

**ATLANTIC COAST PIPELINE, LLC
ATLANTIC COAST PIPELINE**

and

**DOMINION ENERGY TRANSMISSION, INC.
SUPPLY HEADER PROJECT**

**Supplemental Filing
May 26, 2017**

APPENDIX B

Proposed Modifications to the Plan and Procedures

Atlantic Coast Pipeline - North Carolina

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Where Requirement/Practice Applies
			yes/no	If yes, list requirements/practices		Non-specific Area
FERC Upland Erosion Control, Revegetation, and Maintenance Plan						
FERC Plan	II.A.1: Environmental Inspection	At least one Environmental Inspector is required for each construction spread during construction and restoration (as defined by section V). The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.	no	N/A		x
FERC Plan	II.A.2: Environmental Inspection	Environmental Inspectors shall have peer status with all other activity inspectors.	no	N/A		x
FERC Plan	II.A.3: Environmental Inspection	Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the FERC's Orders, stipulations of other environmental permits or approvals, or landowner easement agreements; and to order appropriate corrective action.	no	N/A		x
FERC Plan	II.B.1: Responsibilities of Environmental Inspectors	Inspecting construction activities for compliance with the requirements of this Plan, the Procedures, the environmental conditions of the FERC's Orders, the mitigation measures proposed by the project sponsor (as approved and/or modified by the Order), other environmental permits and approvals, and environmental requirements in landowner easement agreements.	no	N/A		x
FERC Plan	II.B.2: Responsibilities of Environmental Inspectors	Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;	no	N/A		x
FERC Plan	II.B.3: Responsibilities of Environmental Inspectors	Verifying that the limits of authorized construction work areas and locations of access roads are visibly marked before clearing, and maintained throughout construction;	no	N/A		x
FERC Plan	II.B.4: Responsibilities of Environmental Inspectors	Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;	no	N/A		x
FERC Plan	II.B.5: Responsibilities of Environmental Inspectors	Identifying erosion/sediment control and soil stabilization needs in all areas	no	N/A		x
FERC Plan	II.B.6: Responsibilities of Environmental Inspectors	Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats;	no	N/A		x
FERC Plan	II.B.7: Responsibilities of Environmental Inspectors	Verifying that dewatering activities are properly monitored and do not result in the deposition of sand, silt, and/or sediment into sensitive environmental resource areas, including wetlands, waterbodies, cultural resource sites, and sensitive species habitats; stopping dewatering activities if such deposition is occurring and ensuring the design of the discharge is changed to prevent reoccurrence; and verifying that dewatering structures are removed after completion of dewatering activities;	no	N/A		x
FERC Plan	II.B.8: Responsibilities of Environmental Inspectors	Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action	no	N/A		x
FERC Plan	II.B.9: Responsibilities of Environmental Inspectors	Advising the Chief Construction Inspector when environmental conditions (such as wet weather or frozen soils) make it advisable to restrict or delay construction activities to avoid topsoil mixing or excessive compaction;	no	N/A		x
FERC Plan	II.B.10: Responsibilities of Environmental Inspectors	Ensuring restoration of contours and topsoil;	no	N/A		x
FERC Plan	II.B.11: Responsibilities of Environmental Inspectors	Verifying that the soils imported for agricultural or residential use are certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner;	no	N/A		x
FERC Plan	II.B.12: Responsibilities of Environmental Inspectors	Ensuring that erosion control devices are properly installed to prevent sediment flow into sensitive environmental resource areas (e.g., wetlands, waterbodies, cultural resource sites, and sensitive species habitats) and onto roads, and determining the need for additional erosion control devices;	no	N/A		x
FERC Plan	II.B.13: Responsibilities of Environmental Inspectors	Inspecting and ensuring the maintenance of temporary erosion control measures at least: a. on a daily basis in areas of active construction or equipment operation; b. on a weekly basis in areas with no construction or equipment operation; and c. within 24 hours of each 0.5 inch of rainfall;	no	N/A		x

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FERC Plan	II.B.14: Responsibilities of Environmental Inspectors	Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts;	no	N/A		x
FERC Plan	II.B.15: Responsibilities of Environmental Inspectors	Keeping records of compliance with the environmental conditions of the FERC's Orders, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other federal or state environmental permits during active construction and restoration;	no	N/A		x
FERC Plan	II.B.16: Responsibilities of Environmental Inspectors	Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase; and	no	N/A		x
FERC Plan	II.B.17: Responsibilities of Environmental Inspectors	Verifying that locations for any disposal of excess construction materials for beneficial reuse comply with section III.E.	no	N/A		x
FERC Plan	III.A.1: Construction Work Areas	Identify all construction work areas (e.g., construction right-of-way, extra work space areas, pipe storage and contractor yards, borrow and disposal areas, access roads) that would be needed for safe construction. The project sponsor must ensure that appropriate cultural resources and biological surveys are conducted, as determined necessary by the appropriate federal and state agencies.	no	N/A		x
FERC Plan	III.A.2: Construction Work Areas	Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of authorized work areas.	no	N/A		x
FERC Plan	III.A.3: Construction Work Areas	Plan construction sequencing to limit the amount and duration of open trench sections, as necessary, to prevent excessive erosion or sediment flow into sensitive environmental resource areas.	no	N/A		x
FERC Plan	III.B.1: Drain Tile and Irrigation Systems	Attempt to locate existing drain tiles and irrigation systems.	no	N/A		x
FERC Plan	III.B.2: Drain Tile and Irrigation Systems	Contact landowners and local soil conservation authorities to determine the locations of future drain tiles that are likely to be installed within 3 years of the authorized construction.	no	N/A		x
FERC Plan	III.B.3: Drain Tile and Irrigation Systems	Develop procedures for constructing through drain-tiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.	no	N/A		x
FERC Plan	III.B.4: Drain Tile and Irrigation Systems	Engage qualified drain tile specialists, as needed to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialists from the project area, if available.	no	N/A		x
FERC Plan	III.C: Grazing Deferment	Develop grazing deferment plans with willing landowners, grazing permittees, and land management agencies to minimize grazing disturbance of revegetation efforts.	no	N/A		x
FERC Plan	III.D: Road Crossings and Access Points	Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.	yes	NC Std. & Spec. 6.06	NC requirement for installation of stabilized construction entrance at all locations where construction vehicles access or cross public roads. Standard detail available from NCDEQ - Division of Land Quality	x
FERC Plan	III.E: Disposal Planning	Determine methods and locations for the regular collection, containment, and disposal of excess construction materials and debris (e.g., timber, slash, mats, garbage, drill cuttings and fluids, excess rock) throughout the construction process. Disposal of materials for beneficial reuse must not result in adverse environmental impact and is subject to compliance with all applicable survey, landowner or land management agency approval, and permit requirements.	no	N/A		x
FERC Plan	III.F.1: Agency Coordination	Obtain written recommendations from the local soil conservation authorities or land management agencies regarding permanent erosion control and revegetation specifications.	no	N/A		x
FERC Plan	III.F.2: Agency Coordination	Develop specific procedures in coordination with the appropriate agencies to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities.	no	N/A		x
FERC Plan	III.F.3: Agency Coordination	Develop specific procedures in coordination with the appropriate agencies and landowners, as necessary, to allow for livestock and wildlife movement and protection during construction.	no	N/A		x
FERC Plan	III.F.4: Agency Coordination	Develop specific blasting procedures in coordination with the appropriate agencies that address pre- and post-blast inspections; advanced public notification; and mitigation measures for building foundations, groundwater wells, and springs. Use appropriate methods (e.g., blasting mats) to prevent damage to nearby structures and to prevent debris from entering sensitive environmental resource areas.	no	N/A		x
FERC Plan	III.G: Spill Prevention and Response Procedures	The project sponsor shall develop project-specific Spill Prevention and Response Procedures, as specified in section IV of the staff's Procedures. A copy must be filed with the Secretary of the FERC (Secretary) prior to construction and made available in the field on each construction spread. The filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.	no	N/A		x

