

VIRGINIA DEPARTMENT OF TRANSPORTATION

LOCATION AND DESIGN DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: Virginia Stormwater Management Program (VPDES Non-VDOT Projects)	NUMBER: IIM-LD-258
SPECIFIC SUBJECT: ESC and Stormwater Roles and Responsibilities for Projects where VDOT is not the Construction General Permit Permittee	DATE: September 10, 2018
	SUPERSEDES: N/A
APPROVAL: Susan H. Keen, P.E. State Location and Design Engineer Approved September 10, 2018	

EFFECTIVE DATE

Unless identified otherwise within this IIM, the information contained in this IIM is effective upon receipt.

1.0 PROGRAM PURPOSE AND NEED

This IIM addresses policy and general information to identify VDOT's Roles and Responsibilities for Erosion & Sediment Control (ESC) and Stormwater Management (SWM) for Non-VDOT Projects such as Locally Administered Projects (LAP), Secondary Street Acceptance Regulations (SSAR) and Subdivision Street Requirements (SSR) developments, Land Use Permit (LUP), out of plan Utility Projects and certain P3 projects for which VDOT is not the Construction General Permit permittee.

This IIM addresses the regulatory requirements as they relate to the roles and responsibilities of entities administering projects where VDOT is not the CGP Permittee.

1.1 VDOT's Stormwater Management Program

The Virginia Stormwater Management Act, the Virginia Stormwater Management Program (VSMP) Regulations, the Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Discharges of Stormwater from Construction Activities (the Construction Permit) and VDOT's VPDES Individual Permit for Discharge of Stormwater from Municipal Separate Storm Sewer System (MS4 Permit VAR0092975) require that VDOT implement a Stormwater Management program that protects the quality and quantity of state waters from the potential harm of unmanaged stormwater runoff resulting from land-disturbing activities.

This Stormwater Management program includes a post-construction component that protects against the deterioration of the aquatic environment by maintaining certain post-development water quantity and quality runoff characteristics.

Other elements of VDOT's Stormwater Management Program are addressed by the VDOT Drainage Manual and current editions of Instructional and Informational Memoranda.

2.0 PROGRAM ADMINISTRATION (VDOT Annual Standards for ESC and SWM)

Administration of VDOT's Annual ESC and SWM Standards and Specifications (AS&S)

VDOT's Annual ESC and SWM Standards and Specifications (which allow VDOT to self-administer plan review, inspection and program administration) shall apply to all plan design, construction and maintenance activities administered by VDOT and performed either by its internal workforce or contracted to external entities. In certain instances, if approved in advance by DEQ and VDOT (See AS&S Entity Form LD-445I for responsibility of project review, inspection and plan approval), these AS&S (allowing VDOT to administer plan review or inspection) may be applied to other entities administering non-VDOT projects that will be maintained by VDOT as described herein.

VDOT's AS&S are a compilation of VDOT documents related to the design, construction, inspection and maintenance of ESC measures, Pollution Prevention (P2) practices and post-development Best Management Practices (BMP) including, but not limited to, all or a portion of the following:

- Road & Bridge Standards
- Road & Bridge Specifications, Supplemental Specifications and Special Provisions
- Instructional and Informational Memoranda (IIMs)

- Drainage Manual
- Pollution Prevention Field Guide for Construction Activities
- Road Design Manual
- Maintenance Division's BMP Inspection and Maintenance Manuals
- VDOT Standard Details and Special Provisions for Stormwater Management Facilities
- VDOT Virginia Test Methods (VTMs)
- VDOT Construction Manual
- VDOT Land Development Insp. & Doc. Manual

The AS&S and associated documents are dynamic and may be added to, deleted or revised at any time to reflect changes or updates to VDOT's ESC and SWM Program.

Approval to use any portions of VDOT's AS&S on non-VDOT projects/land-disturbing activities (e.g. Locality Administered Projects and Land Use Permit projects - see section 3.1 of this IIM for definition of non-VDOT projects/land disturbing activities) shall be secured from the respective VESCP/VSMP Authority (DEQ or other) and VDOT using Form LD-445I (aka AS&S Entity Form). Requests to use VDOT's AS&S are originated from the land disturbance permittee and are submitted to the District Hydraulic Engineer for review & completion. This form will then be submitted to the Central Office (CO) MS4 contact, which will pursue DEQ's approval. This approval process typically requires 30 days. For non-VDOT projects, the Authority means an authority approved by the State Water Control Board to operate a VESCP or VSMP, and can include the Virginia Department of Environmental Quality (DEQ), a locality, federal entity, another state entity, or linear projects subject to annual standards and specifications. Any approval to use portions of VDOT's AS&S will presumably be part of the VSMP/VESCP Authorities overall plan approval process. For non-VDOT projects for which VDOT will have ultimate O&M responsibilities, consistency with VDOT's technical and design standards is required.

