

**APPENDIX B**

**Stormwater Management**

**SWM Plan Checklist**

# 1. STORMWATER MANAGEMENT

The intent of the Virginia Stormwater Management Program (VSMP) regulations is to improve water quality through runoff reduction and other stormwater control practices and establish water quantity requirements. The baseline level for the stormwater technical criteria is a forested/open space condition.

Under 9 VAC 25-870, regulated land-disturbing activities are required to meet the stormwater technical criteria for water quality and water quantity metrics as outlined in Part IIB. The water quality and quantity criterion are largely directed at avoiding, minimizing and mitigating impacts due to changes in hydrology and stormwater pollutant loads associated with changes in land cover. Each project will be reviewed to evaluate consistency with DEQ Guidance Memorandum No. 15-2003. The guidance memorandum stipulates a number of conditions which must be satisfied for linear utility projects if a Stormwater Management Plan will not be required. Specifically, the following conditions must be satisfied:

- The project does not significantly alter the predevelopment runoff characteristics of the land surface after the completion of construction and final stabilization.
- The project is managed so that less than one (1) acre of land disturbance occurs on a daily basis.
- The disturbed land where work has been completed is adequately stabilized on a daily basis.
- The environment is protected from erosion and sedimentation damage associated with the land-disturbing activity.
- The owner and/or construction activity operator designs, installs, implements and maintains pollution prevention measures to:
  - *Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters;*
  - *Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on-site to precipitation and to stormwater;*
  - *Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures;*
  - *Prohibit the discharge of wastewater from the washout of concrete;*
  - *Prohibit the discharge of wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and*

- *Prohibit the discharge of fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.*
- DETI must provide reasonable assurance to DEQ that all of the above conditions will be satisfied. **This may be accomplished by incorporating these conditions into an Erosion and Sediment Control Plan developed for the project.**

Right-of-ways must be maintained in a Forest/Open Space condition consistent with the Virginia Runoff Reduction Method Instructions & Documentation, which stipulate that rights-of-way considered as Forest/Open space must be restored to a hydrologically functional state and “be left in a natural vegetated state (can include areas that will be bush hogged no more than four times per year),” in accordance with Table 1 of the Virginia Runoff Reduction Method (VRRM) Instructions and Documentation. The forestry and vegetative management practices employed by DETI within the right-of-way comply with the VRRM recommendations for open space. Where the right-of-way consists of forest or open space conditions prior to the construction activity, and will remain in a forested or open space condition under post-developed conditions (e.g. undisturbed or restored to a hydrologically functional state and all surfaces will remain as permeable surfaces which are mowed no more than once every three years, in accordance with FERC Plan Guidelines or maintained in accordance with Table 1 referenced above), runoff curve numbers are identical under the Virginia Runoff Reduction Method. DETI may be required to provide documentation to DEQ of water quantity analysis, and may be required to document consistency with and applicability of DEQ Guidance Memorandum No. 15-2003.

DETI will submit project information to DEQ for preliminary review of whether a SWM plan is required (see Section 1.0 of Main Document). Department of Environmental Quality (DEQ) Guidance Memo No. 15-2003 (Appendix F) addresses this for linear development projects in stating, “...the construction of aboveground or underground utilities may not result in changes to the predevelopment runoff characteristics of the land surface after the completion of construction and final stabilization.” The guidance memorandum goes on further to state that, “If the project will not result in significant changes to the predevelopment runoff characteristics after the completion of construction and final stabilization...,” the requirement for a CGP permit may be waived (this would be separate from the more general exemptions for oil and gas transmission described in Section 1 of the main document). DEQ will review preliminary project information to advise DETI whether a SWM plan is required.

For projects requesting waiver of Stormwater Plan, DEQ requires information to be submitted that reasonably demonstrates that the project will not significantly change the predevelopment runoff characteristics of the land surface after the completion of construction and final stabilization. Information submitted to DEQ may include:

- Pre- and post-construction drainage areas and land cover conditions.

- Limits of disturbance
- Methodology for the restoration of land cover conditions to predevelopment conditions.
- ESC Plan excluding 9VAC25-840-40.19.m. & n. (The full Erosion and Sediment Control Plan would be available later in the process, after the preliminary review discussed above and in Section 1 of the main document).