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FERC Plan	III.H: Residential Construction	For all properties with residences located within 50 feet of construction work areas, project sponsors shall: avoid removal of mature trees and landscaping within the construction work area unless necessary for safe operation of construction equipment, or as specified in landowner agreements; fence the edge of the construction work area for a distance of 100 feet on either side of the residence; and restore all lawn areas and landscaping immediately following clean up operations, or as specified in landowner agreements. If seasonal or other weather conditions prevent compliance with these time frames, maintain and monitor temporary erosion controls (sediment barriers and mulch) until conditions allow completion of restoration.	no	N/A		x
FERC Plan	III.I: Winter Construction Plans	If construction is planned to occur during winter weather conditions, project sponsors shall develop and file a project-specific winter construction plan with the FERC application. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations. The plan shall address: 1. winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping); 2. stabilization and monitoring procedures if ground conditions will delay restoration until the following spring (e.g., mulching and erosion controls, inspection and reporting, stormwater control during spring thaw conditions); and 3. final restoration procedures (e.g., subsidence and compaction repair, topsoil replacement, seeding).	no	N/A		x
FERC Plan	IV.A.1: Approved Areas of Disturbance	Project-related ground disturbance shall be limited to the construction right-of-way, extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the FERC's Orders. Any project-related ground disturbing activities outside these areas will require prior Director approval. This requirement does not apply to activities needed to comply with the Plan and Procedures (i.e., slope breakers, energy-dissipating devices, dewatering structures, drain tile system repairs) or minor field realignments and workspace shifts per landowner needs and requirements that do not affect other landowners or sensitive environmental resource areas. All construction or restoration activities outside of authorized areas are subject to all applicable survey and permit requirements, and landowner easement agreements.	no	N/A		x
FERC Plan	IV.A.2: Approved Areas of Disturbance	The construction right-of-way width for a project shall not exceed 75 feet or that described in the FERC application unless otherwise modified by a FERC Order. However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval to accommodate full construction right-of-way topsoil segregation and to ensure safe construction where topographic conditions (e.g., side-slopes) or soil limitations require it. Twenty-five feet of extra construction right-of-way width may also be used in limited, non-wetland or non-forested areas for truck turn-arounds where no reasonable alternative access exists. Project use of these additional limited areas is subject to landowner or land management agency approval and compliance with all applicable survey and permit requirements. When additional areas are used, each one shall be identified and the need explained in the weekly or biweekly construction reports to the FERC, if required. The following material shall be included in the reports: a. the location of each additional area by station number and reference to previously filed alignment sheets, or updated alignment sheets showing the additional areas; b. identification of the filing at FERC containing evidence that the additional areas were previously surveyed; and c. a statement that landowner approval has been obtained and is available in project files.	no	N/A		x
FERC Plan	IV.B.1: Topsoil Segregation	Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in: a. cultivated or rotated croplands, and managed pastures; b. residential areas; c. hayfields; and d. other areas at the landowner's or land managing agency's request.	no	N/A		x
FERC Plan	IV.B.2: Topsoil Segregation	In residential areas, importation of topsoil is an acceptable alternative to topsoil segregation.	no	N/A		x
FERC Plan	IV.B.3: Topsoil Segregation	Where topsoil segregation is required, the project sponsor must: a. segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil); and b. make every effort to segregate the entire topsoil layer in soils with less than 12 inches of topsoil.	no	N/A		x
FERC Plan	IV.B.4: Topsoil Segregation	Maintain separation of salvaged topsoil and subsoil throughout all construction activities.	no	N/A		x
FERC Plan	IV.B.5: Topsoil Segregation	Segregated topsoil may not be used for padding the pipe, constructing temporary slope breakers or trench plugs, improving or maintaining roads, or as a fill material.	no	N/A		x
FERC Plan	IV.B.6: Topsoil Segregation	Stabilize topsoil piles and minimize loss due to wind and water erosion with use of sediment barriers, mulch, temporary seeding, tackifiers, or functional equivalents, where necessary.	no	N/A		x
FERC Plan	IV.C: Drain Tiles	1. Mark locations of drain tiles damaged during construction. 2. Probe all drainage tile systems within the area of disturbance to check for damage. 3. Repair damaged drain tiles to their original or better condition. Do not use filter-covered drain tiles unless the local soil conservation authorities and the landowner agree. Use qualified specialists for testing and repairs. 4. For new pipelines in areas where drain tiles exist or are planned, ensure that the depth of cover over the pipeline is sufficient to avoid interference with drain tile systems. For adjacent pipeline loops in agricultural areas, install the new pipeline with at least the same depth of cover as the existing pipeline(s).	no	N/A		x
FERC Plan	IV.D: Irrigation	Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.	no	N/A		x

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FERC Plan	IV.E: Road Crossings and Access Points	<p>1. Maintain safe and accessible conditions at all road crossings and access points during construction.</p> <p>2. If crushed stone access pads are used in residential or agricultural areas, place the stone on synthetic fabric to facilitate removal.</p> <p>3. Minimize the use of tracked equipment on public roadways. Remove any soil or gravel spilled or tracked onto roadways daily or more frequent as necessary to maintain safe road conditions. Repair any damages to roadway surfaces, shoulders, and bar ditches.</p>	yes	NC Std. & Spec. 6.06	NC requirement for installation of stabilized construction entrance at all locations where construction vehicles access or cross public roads. Standard detail available from NCDEQ - Division of Land Quality	x																				
FERC Plan	IV.F: Temporary Erosion Control	Install temporary erosion controls immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration is complete.	no	N/A		x																				
FERC Plan	IV.F.1: Temporary Erosion Control	<p>Temporary Slope Breakers</p> <p>a. Temporary slope breakers are intended to reduce runoff velocity and divert water off the construction right-of-way. Temporary slope breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, or sand bags.</p> <p>b. Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion. Temporary slope breakers must be installed on slopes greater than 5 percent where the base of the slope is less than 50 feet from waterbody, wetland, and road crossings at the following spacing (closer spacing shall be used if necessary)</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Slope (%)</th> <th>Spacing (feet)</th> </tr> </thead> <tbody> <tr> <td>5-15</td> <td>300</td> </tr> <tr> <td>>15-30</td> <td>200</td> </tr> <tr> <td>>30</td> <td>100</td> </tr> </tbody> </table> <p>c. Direct the outfall of each temporary slope breaker to a stable, well vegetated area or construct an energy-dissipating device at the end of the slope breaker and off the construction right-of-way.</p> <p>d. Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive environmental resource areas.</p>	Slope (%)	Spacing (feet)	5-15	300	>15-30	200	>30	100	yes	NC Std. & Spec. 6.23	<p><u>Conditions Where Practice Applies:</u> Where runoff protection is needed to prevent erosion on sloping access rights-of-way or other long, narrow sloping areas generally less than 100 feet in width.</p> <p><u>Design Criteria:</u> Height—18-inch minimum measured from the channel bottom to the ridge top. Side slope— 2:1 or flatter 3:1 or flatter where vehicles cross Base width of ridge—6 feet minimum (Figure 6.23b). Spacing of water bars is shown in Table 6.23a: Spacing of Water Bars on Right-of-Way Less than 100 ft. Wide</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>slope (%)</th> <th>spacing (ft)</th> </tr> </thead> <tbody> <tr> <td><5</td> <td>125</td> </tr> <tr> <td>5 to 10</td> <td>100</td> </tr> <tr> <td>10 to 20</td> <td>75</td> </tr> <tr> <td>20 to 35</td> <td>50</td> </tr> <tr> <td>>35</td> <td>25</td> </tr> </tbody> </table> <p>Grade and angle—A crossing angle should be selected to provide a positive grade not to exceed 2% Outlet—Diversion should have stable outlets, either natural or constructed. Site spacing may need to be adjusted for field conditions to use the most suitable areas for water disposal.</p> <p><u>Construction Specifications:</u> 1. Install the diversion as soon as the right-of-way has been cleared and graded. 2. Disk the base for the constructed ridge before placing fill. 3. Track the ridge to compact it to the design cross section. 4. Locate the outlet on an undisturbed area. Adjust field spacing of the diversion to use the most stable outlet areas. When natural areas are not deemed satisfactory, provide outlet protection (Practices 6.40, Level Spreader, and 6.41, Outlet Stabilization Structure). 5. Immediately seed and mulch the portions of the diversions not subject to construction traffic. Stabilize with gravel areas to be crossed by vehicles.</p> <p><u>Maintenance:</u> Periodically inspect right-of-way diversions for wear and after every heavy rainfall for erosion damage. Immediately remove sediment from the flow area, and repair the dike. Check outlet areas, and make timely repairs as needed. When permanent road drainage is established and the area above the temporary right-of-way diversions is permanently stabilized, remove the dike, and fill the channel to blend with the natural ground, and appropriately stabilize the disturbed area.</p> <p>** Note that through correspondence with NCDEQ, NCDEQ and DTI agreed that the requirements for temporary slope breakers in the FERC Plan would be implemented for ACP.</p>	slope (%)	spacing (ft)	<5	125	5 to 10	100	10 to 20	75	20 to 35	50	>35	25	x
Slope (%)	Spacing (feet)																									
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FERC Plan	IV.F.2: Temporary Erosion Control	<p>Temporary Trench Plugs: Temporary trench plugs are intended to segment a continuous open trench prior to backfill.</p> <p>a. Temporary trench plugs may consist of unexcavated portions of the trench, compacted subsoil, sandbags, or some functional equivalent.</p> <p>b. Position temporary trench plugs, as necessary, to reduce trenchline erosion and minimize the volume and velocity of trench water flow at the base of slopes.</p>	no	N/A		x																				
FERC Plan	IV.F.3: Temporary Erosion Control	<p>Sediment Barriers: Sediment barriers are intended to stop the flow of sediments and to prevent the deposition of sediments beyond approved workspaces or into sensitive resources.</p> <p>a. Sediment barriers may be constructed of materials such as silt fence, staked hay or straw bales, compacted earth (e.g., driveable berms across travelways), sand bags, or other appropriate materials.</p> <p>b. At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until revegetation is successful as defined in this Plan. Leave adequate room between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition.</p> <p>c. Where wetlands or waterbodies are adjacent to and downslope of construction work areas, install sediment barriers along the edge of these areas, as necessary to prevent sediment flow into the wetland or waterbody.</p>	no	N/A		x																				
FERC Plan	IV.F.4: Temporary Erosion Control	<p>Mulch:</p> <p>a. Apply mulch on all slopes (except in cultivated cropland) concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing.</p> <p>b. Mulch can consist of weed-free straw or hay, wood fiber hydromulch, erosion control fabric, or some functional equivalent.</p> <p>c. Mulch all disturbed upland areas (except cultivated cropland) before seeding if: (1) final grading and installation of permanent erosion control measures will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas), as required in section V.A.1; or (2) construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions.</p> <p>d. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent.</p> <p>e. If wood chips are used as mulch, do not use more than 1 ton/acre and add the equivalent of 11 lbs/acre available nitrogen (at least 50 percent of which is slow release).</p> <p>f. Ensure that mulch is adequately anchored to minimize loss due to wind and water.</p> <p>g. When anchoring with liquid mulch binders, use rates recommended by the manufacturer. Do not use liquid mulch binders within 100 feet of wetlands or waterbodies, except where the product is certified environmentally non-toxic by the appropriate state or federal agency or independent standards-setting organization.</p> <p>h. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat, unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.</p>	no	N/A		x																				