For all projects that are following VDOT's AS&S, compliance is expected.

3.0 DETERMINING A REGULATED LAND DISTURBING ACTIVITY

3.1 Non-VDOT Regulated Land-Disturbing Activities

Non-VDOT projects typically include LAP, LUP, SSAR, SSR, out of plan Utility Projects and other activities which affect VDOT's stormwater system but where VDOT is not the permittee for the VPDES Construction Permit. Furthermore, while VDOT typically self-administers plan review and approval for ESC and SWM in accordance with their AS&S, there may be instances where the ability to review internally is limited by DEQ because VDOT is not the permittee. In these instances, which may affect PPTA/P3 projects and certain design-build projects, those projects must follow the

same review procedures for Non-VDOT Regulated Land Disturbing Activities listed below, and other criteria contained in this document.

The following land-disturbing activities are examples of non-VDOT projects. For the first two categories, VDOT does not have operational and maintenance responsibility for Stormwater Management (SWM) Facilities:

1. Roadway projects occurring on non-VDOT R/W, such as land development streets, industrial access roads, etc., which are designed and constructed by other parties and which meet Secondary Street Acceptance Requirements (SSAR) or Subdivision Street Requirements (SSR) and are eligible for acceptance into the state roadway system for operations and/or maintenance by VDOT after completion of construction and VDOT acceptance. VDOT does not have operational and maintenance responsibility for Stormwater Management (SWM) Facilities
2. Land-disturbing activities occurring within the existing R/W of VDOT owned and/or operated roadway facilities that are a part of an offsite development and which are allowed by agreement and/or the issuance of a VDOT Land Use Permit and which are designed and constructed by other parties. Such land-disturbing activities shall be considered a part of an overall offsite development plan (i.e., common plan of development) and any SWM requirements for areas inside of VDOT R/W shall be accounted for in the SWM Plan for the offsite development. An example project would be the addition of a turning lane (with pavement widening) to service a private development or subdivision and would require the issuance of a Land Use Permit. VDOT does not have operational and maintenance responsibility for Stormwater Management (SWM) Facilities
3. Projects involving roadways that are owned and/or operated by VDOT and which include land-disturbing activities occurring inside and/or outside of existing R/W and which are funded by VDOT transportation revenue but whose construction contracts are administered by Federal Agencies, other State Agencies or localities (County, City or Town) and which will be operated and/or maintained by VDOT after completion of construction. An example project would be an interchange improvement in a VDOT R/W leading into a federal installation that is administered by Eastern Federal Land, a division of the Federal Highway Department or a Locally Administered Project.
4. Other Projects such as P3 projects, may be required to design to all VDOT technical SWM and ESC criteria (in accordance with IIM 195 and the VDOT Drainage Manual), but the permittee may be a separate entity from VDOT, and therefore the permittee may be responsible for securing review and approval of ESC and SWM from the DEQ, and be responsible for permit compliance and inspections.

For these projects, the ESC and SWM plan review, approval and project inspection is the responsibility of the VESCP/VSMP Authority (or DEQ). VDOT may be the plan approval authority if it is documented in the contract or signed in an agreement. The District Hydraulic Engineer shall receive a copy of the plan(s) submittal, and may assist in the review and approval of certain non-VDOT projects when the project ultimately affects VDOT's R/W, SWM system, or other assets/responsibilities. This review process should occur prior to the issuance of a Land Use Permit including sufficient time to adequately review and comment. Those activities found not to comply with the requirements of the VSMP regulations, VDOT's MS4 Permit, or an approved TMDL, shall not be issued a Land Use Permit, nor be accepted into the state system of roadways, until such compliance is demonstrated to the satisfaction of the District Hydraulic Engineer.

