whose permits are modified or amended at the initiative of the VSMP Authority, excluding errors in the registration statement identified by the Director or errors related to the acreage of the site.

CII. All incomplete VSMP permit fee payments will be deemed as nonpayment's, and the applicant shall be notified of any incomplete permit fee payments. Interest may be charged for late permit fee payments at the underpayment rate set forth in §58.1-15 of the Code of Virginia and is calculated on a monthly basis at the applicable periodic rate. A 10% late payment fee shall be charged to any delinquent (over 90 days past due) account. The Administrator shall be entitled to all remedies available under the Code of Virginia in collecting any past due amount.

Frederick County Land Disturbance/Stormwater Permit Termination Checklist

- ☐ Permit Termination Requirements Met:
 - 1. Necessary permanent controls measures included in the SWPPP for the site are in place and functioning effectively and final stabilization has been achieved for all portions of the site for which the operator is responsible;
 - 2. Another operator has assumed control over all areas of the site that have not been fully stabilized and obtained coverage for ongoing discharge;
 - 3. Coverage under an alternate VPDES or state permit has been obtained; or
 - 4. For residential construction only, temporary soil stabilization has been completed and the residence has been transferred to the homeowner.
- ☐ Submit DEQ Notice of Termination form to Public Works.
<http://www.fcva.us/departments/public-works/stormwater-program-information>
- ☐ Submit construction record drawings(s), or as-builts, for permanent stormwater management facilities (if applicable) including all conveyance system components. As-built information shall include:
 - 1. A copy of the applicant's inspection log book. The log should document all aspects of the construction of the facility to insure compliance with the approved plan and should include:
 - i. Compaction tests for all embankments.
 - ii. Inspection logs related to the of the removal of unsuitable material under and adjacent to the embankment foundation, construction of the cut off trench and other seepage control measures, compaction around the barrel, riser footing structure.
 - iii. As-built shop drawings for all pre-cast concrete control structures and/or other manufactured water quality devices.
 - iv. Verification of location, dimensions, spacing and material of any anti-seep collars, concrete cradles or other seepage control devices.
 - v. Logs related to any sinkhole remediation efforts.
 - vi. Certification records for all bioretention media
 - 2. A red-line revision of the approved plans and computations including:
 - i. A red check mark made beside design values where they agree with constructed values
 - ii. For changed values, "line out" design value and enter actual value in red
 - iii. Elevations to the nearest 0.1-foot
 - iv. A stage-storage summary table comparing design values to actual values for each facility with a storage volume.
 - v. Details for conveyance systems including pipe sizes, slopes, inverts, etc.
 - vi. Location of any sinkholes identified during construction.
 - vii. Signature and seal of a registered Virginia professional.
 - 3. Engineer's certification statement (see County website)
- ☐ Record the BMP Maintenance Agreement (if needed)
- ☐ VSMP Permit Maintenance Fees Due (if applicable)
- ☐ Schedule a Final Inspection with Public Works
- ☐ Submit a request in writing to the Planning and Development Department requesting the release of the bond. Also, if the bond amount was more than \$10,000 a check for \$300 is required along with request.