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FERC Plan	V.A.1: Restoration Cleanup	Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (i.e., temporary slope breakers, sediment barriers, and mulch) until conditions allow completion of cleanup. If construction or restoration unexpectedly continues into the winter season when conditions could delay successful decompaction, topsoil replacement, or seeding until the following spring, file with the Secretary for the review and written approval of the Director, a winter construction plan (as specified in section III.I). This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.	no	N/A		x												
FERC Plan	V.A.2: Restoration Cleanup	A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed as specified in section IV.F. and inspected and maintained as specified in sections II.B.12 through 14. When access is no longer required the travel lane must be removed and the right-of-way restored.	no	N/A		x												
FERC Plan	V.A.3: Restoration Cleanup	Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench shall be considered construction debris, unless approved for use as mulch or for some other use on the construction work areas by the landowner or land managing agency.	no	N/A		x												
FERC Plan	V.A.4: Restoration Cleanup	Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction work area shall be similar to adjacent areas not disturbed by construction. The landowner or land management agency may approve other provisions in writing.	no	N/A		x												
FERC Plan	V.A.5: Restoration Cleanup	Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting.	no	N/A		x												
FERC Plan	V.A.6: Restoration Cleanup	Remove construction debris from all construction work areas unless the landowner or land managing agency approves leaving materials onsite for beneficial reuse, stabilization, or habitat restoration.	no	N/A		x												
FERC Plan	V.A.7: Restoration Cleanup	Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.	no	N/A		x												
FERC Plan	V.B.1: Permanent Erosion Control Devices	1. Trench Breakers a. Trench breakers are intended to slow the flow of subsurface water along the trench. Trench breakers may be constructed of materials such as sand bags or polyurethane foam. Do not use topsoil in trench breakers. b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers. Otherwise, trench breakers shall be installed at the same spacing as and upslope of permanent slope breakers. c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same spacing as if permanent slope breakers were required. d. At a minimum, install a trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland. Install trench breakers at wetland boundaries, as specified in the Procedures. Do not install trench breakers within a wetland.	no	N/A		x												
FERC Plan	V.B.2: Permanent Erosion Control Devices	Permanent Slope Breakers a. Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction right-of-way, and prevent sediment deposition into sensitive resources. Permanent slope breakers may be constructed of materials such as soil, stone, or some functional equivalent. b. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, unless requested by the landowner, using spacing recommendations obtained from the local soil conservation authority or land managing agency. In the absence of written recommendations, use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction right-of-way: Slope (%) Spacing (feet) 5 - 15 300 >15 - 30 200 >30 100 c. Construct slope breakers to divert surface flow to a stable area without causing water to pool or erode behind the breaker. In the absence of a stable area, construct appropriate energy-dissipating devices at the end of the breaker. d. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction right-of-way to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction right-of-way, they are subject to compliance with all applicable survey requirements.	yes	NC Std. & Spec. 6.23	<p><u>Conditions Where Practice Applies:</u> Where runoff protection is needed to prevent erosion on sloping access rights-of-way or other long, narrow sloping areas generally less than 100 feet in width.</p> <p><u>Design Criteria:</u> Height—18-inch minimum measured from the channel bottom to the ridge top. Side slope— 2:1 or flatter 3:1 or flatter where vehicles cross Base width of ridge—6 feet minimum (Figure 6.23b). Spacing of water bars is shown in Table 6.23a: Spacing of Water Bars on Right-of-Way Less than 100 ft. Wide</p> <table border="1"> <thead> <tr> <th>slope (%)</th> <th>spacing (ft)</th> </tr> </thead> <tbody> <tr> <td><5</td> <td>125</td> </tr> <tr> <td>5 to 10</td> <td>100</td> </tr> <tr> <td>10 to 20</td> <td>75</td> </tr> <tr> <td>20 to 35</td> <td>50</td> </tr> <tr> <td>>35</td> <td>25</td> </tr> </tbody> </table> <p>Grade and angle—A crossing angle should be selected to provide a positive grade not to exceed 2% Outlet—Diversion should have stable outlets, either natural or constructed. Site spacing may need to be adjusted for field conditions to use the most suitable areas for water disposal.</p> <p><u>Construction Specifications:</u> 1. Install the diversion as soon as the right-of-way has been cleared and graded. 2. Disk the base for the constructed ridge before placing fill. 3. Track the ridge to compact it to the design cross section. 4. Locate the outlet on an undisturbed area. Adjust field spacing of the diversion to use the most stable outlet areas. When natural areas are not deemed satisfactory, provide outlet protection (Practices 6.40, Level Spreader, and 6.41, Outlet Stabilization Structure). 5. Immediately seed and mulch the portions of the diversions not subject to construction traffic. Stabilize with gravel areas to be crossed by vehicles.</p> <p><u>Maintenance:</u> Periodically inspect right-of-way diversions for wear and after every heavy rainfall for erosion damage. Immediately remove sediment from the flow area, and repair the dike. Check outlet areas, and make timely repairs as needed. When permanent road drainage is established and the area above the temporary right-of-way diversions is permanently stabilized, remove the dike, and fill the channel to blend with the natural ground, and appropriately stabilize the disturbed area.</p> <p>** Note that through correspondence with NCDEQ, NCDEQ and DTI agreed that the requirements for permanent slope breakers in the FERC Plan would be implemented for ACP.</p>	slope (%)	spacing (ft)	<5	125	5 to 10	100	10 to 20	75	20 to 35	50	>35	25	x
slope (%)	spacing (ft)																	
<5	125																	
5 to 10	100																	
10 to 20	75																	
20 to 35	50																	
>35	25																	
FERC Plan	V.C.1: Soil Compaction Mitigation	Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests.	no	N/A		x												
FERC Plan	V.C.2: Soil Compaction Mitigation	Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil. If subsequent construction and cleanup activities result in further compaction, conduct additional tilling.	no	N/A		x												
FERC Plan	V.C.3: Soil Compaction Mitigation	Perform appropriate soil compaction mitigation in severely compacted residential areas.	no	N/A		x												
FERC Plan	V.D.1: Revegetation	General: a. The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b. b. Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices.	no	N/A		x												
FERC Plan	V.D.2: Revegetation	Soil Additives: Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as practicable after application.	no	N/A		x												