For these projects that impact VDOT's R/W, SWM system, or other assets/responsibilities, the project's plans shall document how and where the SWM is being accomplished. This information shall be transmitted to VDOT via the appropriate form(s) (e.g. LD-445D form for VDOT-maintained SWM facilities), along with the complete SWM submission including appropriate plan sheets, report and computations, and provided to the District Hydraulics Engineer. The design and construction information for any outfalls and BMPs accepted by VDOT for operation and maintenance shall be documented by the LPA (Locality Project Manager) and forwarded to the applicable District Infrastructure Manager and the District Hydraulics Engineer for BMP acceptance and inclusion in the respective VDOT outfall and BMP databases. This information is to be retained with the appropriate file(s) in the applicable VDOT District or Residency Office, until such time that it is no longer valid.

3.2 Determining and Documenting Stormwater Management Operation and Maintenance Responsibility for Non-VDOT Projects

The following categories describe typical new non-VDOT projects and the associated review and maintenance responsibilities of SWM Facilities that VDOT will accept.

1. *Not located within current VDOT R/W, locally (e.g. City) or privately-owned and maintained and not seeking VDOT acceptance. An example may be a City LAP project where acceptance of the roadway and SWM facilities is NOT sought. Hydraulic review is not expected as VDOT will have no SWM Facility maintenance responsibility.*
2. *Not located within current VDOT R/W, seeking acceptance into the Secondary Highway System; or Improvements in current VDOT R/W related to offsite development; or Improvements to the current VDOT R/W with no operational or safety improvements. (e.g. construction of new secondary street, beautification projects, road improvement for economic development, drainage improvements unless there are improvements to the safety of traveling public) – VDOT will not be responsible for Operation and Maintenance of SWM Facilities. Design plans must show easement limits for proposed facilities with descriptor indicating*

maintenance responsibility. Maintenance agreement between project proponent and the VSMP Authority shall be required. SWM Facilities shall be located outside the R/W. District hydraulic review may be required. VDOT must be provided a copy of the complete SWM submission including appropriate plan sheets, computations and documentation and proof of the recorded instrument.

3. *Improvements to current VDOT R/W with operational and safety improvements (e. g. improved intersection)* – VDOT may, at its discretion and if agreed to in writing, assume Operation and Maintenance Responsibilities for SWM facilities treating the VDOT R/W and permanent easement only. VDOT maintained facilities must typically be located in permanent VDOT easements or R/W. An example may be County LAP project where acceptance of the roadway and SWM facilities located within the R/W by VDOT will be sought. District hydraulic review is required and should be performed during the plan development process.

4.0 LOCALLY ADMINISTERED PROJECTS (LAP), LUP, SSAR, SSR

During planning and Design Development processes there are several important considerations that must be made by the Local Public Agency (LPA) with regard to hydraulics, the VSMP regulations, and VDOTs MS4 permit. First, the LPA is responsible for all VSMP permitting and permit compliance for the project. This includes the preparation, facilitation, and maintenance of the Stormwater Pollution Prevention Plan (SWPPP) for the project. The SWPPP shall be included in the Design Package submittal to the LPA Project Manager. LPA's should be advised that individual project schedules and approvals may be impacted by the local VSMP authority (or DEQ when acting as the VSMP Authority). As such, these factors should be well understood in relation to critical path milestones and properly considered within the project delivery schedule.

LPA developed design documents must properly denote the land cover changes within the VDOT R/W and permanent easements (including disturbed acreage, impervious cover, forest/open space, and turf acreages). Note that plans developed for approval by the VSMP Authority are still subject to VDOT review for project congruence with applicable VDOT standards and ultimate VDOT acceptance. Insufficient plan information in this regard, may require plan revision independent of the local VSMP Authority review. As such, it is recommended that the LPA coordinate closely throughout design development with the local VSMP Authority and VDOT staff so that design issues may be coordinated early and resolved through reasonable course of the local District's design review. The LPA is responsible for documenting VDOT MS4/Stormwater information at design package submittal through the completion of the *LPA Design Package – VDOT MS4/SWM Program Checklist*. Prior to project advertisement and/or acceptance, additional information and verification of stormwater

compliance is required with the LPA's completion of the *LPA Project Certification – VDOT MS4/SWM Program Checklist* and VDOT will review submittal information prior to final acceptance. See Appendix 12.6B in Chapter 12 of the *Locally Administered Projects (LAP) Manual* for additional information.

LUP projects shall be reviewed and approved by the District Hydraulic Engineer and performed during the plan development process, if the project will be constructed within VDOT's right-of-way and will be accepted into the state Highway Systems.

