

By virtue of this seal and signature, all supporting documents included in this package are accurate and support the design presented herein.



PLAN SUBMITTER'S CHECKLIST

FOR STORMWATER MANAGEMENT PLANS

Please fill in all blanks and **please reference the plan sheets/pages where the information may be found**, where appropriate, or write N/A by items that are not applicable.

GENERAL

Plan Submission Date 3/6/18
Project Name Mountain Valley Pipeline Spread 9
VSMP Permit Number _____
Site Plan Number _____
Site Address N/A
Applicant Mountain Valley Pipeline, LLC Phone Number 724-873-3465
Applicant Legal Address 555 Southpointe Blvd., Suite 200, Canonsburg, PA 15311
Owner Mountain Valley Pipeline, LLC Phone Number 724-873-3465
Owner E-mail Address _____
Principal Designer David Wallner, P.E. Phone Number 412-921-8869
Principal Designer E-mail Address David.Wallner@tetratech.com
Total Disturbed Area Figure _____

X Professional's seal - The designer's original seal, signature, and date are required on the *cover* sheet of each Narrative and each set of Plan Sheets. A facsimile is acceptable for subsequent Plan Sheets.

_____ Number of plan sets – Attach two sets of SWM Plans.

N/A Exceptions - Exceptions requested are governed by Section 9VAC25-870-57 of the *Virginia Stormwater Management Regulations*.

N/A Local Consideration – Provide contact information for the locality's plan review coordinator.

Name _____ Phone Number _____
Address _____

N/A Grandfathering - Attach supporting documentation consistent with the requirements of Section 9VAC25-870-48 of the *Virginia Stormwater Management Regulations*.

N/A Offsite Compliance – Attach letter of availability from the off-site provider as governed by Section 9VAC25-870-55 of the *Virginia Stormwater Management Regulations*.

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CHECKLIST PREPARER

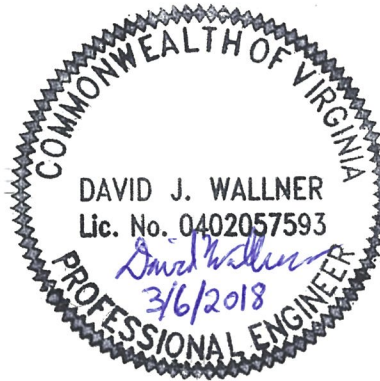
I certify that I am a professional in adherence to all minimum standards and requirements pertaining to the practice of that profession in accordance with Chapter 4 (§ 54.1-400 et seq.) of Title 54.1 of the Code of Virginia and attendant regulations. By signing this checklist I am certifying that this document and all attachments are, to the best of my knowledge and belief, true, accurate, and complete.

SIGNATURE David Wallner

PRINTED NAME David Wallner

QUALIFICATIONS Professional Engineer

DATE 3/6/18



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SITE PLANS

Please reference the plan sheet numbers where specific information may be found in the blanks below.

- X Common address and legal description of the site, including the tax reference number(s) and parcel number(s) of the property or properties affected.
- X 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.
- 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.)
 - Identification of any on-site or adjacent water bodies included on the Virginia 303(d) list of impaired waters N/A
 - 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. N/A
 - 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) N/A
 - 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

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- 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 N/A

_____ 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 N/A
- 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 N/A
- Dam safety and breach analysis, where necessary N/A

N/A 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.

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

N/A Landscaping plans for stormwater control measures and any site reforestation or revegetation

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_____ Long term operations and maintenance plan/agreement as governed by 9VAC25-870-112 of the Virginia Stormwater Management Program Regulations.

X Evidence of acquisition of all applicable local and non-local permits **In progress**

N/A Waiver/exception requests

X Evidence of acquisition of all necessary legal agreements (e.g., easements, covenants, land trusts, etc.)

X Applicable supporting documents and studies (e.g., infiltration tests, geotechnical investigations, TMDLs, flood studies, etc.)

_____ Other required permits: _____

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