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FERC Plan	V.D.3: Revegetation	Seeding Requirements: a. Prepare a seedbed in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed. b. Seed disturbed areas in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or the request of the landowner or land management agency. Seeding is not required in cultivated croplands unless requested by the landowner. c. Perform seeding of permanent vegetation within the recommended seeding dates. If seeding cannot be done within those dates, use appropriate temporary erosion control measures discussed in section IV.F and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Dormant seeding or temporary seeding of annual species may also be used, if necessary, to establish cover, as approved by the Environmental Inspector. Lawns may be seeded on a schedule established with the landowner. d. In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a through V.D.3.c. e. Base seeding rates on Pure Live Seed. Use seed within 12 months of seed testing. f. Treat legume seed with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydro). g. In the absence of written recommendations from the local soil conservation authorities, landowner, or land managing agency to the contrary, a seed drill equipped with a cultipacker is preferred for seed application. Broadcast or hydroseeding can be used in lieu of drilling at double the recommended seeding rates. Where seed is broadcast, firm the seedbed with a cultipacker or roller after seeding. In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by the Environmental Inspector.	yes	NC Std. & Spec. 6.10 and 6.11	Soil Amendments - apply Lime and fertilizer according to soil tests, or apply 4,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer. Mulch - apply 4,000-5,000 lb/acres grain straw, or equivalent of another suitable mulching material. Anchor mulch by tacking with asphalt, roving, or netting. Netting is the preferred anchoring method on steep slopes. Maintenance refertilize in the second year unless growth is fully adequate. May be mowed one or twice a year, but mowing is not necessary. Reseed, fertilize, and mulch x damaged areas immediately.	
FERC Plan	VI.Off-Road Vehicle Control	To each owner or manager of forested lands, offer to install and maintain measures to control unauthorized vehicle access to the right-of-way. These measures may include: A. signs; B. fences with locking gates; C. slash and timber barriers, pipe barriers, or a line of boulders across the right-of-way; and D. conifers or other appropriate trees or shrubs across the right-of-way.	no	N/A		x
FERC Plan	VII.A.1: Post-Construction Activities and Reporting	MONITORING AND MAINTENANCE: Conduct follow-up inspections of all disturbed areas, as necessary, to determine the success of revegetation and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.	no	N/A		x
FERC Plan	VII.A.2: Post-Construction Activities and Reporting	2. Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful when upon visual survey, crop growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise. Continue revegetation efforts until revegetation is successful.	no	N/A		x
FERC Plan	VII.A.3: Post-Construction Activities and Reporting	Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in agricultural areas until restoration is successful.	no	N/A		x
FERC Plan	VII.A.4: Post-Construction Activities and Reporting	Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful, and proper drainage has been restored.	yes	GP NCG 010000	Notification to NCDEQ-Land Quality that stabilization is complete and request site inspection or release from permit conditions	x
FERC Plan	VII.A.5: Post-Construction Activities and Reporting	Routine vegetation mowing or clearing over the full width of the permanent right-of-way in uplands shall not be done more frequently than every 3 years. However, to facilitate periodic corrosion/leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency or the U.S. Fish and Wildlife Service.	no	N/A		x
FERC Plan	VII.A.6: Post-Construction Activities and Reporting	Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the project. Maintain signs, gates, and permanent access roads as necessary.	no	N/A		x
FERC Plan	VII.B.1: Reporting	1. The project sponsor shall maintain records that identify by milepost: a. method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used; b. acreage treated; c. dates of backfilling and seeding; d. names of landowners requesting special seeding treatment and a description of the follow-up actions; e. the location of any subsurface drainage repairs or improvements made during restoration; and f. any problem areas and how they were addressed.	no	N/A		x
FERC Plan	VII.B.2: Reporting	The project sponsor shall file with the Secretary quarterly activity reports documenting the results of follow-up inspections required by section VII.A.1; any problem areas, including those identified by the landowner; and corrective actions taken for at least 2 years following construction. The requirement to file quarterly activity reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advanced notice provisions in the FERC's regulations.	no	N/A		x
FERC Wetland and Waterbody Construction and Mitigation Procedures						
FERC Procedures	III.A: Environmental Inspectors	At least one Environmental Inspector having knowledge of the wetland and waterbody conditions in the project area is required for each construction spread. The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.	no	N/A		x
FERC Procedures	III.B: Environmental Inspectors	The Environmental Inspector's responsibilities are outlined in the Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).	no	N/A		x

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FERC Procedures	IV.A.1: Preconstruction Planning	<p>The project sponsor shall develop project-specific Spill Prevention and Response Procedures that meet applicable requirements of state and federal agencies. A copy must be filed with the Secretary prior to construction and made available in the field on each construction spread. This filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations. It shall be the responsibility of the project sponsor and its contractors to structure their operations in a manner that reduces the risk of spills or the accidental exposure of fuels or hazardous materials to waterbodies or wetlands. The project sponsor and its contractors must, at a minimum, ensure that:</p> <ul style="list-style-type: none"> a. all employees handling fuels and other hazardous materials are properly trained; b. all equipment is in good operating order and inspected on a regular basis; c. fuel trucks transporting fuel to on-site equipment travel only on approved access roads; d. all equipment is parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill; e. hazardous materials, including chemicals, fuels, and lubricating oils, are not stored within 100 feet of a wetland, waterbody, or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas; f. concrete coating activities are not performed within 100 feet of a wetland or waterbody boundary, unless the location is an existing industrial site designated for such use. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill; g. pumps operating within 100 feet of a waterbody or wetland boundary utilize appropriate secondary containment systems to prevent spills; and h. bulk storage of hazardous materials, including chemicals, fuels, and lubricating oils have appropriate secondary containment systems to prevent spills. 	no	N/A		x
			no	N/A		
FERC Procedures	IV.A.2: Preconstruction Planning	<p>The project sponsor and its contractors must structure their operations in a manner that provides for the prompt and effective cleanup of spills of fuel and other hazardous materials. At a minimum, the project sponsor and its contractors must:</p> <ul style="list-style-type: none"> a. ensure that each construction crew (including cleanup crews) has on hand sufficient supplies of absorbent and barrier materials to allow the rapid containment and recovery of spilled materials and knows the procedure for reporting spills and unanticipated discoveries of contamination; b. ensure that each construction crew has on hand sufficient tools and material to stop leaks; c. know the contact names and telephone numbers for all local, state, and federal agencies (including, if necessary, the U. S. Coast Guard and the National Response Center) that must be notified of a spill; and d. follow the requirements of those agencies in cleaning up the spill, in excavating and disposing of soils or other materials contaminated by a spill, and in collecting and disposing of waste generated during spill cleanup. 	no	N/A		x
FERC Procedures	IV.B: Agency Coordination	The project sponsor must coordinate with the appropriate local, state, and federal agencies as outlined in these Procedures and in the FERC's Orders.	no	N/A		x
FERC Procedures	V.A:Waterbody Crossings	<p>NOTIFICATION PROCEDURES AND PERMITS:</p> <ol style="list-style-type: none"> 1. Apply to the U.S. Army Corps of Engineers (COE), or its delegated agency, for the appropriate wetland and waterbody crossing permits. 2. Provide written notification to authorities responsible for potable surface water supply intakes located within 3 miles downstream of the crossing at least 1 week before beginning work in the waterbody, or as otherwise specified by that authority. 3. Apply for state-issued waterbody crossing permits and obtain individual or generic section 401 water quality certification or waiver. 4. Notify appropriate federal and state authorities at least 48 hours before beginning trenching or blasting within the waterbody, or as specified in applicable permits. 	no	N/A		x
FERC Procedures	V.B.1:Installation	<p>Time Window for Construction: Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows:</p> <ul style="list-style-type: none"> a. coldwater fisheries - June 1 through September 30; and b. coolwater and warmwater fisheries - June 1 through November 30. 	no	N/A		x
FERC Procedures	V.B.2:Installation	<p>Extra Work Areas</p> <ul style="list-style-type: none"> a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from the water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the conditions that will not permit a 50-foot setback and measures to ensure the waterbody is adequately protected. c. Limit the size of extra work areas to the minimum needed to construct the waterbody crossing. 	no	N/A		x
FERC Procedures	V.B.3:Installation	<p>General Crossing Procedures</p> <ul style="list-style-type: none"> a. Comply with the COE, or its delegated agency, permit terms and conditions. b. Construct crossings as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit. c. Where pipelines parallel a waterbody, maintain at least 15 feet of undisturbed vegetation between the waterbody (and any adjacent wetland) and the construction right-of-way, except where maintaining this offset will result in greater environmental impact. d. Where waterbodies meander or have multiple channels, route the pipeline to minimize the number of waterbody crossings. e. Maintain adequate waterbody flow rates to protect aquatic life, and prevent the interruption of existing downstream uses. f. Waterbody buffers (e.g., extra work area setbacks, refueling restrictions) must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete. g. Crossing of waterbodies when they are dry or frozen and not flowing may proceed using standard upland construction techniques in accordance with the Plan, provided that the Environmental Inspector verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature. In the event of perceptible flow, the project sponsor must comply with all applicable Procedure requirements for "waterbodies" as defined in section I.B.1. 	no	N/A		x
FERC Procedures	V.B.4:Installation	<p>Spoil Pile Placement and Control</p> <ul style="list-style-type: none"> a. All spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings, must be placed in the construction right-of-way at least 10 feet from the water's edge or in additional extra work areas as described in section V.B.2. b. Use sediment barriers to prevent the flow of spoil or silt-laden water into any waterbody. 	no	N/A		x