For all projects to be maintained by VDOT, regardless of funding, the following are of critical importance to the VDOT's MS4 permit compliance:

1. Post-construction stormwater best management practice (BMP) facilities installed or modified, including:
 - a. New structural BMP facilities being installed;
 - b. Existing structural BMP facilities removed, modified, or retrofitted or land cover acreage or composition within the BMP contributing drainage areas modified;
 - c. Additional non-structural water quality practices or measures installed or affected.
2. Location and Inventory of Outfalls within Project Limits, including:
 - a. New outfalls being added to the system;
 - b. Relocation, removal, or modification of existing outfalls;
 - c. Confirmation of existing outfalls that remain unchanged.
3. Nutrient Credit Purchases transacted for project compliance
4. Redevelopment project calculations showing the net reductions associated with the redevelopment component of the project.
5. Documentation and Apportionment of Pollutant Reductions.
6. Sealed and signed SWM and Drainage Report that document the proposed design; and
7. Construction record drawing information for any facilities which VDOT will maintain.

The following provides a brief overview of the LPA's (Local Public Agencies Project Manager) requirements with regard to these five items.

4.1 Stormwater Management BMPs

While projects are required to comply with local VSMP authority requirements, they are also required to abide by VDOT standard drawings and details, specifications, Stormwater BMP standards and special provisions, as appropriate, for all Stormwater Management Facilities that will fall under the operation and maintenance of VDOT after project completion (i.e. either located within the current or future VDOT R/W or VDOT easements).

LPA's shall denote all SWM facilities used to address land cover changes within the VDOT R/W and permanent easements and the extent to which any water quality credits are apportioned to the improvements in the VDOT R/W. VDOT requires this information for MS4 permit compliance purposes. Credits for new water quality improvements serving/treating the R/W shall be negotiated during the design process and apportioned to VDOT using the LD-458 form. Examples of when credit shall typically be allocated to VDOT include: Water quality improvements and associated TMDL credits resulting from BMPs that will be maintained by VDOT and; credits associated with treatment of VDOT R/W or permanent easements from BMPs that are not maintained by VDOT.

LPA's must provide documentation (maintenance agreements, etc.) required by the VSMP Authority for all non-VDOT maintained Stormwater Management facilities serving improvements in VDOT's R/W or permanent easements. For facilities which are located in VDOT R/W and are not maintained by VDOT, an executed copy of the agreement for *STORMWATER DEVICE LOCATED WITHIN VDOT RIGHT-OF-WAY* shall be provided to the VDOT Project Coordinator (PC). The agreement can be located within the [Secondary Street Acceptance Requirements](#) Guidance Document or by contacting the VDOT Residency.

Design of facilities to be maintained by VDOT (see section 3 -3.2) must appropriately consider maintenance, including access to the BMP location, which has been designed consistent with both VDOT guidance, standards, specifications, special provisions, and with periodic reviews during installation and final BMP acceptance of the District Maintenance and District Hydraulic Engineers.

The LPA shall be responsible for coordinating final acceptance of any SWM facilities which will be maintained by VDOT, which includes a final acceptance inspection by the Maintenance Division and the District NPDES Coordinator. At such time Maintenance Division staff will assign a unique VDOT BMP Maintenance identification number to be noted on the final LD-445D form.

For Stormwater Management Facilities to be maintained by VDOT, LPAs must submit a completed LD-445D form to the VDOT Project Coordinator (PC), along with Stormwater Management Facilities construction record drawings and certifications that the Stormwater Management Facilities were constructed in accordance with the plans. Record drawings and certifications, as outlined in Form LD-445D, must be provided to the satisfaction of both VDOT and the VSMP Authority. As part of this process, the LPA is responsible for coordination with the VDOT Construction Project Monitor (CPM) and VDOT District staff for inspections of facilities during construction. This may include inspections at critical construction milestones and must include a final acceptance inspection (See Section 8.3 of IIM LD-195). The LPA will be responsible for documenting record drawings, certifications, inspections and acceptance, and completing the LD445D form and signifying as such under the *LPA Project Certification – VDOT MS4/SWM Program Checklist*.