If DEQ determines that the project meets the criteria for granting a waiver, then DEQ will waive the requirement for the preparation and implementation of a stormwater management plan. This waiver allows the recipient to exclude the following regulatory sections:

- SWM Quality – 9VAC25-870-63 and -65
- SWM Quantity – 9VAC25-870-66
- ESC MS-19 – 9VAC25-840-40.19.m. & n.

Information shall be submitted to DEQ Central Office for review with a transmittal letter specifically requesting a SWM Plan waiver. DEQ, as the VSMP Authority, will evaluate each project on an individual basis.

If DEQ waives the requirement for a SWM plan, DETI will utilize the DEQ linear projects guidance and will incorporate the conditions stipulated in GM 15-2003 into the Erosion and Sediment Control plan for the project (See *Additional Notes* in Appendix E).

Each project must be reviewed by a certified SWM Plan Reviewer (qualifications described in Section 2 of the main document) to verify exemption. In certain instances, a project may have an element which does result in significant change to predevelopment runoff characteristics after the land-disturbing activity is completed. In those instances, (generally where the addition of impervious surfaces or conversion of forest to managed turf in combination are expected to cause significant changes in predevelopment runoff characteristics), a SWM plan must be prepared, reviewed, approved, and implemented in accordance with 9VAC25-870 and 9VAC25-880 (if applicable).

DETI access roads will be grouped into four categories based on the extent of improvements required to prepare the road for use to support the project. Depending on the improvements, the impact on stormwater runoff characteristics will range from no expected impact to a material impact. Specifically, the four categories are defined below; all access roads, or access road segments, will be assigned a category that is depicted on the corresponding alignment sheet and access road plans.

1. Existing road with no improvements proposed – includes those existing roads that are in a condition such that no improvements are needed to prepare the road for use to support the project (e.g., asphalt surfaced roads).

2. Existing road with minor improvements proposed – includes those existing roads that contain either a compacted earth or gravel surface and the current road configuration (i.e., width, grade, etc.) is adequate to support the project. Roads in this category may receive supplemental gravel to improve the surface condition; however, the footprint of the road would not be expanded (i.e., no additional impervious surface).
3. Existing road with major improvements proposed – includes those existing roads that will receive an expanded footprint (i.e., the impervious surface post-construction may exceed that existing preconstruction) in order to prepare the road for use to support the project.
4. New road – includes roads not located within the limits of an existing road.

Access roads in categories 2, 3 and 4 will involve varying degrees of land disturbance, and thus appropriate erosion and sediment controls (e.g., sediment barriers) will be identified and depicted on the plans. No Post-construction stormwater management criteria will apply to categories 1 & 2 because the roads are existing and there is no additional impervious surface. Access roads in categories 3 and 4 may also require drainage improvements (e.g., road side ditches and ditch relief culverts). The general approach to locating sediment barriers along access roads will be to provide sediment barriers when a resource (e.g., wetland, waterbody) is downgradient of and within 200 feet of an access road.

Access roads in categories 3 and 4 involve improvements that are expected to result in a material change to the existing stormwater runoff characteristics as a result of the addition of impervious surface. These access roads must meet the Stormwater management requirements for quality and quantity.

Access roads in categories 3& 4 will be identified as to whether they are temporary (meant to serve the project initial construction and then removed and restored after construction is complete) or permanent.

Temporary access roads will be restored/rehabilitated to establish a firm stand of erosion-resistant vegetation and restored to a hydrologically functional state prior to completion of the project. All non-porous stone surfacing will be removed and porous stone ballast will be removed where it impedes infiltration. Any defined ditches or topographic alterations which significantly alter predevelopment runoff characteristics will be graded and topsoiled to match pre-development drainage patterns and avoid concentration of runoff. In accordance with the maintenance guidelines herein, these vegetated areas will be mowed no more than four times per year and will be considered open space. For FERC 7c projects, soils restoration will follow the FERC plan and procedures and will typically include provisions for Soil Restoration, Soil Compaction, Topsoil Segregation, Replacement and Soil Conditioning, and Re-Contouring.

