



STORMWATER MANAGEMENT PLAN CHECKLIST

General:

- Stormwater Management Plans are required on all projects that disturb 2,500 square feet or more of land area within the Chesapeake Bay Preservation Area (CBPA), subdivision plans of four (4) or more lots, or any project that disturbs one (1) acre or more of land area.
- Stormwater Management Plans must be submitted to the Engineering Department and approved through the local Virginia Stormwater Management Program prior to the issuance of any Land Disturbing Permit and prior to the commencement of any land disturbing activity.
- The Responsible Land Disturber Notification Form and a signed Registration Statement must be submitted prior to final plan approval.
 - <https://www.portsmouthva.gov/DocumentCenter/View/3214/Responsible-Land-Disturber-Notification?bidId=>
- If off-site compliance options as established in 9VAC25-870-69, a letter of availability from the off-site provider must be included with the plan submittal. A fully executed purchase agreement will be required prior to any land disturbance permits being issued.
- Prior to final site acceptance, a final inspection by the VSMP is required. Requirements for this inspection require, among other information, that stormwater management facilities are installed per the approved plan, as-builts for the stormwater management facilities have been submitted for review and approval, and the maintenance agreement for stormwater management facilities is recorded.
 - <https://www.portsmouthva.gov/DocumentCenter/View/3246/Stormwater-Compliance-Final-Inspection-2017?bidId=>
 - <https://portsmouthva.gov/DocumentCenter/View/7114/Stormwater-Management-Facilities-As-Built-Requirements>
 - [https://portsmouthva.gov/DocumentCenter/View/7113/Boilerplate-Stormwater-Management-Facilities-Agreement -Revised-12019](https://portsmouthva.gov/DocumentCenter/View/7113/Boilerplate-Stormwater-Management-Facilities-Agreement- -Revised-12019)

Review Checklist:

- The attached Checklist may be used to ensure that all items required for a Stormwater Management Plan have been addressed.
- Submittal of the checklist, indicating the plan sheets/pages where the required information can be found is strongly encouraged. Items that are not applicable should be marked as “N/A”.

Special Notes:

- For comprehensive requirements of the Virginia Stormwater Management Program (VSMP) Regulation, refer to 9VAC25-870

SITE PLANS

- _____ A narrative that includes a description of current site conditions and proposed development and final site conditions, including proposed use of environmental site design techniques and practices, stormwater control measures, relevant information pertaining to long-term maintenance of these measures, and a construction schedule.
- _____ An executed Responsible Land Disturber Notification Form
- _____ An executed Registration Statement
- _____ An executed Stormwater Management Facilities (Maintenance) Agreement
- _____ Existing and proposed mapping and plans (recommended scale of 1" = 50', or greater detail), which illustrates the following at a minimum:
- North arrow
 - Legend
 - Vicinity map
 - Existing and proposed topography (minimum of 2-foot contours recommended)
 - Property lines
 - Perennial and intermittent streams
 - Mapping of predominant soils from USDA soils surveys as well as the location of any site-specific test bore hole investigations that may have been conducted and information identifying the hydrologic characteristics and structural properties of soils used in the installation of stormwater management facilities
 - Boundaries of existing predominant vegetation and proposed limits of clearing and grading
 - Location and boundaries of natural feature protection and conservation areas (e.g., wetlands, lakes, ponds, aquifers, public drinking water supplies, etc.) and applicable setbacks (e.g., stream buffers, drinking water well setbacks, septic drainfield setbacks, building setbacks, etc.)
 - Location of Chesapeake Bay Preservation Area (CBPA) Resource Protection Areas (RPA). <http://www2.portsmouthva.gov/portsmap/>.
 - Identification of any on-site or adjacent water bodies included on the Virginia 303(d) list of impaired waters
 - Current land use and location of existing and proposed roads, buildings, parking lots and other impervious areas
 - Location and description of any planned demolition of existing structures, roads, etc.
 - Proposed land use(s) with a tabulation of the percentage of surface area to be adapted to various uses, including but not limited to planned locations of utilities, roads, parking lots, stormwater management facilities, and easements
 - Location of existing and proposed utilities [e.g., water (including wells), sewer (including septic systems), gas, electric, telecommunications, cable TV, etc.] and easements
 - Earthwork specifications
 - Show the BMP name, **geographic coordinates** and design of both structural and non-structural stormwater control measures, including maintenance access and limits of disturbance
 - Storm drainage plans for site areas not draining to any BMP(s)
 - Location of existing and proposed conveyance systems, such as storm drains, inlets, catch basins, channels, lateral groundwater movement interceptors (French drains, agric. tile drains,

etc.), swales, and areas of overland flow, including grades, dimensions, and direction of flow

- Final drainage patterns and flow paths
- Location of floodplain/floodway limits and relationship of site to upstream and downstream properties and drainage systems
- Location of all contributing drainage areas and points of stormwater discharge, receiving surface waters or karst features into which stormwater discharges, the pre-development and post-development conditions for drainage areas, and the potential impacts of site stormwater on adjoining parcels
- Location and dimensions of proposed channel modifications, such as bridge or culvert crossings
- Final stabilization and landscaping plans

_____ Hydrologic and hydraulic analysis, including the following:

- Site map with locations of design points and drainage areas (size in acres) for runoff calculations
- Identification and calculation of stormwater site design credits, if any apply
- Summary description of the water quantity and water quality compliance strategy.
- Time of concentration (and associated flow paths)
- Imperviousness of the entire site and each drainage area
- NRCS runoff curve numbers or volumetric runoff coefficients
- A hydrologic analysis for the existing (pre-development) conditions, including runoff rates, volumes, and velocities, showing the methodologies used and supporting calculations
- A hydrologic analysis for the proposed (post-development) conditions, including runoff rates, volumes, and velocities, showing the methodologies used and supporting calculations
- Hydrologic and hydraulic analysis of the stormwater management system for all applicable design storms
- Pollution load and load reduction requirements and calculations
- Final good engineering and sizing calculations for stormwater control measures, including contributing drainage areas, storage, and outlet configurations, verifying compliance with the water quality and water quantity requirements of the regulations
- Stage-discharge or outlet rating curves and inflow and outflow hydrographs for storage facilities
- Final analysis of the potential downstream impacts/effects of the project, where necessary
- Downstream analysis, where detention is proposed
- Dam safety and breach analysis, where necessary

_____ Representative cross-section and profile drawings and details of stormwater control measures and conveyances which include the following:

- Existing and proposed structural elevations (e.g., inverts of pipes, manholes, etc.)
- Design water surface elevations
- Structural details of BMP designs, outlet structures, embankments, spillways, grade control structures, conveyance channels, etc.

_____ Indicate on the drawings that as-built drawings for the stormwater management facilities are required, and list the applicable requirements for all stormwater management facilities.

_____ Applicable construction and material specifications, including references to applicable material and construction standards (ASTM, etc.)

- _____ Landscaping plans for stormwater control measures and any site reforestation or revegetation
- _____ Evidence of acquisition of all applicable local and non-local permits
- _____ Waiver/exception requests
- _____ Evidence of acquisition of all necessary legal agreements (e.g., easements, covenants, land trusts, etc.)
- _____ Applicable supporting documents and studies (e.g., infiltration tests, geotechnical investigations, TMDLs, flood studies, etc.)
- _____ Other required permits: _____