4.2 Outfall Identification and Inventory

VDOT is required to identify and inventory the regulated outfalls within its MS4 regulated area for MS4 permit compliance. Verification of the projects proximity to VDOT's MS4 regulated area shall be coordinated with the District Hydraulic Engineer. New outfalls will continually be added to the inventory through the LAP program, LUP, Secondary Street Acceptance Program, or other roadway plans for projects, and maintenance activities. It is necessary to capture these outfalls upon completion of those activities to ensure appropriate documentation. As such, these projects must aid in this process both during design development as a best practice in early identification, and most importantly, at project acceptance to account for as-built conditions. Design plans within VDOT's right-of-way (including LUP projects) must clearly identify new outfalls and points of interconnectedness with adjacent MS4s, and the LPA must, to the extent practicable, provide pertinent outfall information in the appropriate Outfall Inventory Field Sheet(s) (See Section 7.0 FORMS) within the design plan documents (the forms must be initiated during the design stage and completed prior to project acceptance). The *VDOT Location and Design Division's MS4 Stormwater Outfall Inventory Manual* may serve as a useful reference for completion of these forms. Completion of this information shall be verified on the *LPA Design Package – VDOT MS4/SWM Program Checklist*, which shall accompany the LPA's Design Package Submittal. Completion of this checklist shall be accomplished by the LPA prior to completion of the LAP 402A form for Certification of Documents. See Appendix 12.6B in Chapter 12 of the LAP Manual for additional information.

All outfall inventory and inventory updates must be performed and documented and transmitted to the LPA Project Manager. Following construction, the LPA is responsible for providing this data through submittal of completed *Outfall Inventory Field Sheets* (See Section 7.0 - FORMS) for all applicable outfalls to the Department. Additionally, this shall be indicated as complete on the *LPA Project Certification – VDOT MS4/SWM Program Checklist* (See Chapter 14 of the LAP Manual for additional information) and the Department will verify submittal information prior to final acceptance and final billing. The *VDOT Location and Design Division's MS4 Stormwater Outfall Inventory Manual* may serve as a useful reference for completion of this form.

4.3 Nutrient Credit Purchases

The purchase of nutrient credits to address post-construction water quality reduction requirements for construction activities shall be considered the preferred alternative when available and economically feasible. Projects may obtain nutrient credits for water quality compliance through purchases, if allowed by regulation and as determined by the LPA and/or design engineer. Credits and pollutant reductions serving or offsetting improvements in the R/W must be transferred to VDOT at the acceptance of the project for VDOT's record-keeping purposes.

If an LPA desires to utilize the purchase of certified nutrient credits, they should contact the VDOT Project Coordinator (PC), who will work internally with the District Hydraulic Engineer and the State MS4 Engineer at VDOT Central Office. VDOT may be able to assist in purchasing nutrient credits/offsets through statewide contract vehicles (with charges apportioned to the LPA or project). The LPA is responsible for a pre-evaluation to ensure no existing water quality based limitations are in place within the project watershed(s) which may prohibit the use of nutrient credits. The LPA is also responsible for ensuring that credits are available for use within the same or adjacent HUC. This pre-evaluation must be documented, and coordinated with, the District Hydraulic Engineer early in the planning process. Specific options for the use of nutrient credit purchase include:

- 1) Preferred Option: VDOT Central Office may purchase the nutrient credits directly on behalf of the project using an established VDOT nutrient credit contract. The LPA PM or District Hydraulic Engineer will supply the State MS4 Engineer at VDOT Central Office with a UPC to purchase the credits. If this option is intended to be utilized, the LPA should coordinate with the District Hydraulic Engineer and Central Office prior to the Public Hearing milestone. See IIM-LD-251(most current version) - "Application of the VSMP Regulations as it relates to utilization of the Nutrient Credits as an off-site compliance option". At design completion, coordination of the purchase of nutrient credits through Central Office shall be performed by the LPA using the LD-453 form.
- 2) Alternative Option: The LPA may purchase the nutrient credits required for the project directly and transfer the credits into VDOT's name using the NUTRIENT CREDIT ASSIGNMENT AGREEMENT form. See IIM-LD-251 (most current version) for additional information. VDOT will also require the nutrient credit affidavit and bill of sale to document the nutrient credit purchase, and require that the nitrogen and sediment credits associated with the phosphorus credit purchase be encumbered and allocated. Should this option be selected by the LPA, the pre-evaluation must be supplied to the District Hydraulic Engineer for review, prior to purchase of credits. It is strongly advised that the LPA have familiarity with the nutrient credit acquisition process, or have an existing contract vehicle in place. Unless the LPA maintains an existing purchase mechanism through a nutrient banker, it is likely that the LPA's Legal Counsel will require negotiation, review, and approval of the nutrient credit purchase agreement terms. This can result in unexpected delays to the purchase and potentially the overall project schedule. As such, these timelines and coordination, necessary prior to construction, must be considered in project schedule planning.