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FERC Procedures	V.B.5:Installation	<p>Equipment Bridges</p> <p>a. Only clearing equipment and equipment necessary for installation of equipment bridges may cross waterbodies prior to bridge installation. Limit the number of such crossings of each waterbody to one per piece of clearing equipment.</p> <p>b. Construct and maintain equipment bridges to allow unrestricted flow and to prevent soil from entering the waterbody. Examples of such bridges include:</p> <p>(1) equipment pads and culvert(s);</p> <p>(2) equipment pads or railroad car bridges without culverts;</p> <p>(3) clean rock fill and culvert(s); and</p> <p>(4) flexi-float or portable bridges.</p> <p>Additional options for equipment bridges may be utilized that achieve the performance objectives noted above. Do not use soil to construct or stabilize equipment bridges.</p> <p>c. Design and maintain each equipment bridge to withstand and pass the highest flow expected to occur while the bridge is in place. Align culverts to prevent bank erosion or streambed scour. If necessary, install energy dissipating devices downstream of the culverts.</p> <p>d. Design and maintain equipment bridges to prevent soil from entering the waterbody.</p> <p>e. Remove temporary equipment bridges as soon as practicable after permanent seeding.</p> <p>f. If there will be more than 1 month between final cleanup and the beginning of permanent seeding and reasonable alternative access to the right-of-way is available, remove temporary equipment bridges as soon as practicable after final cleanup.</p> <p>g. Obtain any necessary approval from the COE, or the appropriate state agency for permanent bridges.</p>	no	N/A		x
			no	N/A		
FERC Procedures	V.B.6:Installation	<p>a. Dry-Ditch Crossing Methods</p> <p>a. Unless approved otherwise by the appropriate federal or state agency, install the pipeline using one of the dry-ditch methods outlined below for crossings of waterbodies up to 30 feet wide (at the water's edge at the time of construction) that are state-designated as either coldwater or significant coolwater or warmwater fisheries, or federally-designated as critical habitat.</p> <p>b. Dam and Pump</p> <p>(1) The dam-and-pump method may be used without prior approval for crossings of waterbodies where pumps can adequately transfer streamflow volumes around the work area, and there are no concerns about sensitive species passage.</p> <p>(2) Implementation of the dam-and-pump crossing method must meet the following performance criteria:</p> <p>(i) use sufficient pumps, including on-site backup pumps, to maintain downstream flows;</p> <p>(ii) construct dams with materials that prevent sediment and other pollutants from entering the waterbody (e.g., sandbags or clean gravel with plastic liner);</p> <p>(iii) screen pump intakes to minimize entrainment of fish;</p> <p>(iv) prevent streambed scour at pump discharge; and</p> <p>(v) continuously monitor the dam and pumps to ensure proper operation throughout the waterbody crossing.</p> <p>c. Flume Crossing: The flume crossing method requires implementation of the following steps:</p> <p>(1) install flume pipe after blasting (if necessary), but before any trenching;</p> <p>(2) use sand bag or sand bag and plastic sheeting diversion structure or equivalent to develop an effective seal and to divert stream flow through the flume pipe (some modifications to the stream bottom may be required to achieve an effective seal);</p> <p>(3) properly align flume pipe(s) to prevent bank erosion and streambed scour;</p> <p>(4) do not remove flume pipe during trenching, pipelaying, or backfilling activities, or initial streambed restoration efforts; and</p> <p>(5) remove all flume pipes and dams that are not also part of the equipment bridge as soon as final cleanup of the stream bed and bank is complete.</p> <p>d. Horizontal Directional Drill</p> <p>For each waterbody or wetland that would be crossed using the HDD method, file with the Secretary for the review and written approval by the Director, a plan that includes:</p> <p>(1) site-specific construction diagrams that show the location of mud pits, pipe assembly areas, and all areas to be disturbed or cleared for construction;</p> <p>(2) justification that disturbed areas are limited to the minimum needed to construct the crossing;</p> <p>(3) identification of any aboveground disturbance or clearing between the HDD entry and exit workspaces during construction;</p> <p>(4) a description of how an inadvertent release of drilling mud would be contained and cleaned up; and</p> <p>(5) a contingency plan for crossing the waterbody or wetland in the event the HDD is unsuccessful and how the abandoned drill hole would be sealed, if necessary.</p> <p>The requirement to file HDD plans does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.</p>	no	N/A		x
			no	N/A		

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FERC Procedures	V.B.7:Installation	<p>Crossings of Minor Waterbodies</p> <p>Where a dry-ditch crossing is not required, minor waterbodies may be crossed using the open-cut crossing method, with the following restrictions:</p> <ul style="list-style-type: none"> a. except for blasting and other rock breaking measures, complete instream construction activities (including trenching, pipe installation, backfill, and restoration of the streambed contours) within 24 hours. Streambanks and unconsolidated streambeds may require additional restoration after this period; b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and c. equipment bridges are not required at minor waterbodies that do not have a state-designated fishery classification or protected status (e.g., agricultural or intermittent drainage ditches). However, if an equipment bridge is used it must be constructed as described in section V.B.5. 	no	N/A		x
FERC Procedures	V.B.8:Installation	<p>Crossings of Intermediate Waterbodies</p> <p>Where a dry-ditch crossing is not required, intermediate waterbodies may be crossed using the open-cut crossing method, with the following restrictions:</p> <ul style="list-style-type: none"> a. complete instream construction activities (not including blasting and other rock breaking measures) within 48 hours, unless site-specific conditions make completion within 48 hours infeasible; b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and c. all other construction equipment must cross on an equipment bridge as specified in section V.B.5. 	no	N/A		x
FERC Procedures	V.B.9:Installation	<p>Crossings of Major Waterbodies</p> <p>Before construction, the project sponsor shall file with the Secretary for the review and written approval by the Director a detailed, site-specific construction plan and scaled drawings identifying all areas to be disturbed by construction for each major waterbody crossing (the scaled drawings are not required for any offshore portions of pipeline projects). This plan must be developed in consultation with the appropriate state and federal agencies and shall include extra work areas, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues. The requirement to file major waterbody crossing plans does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.</p> <p>The Environmental Inspector may adjust the final placement of the erosion and sediment control structures in the field to maximize effectiveness.</p>	no	N/A		x
FERC Procedures	V.B.10:Installation	<p>Temporary Erosion and Sediment Control</p> <p>Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the waterbody or adjacent upland.</p> <p>Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan; however, the following specific measures must be implemented at stream crossings:</p> <ul style="list-style-type: none"> a. install sediment barriers across the entire construction right-of-way at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. Removable sediment barriers (or driveable berms) must be installed across the travel lane. These removable sediment barriers can be removed during the construction day, but must be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent; b. where waterbodies are adjacent to the construction right-of-way and the right-of-way slopes toward the waterbody, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the waterbody; and c. use temporary trench plugs at all waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the waterbody. 	no	N/A		x
FERC Procedures	V.B.11:Installation	<p>Trench Dewatering</p> <p>Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any waterbody. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.</p>	no	N/A		x
			no	N/A		