In some instances, permanent access roads may be required for the construction or long-term maintenance and operation of the utility infrastructure. Each instance where a permanent access road is proposed will be reviewed for consistency with stormwater quality and quantity requirements. If DETI is of the opinion that the increases in runoff relative to pre-development conditions are not significant, DETI may request an exception from the stormwater management criteria from DEQ. A request for an exception must demonstrate that the request is in accordance with the provisions for exceptions in the VSMP regulations (9VAC25-870-57 & 9VAC25-870-122) and that the activity avoids and minimizes impacts to stormwater runoff. DEQ will scrutinize each exception request, so early coordination is advised.

## 2. TECHNICAL REQUIREMENTS

### 2.1 WATER QUALITY

Part IIB of the stormwater regulations states that the total phosphorous load will not exceed 0.41-pound per acre per year (lb./ac/yr.) for new development activities. The Land Cover Guidance for the VRRM defines provides for certain areas (including “Utility rights-of-way that will be left in a natural vegetated state”) under certain operational conditions to be considered forested/open space and not as managed turf for the purposes of stormwater quality and quantity compliance. In accordance with the above, DETI will coordinate with DEQ on the applicability of GM15-2003 and whether a SWM plan is required. If a SWM plan is required (e.g. due to significant changes to predevelopment runoff characteristics, or other requirements which trigger the need for CGP coverage or post-construction SWM), DETI must develop and implement a SWM plan consistent with the applicable requirements of 9VAC25-870 and 9VAC25-880. The VRRM Spreadsheet is a tool which regulated entities may use to document general water quality planning and consistency with the technical requirements of 9VAC25-870 (et seq).

### 2.2 WATER QUANTITY

As identified in the VSMP regulations, the technical criteria for water quantity are designed to ensure the protection of State waters from the potential harm of unmanaged stormwater runoff. This is generally achieved through the incorporation of techniques to address localized flooding and the protection of downstream channels. The specific technical criteria to be applied for water quantity analysis and compliance are contained in 9VAC25-870-66.

#### 2.2.3 PRIOR DEVELOPED LANDS

As noted previously, DETI will provide for an initial evaluation of each project to ascertain whether the project may be exempt from CGP permit coverage and whether there is a significant

change in predevelopment runoff characteristics that might trigger the need for a Stormwater Management Plan and associated controls (pursuant to GM15-2003). DETI will obtain concurrence from DEQ early in the process if a SWM plan is not required pursuant to GM15-2003. Permanent facilities with significant impervious cover (such as compressor stations) are expected to provide for a stormwater management plan and associated controls if needed, even though these facilities may remain exempt from permit coverage. For portions of pipeline easements which traverse prior developed lands (e.g. under turf-intensive uses such as ballfields, or under existing parking lots or road segments), DETI does not expect to provide improvements to existing runoff conditions if predevelopment conditions are restored. DEQ has clarified that it is not their expectation that permanent best management practices be installed on restored right-of-way. As discussed earlier, DEQ will review the overall project (at an early stage), including soil restoration conditions, to identify whether SWM plan preparation is waived for these activities.

Where predevelopment land cover conditions are changed significantly triggering requirements for post construction stormwater quality and quantity requirements, post-construction Best Management Practices (BMPs) may be required to comply with water quality and water quantity criteria and MS-19 of the Erosion and Sediment Control Regulations. In such instances, the outfall within the project must comply with Part IIB or Part IIC (where applicable) of the stormwater regulations to assess compliance. This may include the “Energy Balance” method described by item B.3.a of 9VAC25-870-66. In these instances, water quantity criteria for flood control and channel protection must be addressed and managed through the preparation of a SWM plan consistent with 9VAC25-870 and 9VAC25-880.

These Annual Standards and Specifications for ESC and SWM also assist in meeting the standards of the Federal Energy Regulatory Commission (FERC) Upland Erosion Revegetation and Maintenance Plan (Plan) and the FERC Wetland and Waterbody Construction and Mitigation Procedures (Procedures). DETI and its construction contractors must implement this plan as appropriate for all construction in Virginia unless a variance to the Virginia Erosion and Sediment Control Regulations has been submitted to and granted approval by the DEQ.