4.4 Redevelopment Projects

Redevelopment projects designed under VSMP Part IIC or Part IIB realize reductions from existing lands between 10% and 20%. For BMP facilities that will be maintained by VDOT or BMPs that treat VDOT lands, the water quality computations for the project shall be submitted prior to Stormwater Management Facility acceptance and transfer. The VDOT Hydraulics Redevelopment/Surplus Credit Tracking Form LD-458 and the applicable water quality calculations (e.g. Runoff Reduction Method Spreadsheets) shall be completed and provided to the VDOT. Credit for net reductions from redevelopment areas will be claimed by VDOT for MS4 permit TMDL Special Condition compliance purposes in accordance with funding commitment and long-term O&M responsibilities.

4.5 SWM Facility Crediting and Additional Pollutant Reductions Achieved Above and Beyond the Minimum Required

The reductions and credit associated with the installation of SWM Facilities, and other creditable practices, implemented for VSMP project compliance that will treat roadways and R/W lands that will be accepted into VDOT system will carry over to and be utilized by VDOT for MS4 and TMDL purposes, regardless of the entity that maintains the facility.

It may be possible to achieve additional pollutant reductions through the exceedance of VSMP water quality minimum treatment requirements onsite. This may occur through the installation of SWM retrofits, the additional treatment of land outside of the R/W or project area, or exceedance of minimum overall project load reduction requirements, among other mechanisms. Should this be the case for activities implemented in areas under VDOT's long-term O&M, the LPA, LUP, SSAR, SSR or other project type Project Manager proponent shall quantify and document the credit yield for these activities (for VDOT to utilize in MS4 and TMDL crediting).

In these instances, the LPA, LUP, SSAR, SSR or other project type Project Manager proponent shall be responsible for documenting surplus credits (amount of pollutant reductions that are achieved above and beyond the minimum required by the CGP), providing documentation of such credits to VDOT on Form LD-458, including attachments and supporting documentation for the credit surplus, and for completing the LPA Project Certification – VDOT MS4/SWM Program Checklist.

Projects may also involve stream channel restoration and/or relocation aspects or land use modifications from developed area to passive or open space which may be of value to both the local community and VDOT. VDOT's MS4 program may have goals in common with local MS4 permittees. LPAs are encouraged to communicate issues or items in this regard to VDOT's State MS4 Stormwater Engineer as soon as they become evident within the scoping or plan development processes as they may be of value, particularly for cost optimization, to the LPA and the Department.

**[Locally Administered Project Manual. Chapter 12, Appendix
LPA Design Package – VDOT MS4/SWM Program Checklist](#)**

**[Locally Administered Projects Manual. Chapter 14, Appendix
LPA Project Certification – VDOT MS4/SWM Program Checklist
\[http://www.virginiadot.org/business/locally_administered_projects_manual.asp\]\(http://www.virginiadot.org/business/locally_administered_projects_manual.asp\)](#)**

**[Secondary Street Acceptance Requirements \(SSAR\)
Land Use Permits Program](#)**

4.6 Utility Projects – VPDES General Permit Coverage Responsibility Requirements

Project utility improvements (in-plan utilities – water, sewer, gas relocations that will be constructed within the right-of-way or construction limits of the VDOT project, and performed concurrently with the project, will have (VPDES) General Permit for Discharges of Stormwater from Construction Activities coverage under the VDOT roadway improvement project permit.

Project utility improvements (out-of-plan utilities – relocation of power, communications, etc.) to be constructed outside the right-of-way or construction limits of the VDOT projects will be required to obtain separate (VPDES) General Permit for Discharges of Stormwater from Construction Activities (the Construction Permit) permit coverage for their utility installation activity. It will be the responsibility of the Utility Contractors to obtain this separate permit coverage for this utility installation activity from the VSMP Authority.

5.0 ESC/SWM PLAN REVIEW AND APPROVAL

ESC/SWM Plan Review and Approval is the responsibility of the local VSMP Authority or DEQ.