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FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Where Requirement/Practice Applies
			yes/no	If yes, list requirements/practices		Non-specific Area
FERC Procedures	V.C:Restoration	<p>1. Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain coldwater fisheries.</p> <p>2. For open-cut crossings, stabilize waterbody banks and install temporary sediment barriers within 24 hours of completing instream construction activities. For dry-ditch crossings, complete streambed and bank stabilization before returning flow to the waterbody channel.</p> <p>3. Return all waterbody banks to preconstruction contours or to a stable angle of repose as approved by the Environmental Inspector.</p> <p>4. Install erosion control fabric or a functional equivalent on waterbody banks at the time of final bank recontouring. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.</p> <p>5. Application of riprap for bank stabilization must comply with COE, or its delegated agency, permit terms and conditions.</p> <p>6. Unless otherwise specified by state permit, limit the use of riprap to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric.</p> <p>7. Revegetate disturbed riparian areas with native species of conservation grasses, legumes, and woody species, similar in density to adjacent undisturbed lands.</p> <p>8. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent that are less than 50 feet from the waterbody, or as needed to prevent sediment transport into the waterbody. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the waterbody.</p> <p>9. Sections V.C.3 through V.C.7 above also apply to those perennial or intermittent streams not flowing at the time of construction.</p>	no	N/A		x
FERC Procedures	V.D:Post-Construction Maintenance	<p>1. Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in riparian areas that are between HDD entry and exit points.</p> <p>2. Do not use herbicides or pesticides in or within 100 feet of a waterbody except as allowed by the appropriate land management or state agency.</p> <p>3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of riparian areas.</p>	no	N/A		x
FERC Procedures	VI: Wetland Crossings					
FERC Procedures	VI.A.1: General	<p>The project sponsor shall conduct a wetland delineation using the current federal methodology and file a wetland delineation report with the Secretary before construction. The requirement to file a wetland delineation report does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.</p> <p>This report shall identify:</p> <ul style="list-style-type: none"> a. by milepost all wetlands that would be affected; b. the National Wetlands Inventory (NWI) classification for each wetland; c. the crossing length of each wetland in feet; and d. the area of permanent and temporary disturbance that would occur in each wetland by NWI classification type. <p>The requirements outlined in this section do not apply to wetlands in actively cultivated or rotated cropland. Standard upland protective measures, including workspace and topsoiling requirements, apply to these agricultural wetlands.</p>	no	N/A		x
FERC Procedures	VI.A.2: General	Route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands. Where looping an existing pipeline, overlap the existing pipeline right-of-way with the new construction right-of-way. In addition, locate the loop line no more than 25 feet away from the existing pipeline unless site-specific constraints would adversely affect the stability of the existing pipeline.	no	N/A		x
FERC Procedures	VI.A.3: General	Limit the width of the construction right-of-way to 75 feet or less. Prior written approval of the Director is required where topographic conditions or soil limitations require that the construction right-of-way width within the boundaries of a federally delineated wetland be expanded beyond 75 feet. Early in the planning process the project sponsor is encouraged to identify site-specific areas where excessively wide trenches could occur and/or where spoil piles could be difficult to maintain because existing soils lack adequate unconfined compressive strength.	no	N/A		x
FERC Procedures	VI.A.4: General	Wetland boundaries and buffers must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.	no	N/A		x
FERC Procedures	VI.A.5: General	Implement the measures of sections V and VI in the event a waterbody crossing is located within or adjacent to a wetland crossing. If all measures of sections V and VI cannot be met, the project sponsor must file with the Secretary a site-specific crossing plan for review and written approval by the Director before construction. This crossing plan shall address at a minimum:	no	N/A		x
FERC Procedures	VI.A.6: General	Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit compliance with U.S. Department of Transportation regulations.	no	N/A		x
FERC Procedures	VI.B.1: Installation	<p>Extra Work Areas and Access Roads</p> <ul style="list-style-type: none"> a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from wetland boundaries, except where adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the site-specific conditions that will not permit a 50-foot setback and measures to ensure the wetland is adequately protected. c. The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction right-of-way has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats). In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall use access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way. d. The only access roads, other than the construction right-of-way, that can be used in wetlands are those existing roads that can be used with no modifications or improvements, other than routine repair, and no impact on the wetland. 	no	N/A		x

Atlantic Coast Pipeline - North Carolina

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Where Requirement/Practice Applies	
			yes/no	If yes, list requirements/practices		Non-specific Area	
FERC Procedures	VI.B.2: Installation	<p>Crossing Procedures</p> <p>a. Comply with COE, or its delegated agency, permit terms and conditions.</p> <p>b. Assemble the pipeline in an upland area unless the wetland is dry enough to adequately support skids and pipe.</p> <p>c. Use "push-pull" or "float" techniques to place the pipe in the trench where water and other site conditions allow.</p> <p>d. Minimize the length of time that topsoil is segregated and the trench is open. Do not trench the wetland until the pipeline is assembled and ready for lowering in.</p> <p>e. Limit construction equipment operating in wetland areas to that needed to clear the construction right-of-way, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction right-of-way.</p> <p>f. Cut vegetation just above ground level, leaving existing root systems in place, and remove it from the wetland for disposal. The project sponsor can burn woody debris in wetlands, if approved by the COE and in accordance with state and local regulations, ensuring that all remaining woody debris is removed for disposal.</p> <p>g. Limit pulling of tree stumps and grading activities to directly over the trenchline. Do not grade or remove stumps or root systems from the rest of the construction right-of-way in wetlands unless the Chief Inspector and Environmental Inspector determine that safety-related construction constraints require grading or the removal of tree stumps from under the working side of the construction right-of-way.</p> <p>h. Segregate the top 1 foot of topsoil from the area disturbed by trenching, except in areas where standing water is present or soils are saturated. Immediately after backfilling is complete, restore the segregated topsoil to its original location.</p> <p>i. Do not use rock, soil imported from outside the wetland, tree stumps, or brush riprap to support equipment on the construction right-of-way.</p> <p>j. If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment, or operate normal equipment on timber riprap, prefabricated equipment mats, or terra mats.</p> <p>k. Remove all project-related material used to support equipment on the construction right-of-way upon completion of construction.</p>	no	N/A		x	
		no	N/A				
FERC Procedures	VI.B.3: Installation	<p>Temporary Sediment Control</p> <p>Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the wetland or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench). Except as noted below in section VI.B.3.c, maintain sediment barriers until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan.</p> <p>a. Install sediment barriers across the entire construction right-of-way upslope of the wetland boundary at all wetland crossings where necessary to prevent sediment flow into the wetland.</p> <p>b. Where wetlands are adjacent to the construction right-of-way and the right-of-way slopes toward the wetland, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the wetland.</p> <p>c. Install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way through wetlands. Remove these sediment barriers during right-of-way cleanup.</p>	no	N/A		x	
FERC Procedures	VI.B.4: Installation	<p>Trench Dewatering</p> <p>Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any wetland. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.</p>	no	N/A		x	
FERC Procedures	VI.C: Restoration	<p>1. Where the pipeline trench may drain a wetland, construct trench breakers at the wetland boundaries and/or seal the trench bottom as necessary to maintain the original wetland hydrology.</p> <p>2. Restore pre-construction wetland contours to maintain the original wetland hydrology.</p> <p>3. For each wetland crossed, install a trench breaker at the base of slopes near the boundary between the wetland and adjacent upland areas. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the wetland.</p> <p>4. Do not use fertilizer, lime, or mulch unless required in writing by the appropriate federal or state agency.</p> <p>5. Consult with the appropriate federal or state agencies to develop a project-specific wetland restoration plan. The restoration plan shall include measures for re-establishing herbaceous and/or woody species, controlling the invasion and spread of invasive species and noxious weeds (e.g., purple loosestrife and phragmites), and monitoring the success of the revegetation and weed control efforts. Provide this plan to the FERC staff upon request.</p> <p>6. Until a project-specific wetland restoration plan is developed and/or implemented, temporarily revegetate the construction right-of-way with annual ryegrass at a rate of 40 pounds/acre (unless standing water is present).</p> <p>7. Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species.</p> <p>8. Remove temporary sediment barriers located at the boundary between wetland and adjacent upland areas after revegetation and stabilization of adjacent upland areas are judged to be successful as specified in section VII.A.4 of the Plan.</p>	no	N/A		x	
FERC Procedures	VI.D: Post-Construction Maintenance And Reporting	<p>1. Do not conduct routine vegetation mowing or clearing over the full width of the permanent right-of-way in wetlands. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in wetlands that are between HDD entry and exit points.</p> <p>2. Do not use herbicides or pesticides in or within 100 feet of a wetland, except as allowed by the appropriate federal or state agency.</p> <p>3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of wetland areas.</p> <p>4. Monitor and record the success of wetland revegetation annually until wetland revegetation is successful.</p> <p>5. Wetland revegetation shall be considered successful if all of the following criteria are satisfied:</p> <p>a. the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation);</p> <p>b. vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction;</p> <p>c. if natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and</p> <p>d. invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction.</p> <p>6. Within 3 years after construction, file a report with the Secretary identifying the status of the wetland revegetation efforts and documenting success as defined in section VI.D.5, above. The requirement to file wetland restoration reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advance notice provisions in the FERC's regulations.</p> <p>For any wetland where revegetation is not successful at the end of 3 years after construction, develop and implement (in consultation with a professional wetland ecologist) a remedial revegetation plan to actively revegetate wetlands. Continue revegetation efforts and file a report annually documenting progress in these wetlands until wetland revegetation is successful.</p>	no	N/A			
FERC Procedures	VII: Hydrostatic Testing						
FERC Procedures	VII.A: Notification Procedures and Permits	<p>1. Apply for state-issued water withdrawal permits, as required.</p> <p>2. Apply for National Pollutant Discharge Elimination System (NPDES) or state-issued discharge permits, as required.</p> <p>3. Notify appropriate state agencies of intent to use specific sources at least 48 hours before testing activities unless they waive this requirement in writing.</p>	no	N/A		x	