### **3. STORMWATER MANAGEMENT BMPS**

Stormwater Management BMPs used for consistency with these specifications should be approved by DEQ and contained in the Virginia Stormwater BMP Clearinghouse. For projects requiring post-construction SWM BMPs, DETI must report the following annually each year to DEQ:

Number and types of SWM BMPs installed;

Geographic coordinates of each BMP;

Drainage area or watershed size served; and  
Receiving stream or hydrologic unit.

#### 4. STORMWATER MAINTENANCE

Each project plan must be reviewed by certified personnel described in Section 2 (main document) to ascertain whether the specific project is exempt from post-construction stormwater quality and quantity requirement, or whether SWM planning is required (with DEQ concurrence). If post-construction SWM is required, non-structural BMPs allowed by the permit will be the preferred option. A maintenance plan for both the non-structural and any additional structural BMPs must be developed to ensure compliance with requirements for routine inspection or reporting in the Virginia Stormwater BMP Clearinghouse specifications. Maintenance requirements for non-structural BMPs must be identified and incorporated into inspection documentation during routine patrolling of the right-of-way by certified personnel. Any structural BMPs would require a more formal inspection. Each stormwater management facility will be inspected by DETI, as the owner of the facility, at least once every five years; and all inspections will be documented. Corrective measures must be carried out as soon as practicably feasible when needed. Long-term maintenance of structural SWM facilities must be conducted in accordance with 9VAC25-870-112. To be consistent with the provisions of 9VAC25-870-112, maintenance plans for the stormwater facilities must be submitted to DETI for formal review and approval prior to initiating the land disturbing activity, made available to DEQ upon request, and must provide for inspections and maintenance and the submission of inspection and maintenance reports to the DEQ. DETI transmission easements over land under which permanent stormwater management facilities will be placed must further assure the following:

- Be stated to run with the land;
- Provide for all necessary access to the property for purposes of maintenance and regulatory inspections;
- And, be enforceable by all appropriate governmental parties.

#### 5. INSPECTIONS FOR STORMWATER MANAGEMENT

DETI or its designated representative will continue to be responsible for periodic inspections for compliance with the CGP, if required, erosion and sediment control regulations and any FERC Certificate. Certified personnel, as outlined in Section 2 of the main document, must conduct all inspections.

**Inspections for compliance with the SWPPP (and relevant SWM and ESC elements) must occur in accordance with the following:**

Inspections must be conducted at the following frequency:

- (1) At least once every five business days; or
- (2) At least once every 10 business days and no later than 48 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 48 hours between business days, the inspection must be conducted no later than the next business day.

A measurable storm event means a rainfall event producing 0.25 inches of rain or greater over 24 hours. Where areas have been temporarily stabilized or land-disturbing activities will be suspended due to continuous frozen ground conditions and stormwater discharges are unlikely, the inspection frequency may be reduced to once per month. If weather conditions (such as above freezing temperatures or rain or snow events) make discharges likely, the operator must immediately resume the regular inspection frequency.

DETI's SWPPP inspections will be conducted by Certified Personnel as identified in Section 2 and will serve also as the periodic inspections.

For projects discharging to exceptional waters identified in [9VAC25-260-30.A.3.c](#), or to surface waters identified as impaired in the 2012 § 305(b)/303(d) Water Quality Assessment Integrated Report or for which a Total Maximum Daily Load (TMDL) wasteload allocation has been established and approved prior to the term of this general permit for (i) sediment or a sediment-related parameter (i.e., total suspended solids or turbidity) or (ii) nutrients (i.e., nitrogen or phosphorus), the following additional requirements will apply:

- a. The exceptional water(s), impaired water(s), approved TMDL(s), and pollutant(s) of concern, when applicable, must be identified in the SWPPP;
- b. Permanent or temporary soil stabilization must be applied to denuded areas within seven days after final grade is reached on any portion of the site;
- c. Nutrients must be applied in accordance with manufacturer's recommendations or an approved nutrient management plan and will not be applied during rainfall events; and
- d. The applicable SWPPP inspection requirements specified in Part II F 2 must be amended as follows:
  - (1) Inspections must be conducted at a frequency of (i) at least once every four business days or (ii) at least once every five business days and no later than

48 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 48 hours between business days, the inspection must be conducted on the next business day; and