6.0 DATA TRANSFER AND BMP RECORD DRAWINGS

Prior to final billing, the LPA shall provide the completed LPA Project Certification - VDOT MS4/SWM Program Checklist. For any permanent post-construction facilities in which VDOT will assume long-term operation and maintenance responsibilities, the LPA shall also furnish to the LAP Project Manager a copy of the record drawing that is required by the acting VSMP Authority and a copy of the professional certification that the BMP was constructed in accordance with the plans. The LAP Project Manager shall upload copies of plans, nutrient credit documentation (consistent with IIM-LD-251), construction record drawings and reports to ProjectWise (formerly FALCON) for long-term documentation. VDOT reserves the right to require a record drawing using its latest version of the special provision entitled "Construction Record Documentation of Permanent Stormwater Management Facilities." Failure to provide completed certifications and documentation may delay payment.

7.0 FORMS

The Outfall Inventory form referenced herein is provided as an attachment to this document.

OUTFALL INVENTORY FIELD SHEET

Outfall Inventory

Section 1: Team Data

Investigators:	Today's date:		
Rainfall (in.): Last 24 hours:	Last 48 hours:	Temperature (°F):	iPad Unit:

Investigators:	Team ID:		
Today's date:	Rainfall (in.): Last 24 hours: Last 48 hours:		
Temperature (°F):	GPS Unit:	GPS SN or ID:	
Camera:	Camera SN or ID:		

Section 2: Background Data (Grayed out areas are determined as part of process and does not required direct entry)

Outfall ID:			
Subwatershed: (Determined by GIS location and not Field Entry)		Latitude:	Longitude:
Photo #s: Note: Photo is taken and then attached to each Outfall and POD as part of the Processing and the Investigator does not need to separately record Photo No.	<u>MS4 Outfall or POD:</u> MS4 Outfall POD (Point of Discharge) NOF (No Outfall Found) UTW (Unable To Work – Please add Note) <u>For POD:</u> ID of County Structure Is POD a MS4 Interconnection (YES/No) ³ ID of County Outfall	Notes (e.g., origin of outfall, if known such as SWM Basin):	
Land Use in Drainage Area (Check Predominate Use or add Multiple under Other): <input type="checkbox"/> VDOT <input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial <div style="float: right; margin-top: 10px;"> <input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: _____ </div>			
Inventory Review Reason (Outfall Survey, QA/QC, IDDE, TMDL) _____ USACE Default to Phase I MS4			

MS4 Outfall Notes:

- 1 Because of IDDE call in and referrals not all outfalls inventories will be in MS4 area. VDOT is logging all outfalls into a wetland, water body or stream on VDOT R/W as VDOT outfall. County Tax plats will be imported to assist in the R/W determination but it will be assumed that VDOT has a drainage easement to go around the end of any pipe culvert or box culvert accepted for maintenance. A discharge point cannot be both a MS4 outfall and a POD.
- 2 If VDOT discharges stormwater inside of a targeted area of MS4 investigation and the discharge is not directly into the wetland, water body or stream on VDOT R/W the point will be captured as a Point of Discharge (POD and the inventory and assessment completed.
- 3 If the POD is into a ditch, paved ditch or pipe then the POD is also a MS4 Interconnection (MS4 I). If the POD is into a flood plain or natural swale then the POD is not also a MS4 I.

Section 3: Outfall Description

LOCATION	MATERIAL	SHAPE	NO. OF PIPES	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter: _____ Or Width: _____ Height : _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> V shaped ditch <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)
<input type="checkbox"/> Drop Inlet	<input type="checkbox"/> Curb Inlet	Measure Slot – Grate area will not be measured	Height: _____ Width: _____
	<input type="checkbox"/> Curb Inlet with Grate		
	<input type="checkbox"/> Flat DI	<input type="checkbox"/> Square or Rectangular	Length: _____ Width: _____
		<input type="checkbox"/> Circular	Diameter: _____
	<input type="checkbox"/> DI in V Ditch	Measure Grate Area	Length: _____ Width: _____
<input type="checkbox"/> Other: _____			

<input type="checkbox"/> VDOT Right of Way	<input type="checkbox"/> Mixed VDOT and Other Sources	<input type="checkbox"/> Other Sources
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Section 4: Dry Weather Survey

Complete Dry Weather Survey Today	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Flow Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <i>If No, Skip to Section 6</i>
Flow Description (If present)	<input type="checkbox"/> Trickle	<input type="checkbox"/> Moderate <input type="checkbox"/> Substantial