Atlantic Coast Pipeline - North Carolina

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Where Requirement/Practice Applies
			yes/no	If yes, list requirements/practices		Non-specific Area
FERC Procedures	VII.B: General	1. Perform 100 percent radiographic inspection of all pipeline section welds or hydrotest the pipeline sections, before installation under waterbodies or wetlands. 2. If pumps used for hydrostatic testing are within 100 feet of any waterbody or wetland, address secondary containment and refueling of these pumps in the project's Spill Prevention and Response Procedures. 3. The project sponsor shall file with the Secretary before construction a list identifying the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.	no	N/A		x
FERC Procedures	VII.C: Intake Source and Rate	1. Screen the intake hose to minimize the potential for entrainment of fish. 2. Do not use state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and/or local permitting agencies grant written permission. 3. Maintain adequate flow rates to protect aquatic life, provide for all waterbody uses, and provide for downstream withdrawals of water by existing users. 4. Locate hydrostatic test manifolds outside wetlands and riparian areas to the maximum extent practicable.	no	N/A		x
FERC Procedures	VII.D: Discharge Location, Method, and Rate	1. Regulate discharge rate, use energy dissipation device(s), and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow. 2. Do not discharge into state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and local permitting agencies grant written permission.	no	N/A		x

Atlantic Coast Pipeline - Virginia

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies	
			yes/no	if yes, list requirements/practices			USFS National Forest	Non-specific Area
FERC Upland Erosion Control, Revegetation, and Maintenance Plan								
FERC Plan	II.A.1: Environmental Inspection	At least one Environmental Inspector is required for each construction spread during construction and restoration (as defined by section V). The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.	no	NA	NA	7.1		x
FERC Plan	II.A.2: Environmental Inspection	Environmental Inspectors shall have peer status with all other activity inspectors.	no	NA	NA	7.1		x
FERC Plan	II.A.3: Environmental Inspection	Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the FERC's Orders, stipulations of other environmental permits or approvals, or landowner easement agreements; and to order appropriate corrective action.	no	NA	NA	7.1		x
FERC Plan	II.B.1: Responsibilities of Environmental Inspectors	Inspecting construction activities for compliance with the requirements of this Plan, the Procedures, the environmental conditions of the FERC's Orders, the mitigation measures proposed by the project sponsor (as approved and/or modified by the Order), other environmental permits and approvals, and environmental requirements in landowner easement agreements.	yes	9 VAC 25-850-30 (Erosion and Sediment Control and Stormwater Management Certification Regulations)	Inspections of land-disturbing activities shall be conducted by a certified inspector in accordance with §662.1-44.15:51 E and 62.1-44.15:53 of the Virginia Erosion and Sediment Control Act. A "certified inspector" means an employee or agent of a VESCP authority (or entity with standards and specifications such as DTI) who (i) holds a certificate of competence from the Board in the area of project inspection or (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment.	7.1		x
FERC Plan	II.B.2: Responsibilities of Environmental Inspectors	Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;	yes	9 VAC 25-850-30 (Erosion and Sediment Control and Stormwater Management Certification Regulations)	Inspections of land-disturbing activities shall be conducted by a certified inspector in accordance with §662.1-44.15:51 E and 62.1-44.15:53 of the Virginia Erosion and Sediment Control Act. A "certified inspector" means an employee or agent of a VESCP authority (or entity with standards and specifications such as DTI) who (i) holds a certificate of competence from the Board in the area of project inspection or (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment.	7.1		x
FERC Plan	II.B.3: Responsibilities of Environmental Inspectors	Verifying that the limits of authorized construction work areas and locations of access roads are visibly marked before clearing, and maintained throughout construction;	yes	9 VAC 25-850-30 (Erosion and Sediment Control and Stormwater Management Certification Regulations)	Inspections of land-disturbing activities shall be conducted by a certified inspector in accordance with §662.1-44.15:51 E and 62.1-44.15:53 of the Virginia Erosion and Sediment Control Act. A "certified inspector" means an employee or agent of a VESCP authority (or entity with standards and specifications such as DTI) who (i) holds a certificate of competence from the Board in the area of project inspection or (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment.	7.1		x
FERC Plan	II.B.4: Responsibilities of Environmental Inspectors	Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;	yes	9 VAC 25-850-30 (Erosion and Sediment Control and Stormwater Management Certification Regulations)	Inspections of land-disturbing activities shall be conducted by a certified inspector in accordance with §662.1-44.15:51 E and 62.1-44.15:53 of the Virginia Erosion and Sediment Control Act. A "certified inspector" means an employee or agent of a VESCP authority (or entity with standards and specifications such as DTI) who (i) holds a certificate of competence from the Board in the area of project inspection or (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment.	7.1		x
FERC Plan	II.B.5: Responsibilities of Environmental Inspectors	Identifying erosion/sediment control and soil stabilization needs in all areas	yes	9 VAC 25-850-30 (Erosion and Sediment Control and Stormwater Management Certification Regulations)	Inspections of land-disturbing activities shall be conducted by a certified inspector in accordance with §662.1-44.15:51 E and 62.1-44.15:53 of the Virginia Erosion and Sediment Control Act. A "certified inspector" means an employee or agent of a VESCP authority (or entity with standards and specifications such as DTI) who (i) holds a certificate of competence from the Board in the area of project inspection or (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment.	3.3		x
FERC Plan	II.B.6: Responsibilities of Environmental Inspectors	Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats;	yes	9 VAC 25-850-30 (Erosion and Sediment Control and Stormwater Management Certification Regulations)	Inspections of land-disturbing activities shall be conducted by a certified inspector in accordance with §662.1-44.15:51 E and 62.1-44.15:53 of the Virginia Erosion and Sediment Control Act. A "certified inspector" means an employee or agent of a VESCP authority (or entity with standards and specifications such as DTI) who (i) holds a certificate of competence from the Board in the area of project inspection or (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment.	7.1		x
FERC Plan	II.B.7: Responsibilities of Environmental Inspectors	Verifying that dewatering activities are properly monitored and do not result in the deposition of sand, silt, and/or sediment into sensitive environmental resource areas, including wetlands, waterbodies, cultural resource sites, and sensitive species habitats; stopping dewatering activities if such deposition is occurring and ensuring the design of the discharge is changed to prevent recurrence; and verifying that dewatering structures are removed after completion of dewatering activities;	yes	9 VAC 25-850-30 (Erosion and Sediment Control and Stormwater Management Certification Regulations)	Inspections of land-disturbing activities shall be conducted by a certified inspector in accordance with §662.1-44.15:51 E and 62.1-44.15:53 of the Virginia Erosion and Sediment Control Act. A "certified inspector" means an employee or agent of a VESCP authority (or entity with standards and specifications such as DTI) who (i) holds a certificate of competence from the Board in the area of project inspection or (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment.	3.1.8.1 3.1.8.2		x