Frederick County Public Works - Land Disturbance Permit Process



**FREDERICK COUNTY, VA
EROSION AND SEDIMENT CONTROL MEASURES
GUARANTY ESTIMATE FORM - REVISED FEBRUARY 2018**

PROJECT NAME: _____
 DATE: _____
 DESIGN FIRM: _____ PHONE: _____
 CONTACT PERSON: _____ EMAIL: _____

EROSION AND SEDIMENT CONTROL

<u>MIN.STD.#</u>	<u>ITEM</u>	<u>PRICE</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>COST</u>
3.01	Safety Fence	\$4.00	LF	_____	_____
3.02	Construction Entrance	\$2,500.00	Each	_____	_____
3.04	Straw Bale Barrier	\$8.00	LF	_____	_____
3.05	Silt Fence w/ Wire Support	\$8.00	LF	_____	_____
	Super Silt Fence	\$10.00	LF	_____	_____
3.07	Curb Inlet Protection	\$150.00	Each	_____	_____
3.08	Culvert Inlet Protection	\$200.00	Each	_____	_____
3.09	Diversion Dike	\$5.00	LF	_____	_____
3.10	Fill Diversion	\$2.00	LF	_____	_____
3.12	Diversion	\$10.00	LF	_____	_____
3.13	Sediment Trap	\$2,000.00	Each	_____	_____
3.14	Sediment Basin	\$5000 + \$1000	Acre	_____	_____
3.16	Paved Flume	\$35.00	SY	_____	_____
3.17	Stormwater Conveyance Channel			_____	_____
	Seeded	\$10.00	SY	_____	_____
	Sodded	\$20.00	SY	_____	_____
	Riprap	\$60.00	SY	_____	_____
3.18	Outlet Protection			_____	_____
	Riprap	\$60.00	SY	_____	_____
	Concrete	\$150.00	cy	_____	_____
3.20	Rock Check Dam	\$150.00	Each	_____	_____
3.21	Level Spreader	\$250.00	LF	_____	_____
3.22	Temporary Seeding/Mulch/Fert.	\$2,500.00	Acre	_____	_____
3.23	Permanent Seeding/Mulch/Fert.	\$3,000.00	Acre	_____	_____
	EC-2 (i.e. Jute Mesh)	\$2.00	SY	_____	_____
	EC-3 (Permanent Ditch Lining)	\$4.00	SY	_____	_____
	_____			_____	_____
	_____			_____	_____

E&S SUBTOTAL

SWM/BMP

Non-Proprietary BMP

	<u>COST</u>
Dry Extended Detention Pond	Provide Cost* _____
Wet Pond	Provide Cost* _____
Constructed Wetlands	Provide Cost* _____
Bioswale	Provide Cost* _____
Vegetated Grass Channel	Provide Cost* _____
Micro-bioretenention	Provide Cost* _____
Bioretenention	Provide Cost* _____
Infiltration Facility	Provide Cost* _____
Permeable Pavement	Provide Cost* _____
Vegetated Roof	Provide Cost* _____
Soil Compost Amendment	Provide Cost* _____
Rooftop Impervious Disconnection	Provide Cost* _____

Proprietary/Manufactured BMP

Aqua-Swirl® Stormwater Treatment System	Provide Cost*	
BaySaver Barracuda	Provide Cost*	
BaySeparator™	Provide Cost*	
Continuous Deflective Separator® (CDS)	Provide Cost*	
Downstream Defender®	Provide Cost*	
Dual Vortex Separator (DVS)	Provide Cost*	
First Defense®	Provide Cost*	
Hydroguard	Provide Cost*	
Stormceptor®	Provide Cost*	
StormPro	Provide Cost*	
Storm Water Quality Unit	Provide Cost*	
Terre Kleen™ Hydrodynamic Separator	Provide Cost*	
V2B1	Provide Cost*	
The Vortechs® System	Provide Cost*	
CrystalClean Separator – Single Vault	Provide Cost*	
StormTank Module Debris Row	Provide Cost*	
Aqua-Filter™ Stormwater Filtration System	Provide Cost*	
StormKeeper® Sediment Strip®	Provide Cost*	
StormTech® Isolator Row™	Provide Cost*	
Stormwater Management StormFilter®	Provide Cost*	
BayFilter™ Stormwater Cartridge System	Provide Cost*	
Filtterra Bioretention Systems	Provide Cost*	
FocalPoint HPMBS	Provide Cost*	
Jellyfish® Filter	Provide Cost*	
Modular Wetland System Linear (MWS-Linear)	Provide Cost*	
Perk Filter	Provide Cost*	
Silva Cell	Provide Cost*	

SWM/BMP SUBTOTAL

COMBINED SUBTOTAL

Contingency 25% of Combined Subtotals Required

CONTINGENCY AMOUNT

GRAND TOTAL

- Notes:
1. Items not listed will be checked on a per site basis
 2. Design firms to provide cost estimates for all SWM/BMP items.
 3. SWM/BMP cost estimates shall include cost of purchase and installation.
 4. Itemized costs for non-proprietary SWM/BMP's to be provided upon County request.



Engineer's Seal

Engineer's Signature

Name (Print)