SECTION 5: PHYSICAL INDICATORS FOR FLOWING OUTFALLS ONLY

Are Any Physical Indicators Present in the flow? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint	<input type="checkbox"/> 2 – Easily detected	<input type="checkbox"/> 3 – Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint colors in sample bottle	<input type="checkbox"/> 2 – Clearly visible in sample bottle	<input type="checkbox"/> 3 – Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 – Slight cloudiness	<input type="checkbox"/> 2 – Cloudy	<input type="checkbox"/> 3 – Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Few/slight; origin not obvious	<input type="checkbox"/> 2 – Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 6: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 7)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line of pipe or ditch <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other: Sheen <input type="checkbox"/> Petroleum Sheen <input type="checkbox"/> Organic Sheen	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Sediment accumulation ¹	<input type="checkbox"/>	<input type="checkbox"/> ¼ full <input type="checkbox"/> ½ full <input type="checkbox"/> ¾ full <input type="checkbox"/> full <input type="checkbox"/> Other:	

Notes: ¹ – If the sediment appears to be as a result from the erosion or scouring within the storm sewer system complete sections 8, 9, and 10 of this form.

Section 7: Overall Outfall IDDE Characterization

An IDDE score will be calculated by summing the Severity Indexes in section 5 and adding the number of indicators checked as present in section 6

Unlikely (No indicator checked as present in Section 5 OR only **one (1)** indicator checked as present in Section 6)

Potential – (one (1) indicator with a severity of **one (1)** in Section 5 OR **two (2)** indicators checked as present in Section 6)

Suspect - IDDE score of Three (3) (one or more indicators checked in Section 5 with a total of severities equal to three (3) OR **more than two (2)** indicators checked as present in Section 6 OR a total of severities in Section 5 plus indicators checked as present in Section 6 is equal to three (3))

Obvious – IDDE score of greater than Three (3) (one or more indicators checked in Section 5 with and the total of the severities **is greater than three (3)** OR a total of severities in Section 5 plus indicators checked as present in Section 6 **is greater than three (3)**)

IDDE _____ Notes: _____

Inspectors Overall Outfall Characterization: Unlikely, Potential, Suspect, Obvious

Reason for Override: _____ if different from IDDE

Section 8: Outfall Channel Field Concerns

Concerns	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)	COMMENTS
Channel blocked*	<input type="checkbox"/>	<input type="checkbox"/> Overgrown vegetation <input type="checkbox"/> Debris <input type="checkbox"/> Sediment accumulation <input type="checkbox"/> Other	<input type="checkbox"/> 1- ¼ blocked <input type="checkbox"/> 2- ½ blocked <input type="checkbox"/> 3 -¾ or more blocked	
Channel Erosion occurring*	<input type="checkbox"/>	<input type="checkbox"/> Damaged paved ditch or riprap channel <input type="checkbox"/> At immediate downstream banks <input type="checkbox"/> At discharge of outfall (depression/pooling) <input type="checkbox"/> Beneath or around pipe <input type="checkbox"/> Other:	<input type="checkbox"/> 1- Minor <input type="checkbox"/> 2- Moderate <input type="checkbox"/> 3- Major	
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Cracked pipe <input type="checkbox"/> Crushed pipe <input type="checkbox"/> Rusting or corroded pipe <input type="checkbox"/> End wall damage <input type="checkbox"/> Pipe disconnected from end wall <input type="checkbox"/> Peeling paint <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Monitor <input type="checkbox"/> 2- Flow constricted due to damage <input type="checkbox"/> 3 -Safety concern	
		<input type="checkbox"/> Cracked/displaced or eroded Paved Ditch <input type="checkbox"/> Riprap ditch has failed <input type="checkbox"/> Erosion Control Blanket lined ditch has failed <input type="checkbox"/> Vegetative ditch has failed		

* Channel inspection to include downstream channel within immediate vicinity of outfall

Section 9: Outfall Channel Rating

<input type="checkbox"/> No Maintenance Required - No concerns indicated <input type="checkbox"/> Monitor - Presence of one or more indicators with a severity of 1 <input type="checkbox"/> Review - One or more indicators with a severity of 3 or two or more with a severity of 2 <input type="checkbox"/> Repair – Two or more indicators with a severity of 3 or a safety concern noted

Section 10: Any Non-Illicit Discharge Concerns