FERC Plan	II.B.8: Responsibilities of Environmental Inspectors	Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action	no	NA	NA	3.1.13.3		x
FERC Plan	II.B.9: Responsibilities of Environmental Inspectors	Advising the Chief Construction Inspector when environmental conditions (such as wet weather or frozen soils) make it advisable to restrict or delay construction activities to avoid topsoil mixing or excessive compaction;	no	NA	NA	7.1		x
FERC Plan	II.B.10: Responsibilities of Environmental Inspectors	Ensuring restoration of contours and topsoil;	yes	9 VAC 25-850-30 (Erosion and Sediment Control and Stormwater Management Certification Regulations)	Inspections of land-disturbing activities shall be conducted by a certified inspector in accordance with §662.1-44.15:51 E and 62.1-44.15:53 of the Virginia Erosion and Sediment Control Act. A "certified inspector" means an employee or agent of a VESCP authority (or entity with standards and specifications such as DTI) who (i) holds a certificate of competence from the Board in the area of project inspection or (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment.	7.1		x
FERC Plan	II.B.11: Responsibilities of Environmental Inspectors	Verifying that the soils imported for agricultural or residential use are certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner;	no	NA	NA	7.1		x
FERC Plan	II.B.12: Responsibilities of Environmental Inspectors	Ensuring that erosion control devices are properly installed to prevent sediment flow into sensitive environmental resource areas (e.g., wetlands, waterbodies, cultural resource sites, and sensitive species habitats) and onto roads, and determining the need for additional erosion control devices;	yes	9 VAC 25-850-30 (Erosion and Sediment Control and Stormwater Management Certification Regulations)	Inspections of land-disturbing activities shall be conducted by a certified inspector in accordance with §662.1-44.15:51 E and 62.1-44.15:53 of the Virginia Erosion and Sediment Control Act. A "certified inspector" means an employee or agent of a VESCP authority (or entity with standards and specifications such as DTI) who (i) holds a certificate of competence from the Board in the area of project inspection or (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment.	7.1		x
FERC Plan	II.B.13: Responsibilities of Environmental Inspectors	Inspecting and ensuring the maintenance of temporary erosion control measures at least: a. on a daily basis in areas of active construction or equipment operation; b. on a weekly basis in areas with no construction or equipment operation; and c. within 24 hours of each 0.5 inch of rainfall;	yes	9 VAC 25-850-30 (Erosion and Sediment Control and Stormwater Management Certification Regulations)	Inspections of land-disturbing activities shall be conducted by a certified inspector in accordance with §662.1-44.15:51 E and 62.1-44.15:53 of the Virginia Erosion and Sediment Control Act. A "certified inspector" means an employee or agent of a VESCP authority (or entity with standards and specifications such as DTI) who (i) holds a certificate of competence from the Board in the area of project inspection or (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment. Note that FERC-related inspections conducted at the frequencies listed in FERC Plan II.B.13 do not require a Virginia-certified inspector.	8.1.1		x
FERC Plan	II.B.14: Responsibilities of Environmental Inspectors	Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts;	no	NA	NA	7.1		x

Atlantic Coast Pipeline - Virginia

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies	
			yes/no	if yes, list requirements/practices			USFS National Forest	Non-specific Area
FERC Plan	II.B.15: Responsibilities of Environmental Inspectors	Keeping records of compliance with the environmental conditions of the FERC's Orders, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other federal or state environmental permits during active construction and restoration;	no	NA	NA	7.1		x
FERC Plan	II.B.16: Responsibilities of Environmental Inspectors	Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase; and	no	NA	NA	7.1		x
FERC Plan	II.B.17: Responsibilities of Environmental Inspectors	Verifying that locations for any disposal of excess construction materials for beneficial reuse comply with section III.E.	no	NA	NA	7.1		x
FERC Plan	III.A.1: Construction Work Areas	Identify all construction work areas (e.g., construction right-of-way, extra work space areas, pipe storage and contractor yards, borrow and disposal areas, access roads) that would be needed for safe construction. The project sponsor must ensure that appropriate cultural resources and biological surveys are conducted, as determined necessary by the appropriate federal and state agencies.	no	NA	NA	2.11 2.18 2.19.5 2.19.9		x
FERC Plan	III.A.2: Construction Work Areas	Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of authorized work areas.	no	NA	NA	N/A		x
FERC Plan	III.A.3: Construction Work Areas	Plan construction sequencing to limit the amount and duration of open trench sections, as necessary, to prevent excessive erosion or sediment flow into sensitive environmental resource areas.	yes	VA Minimum Standard, MS-16a	Virginia Minimum Standard MS-16a requires that no more than 500 linear feet of trench may be opened at one time. In accordance with Virginia ESC Regulation for Variances (9 VAC 25-840-50.1), a variance to allow more than 500 linear feet of trench to be open at any one time is requested to become part of the approved Erosion and Sediment Control Plan (See General Notes on Construction Alignment Sheets)	Appendix A - Construction Alignment Sheets: General Notes		x
FERC Plan	III.B.1: Drain Tile and Irrigation Systems	Attempt to locate existing drain tiles and irrigation systems.	no	NA	NA	3.5.2		x
FERC Plan	III.B.2: Drain Tile and Irrigation Systems	Contact landowners and local soil conservation authorities to determine the locations of future drain tiles that are likely to be installed within 3 years of the authorized construction.	no	NA	NA	3.5.2		x
FERC Plan	III.B.3: Drain Tile and Irrigation Systems	Develop procedures for constructing through drain-tiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.	no	NA	NA	3.5.2		x
FERC Plan	III.B.4: Drain Tile and Irrigation Systems	Engage qualified drain tile specialists, as needed to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialists from the project area, if available.	no	NA	NA	3.1		x
FERC Plan	III.C: Grazing Deferment	Develop grazing deferment plans with willing landowners, grazing permittees, and land management agencies to minimize grazing disturbance of revegetation efforts.	no	NA	NA	3.5.2		x
FERC Plan	III.D: Road Crossings and Access Points	Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.	no	NA	NA	3.1		x
FERC Plan	III.E: Disposal Planning	Determine methods and locations for the regular collection, containment, and disposal of excess construction materials and debris (e.g., timber, slash, mats, garbage, drill cuttings and fluids, excess rock) throughout the construction process. Disposal of materials for beneficial reuse must not result in adverse environmental impact and is subject to compliance with all applicable survey, landowner or land management agency approval, and permit requirements.	no	NA	NA	6.4 6.6 7.1		x
FERC Plan	III.F.1: Agency Coordination	Obtain written recommendations from the local soil conservation authorities or land management agencies regarding permanent erosion control and revegetation specifications.	no	NA	NA	3.1.13.4 Appendix R- Restoration & Rehabilitation Plan		x
FERC Plan	III.F.2: Agency Coordination	Develop specific procedures in coordination with the appropriate agencies to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities.	no	NA	NA	6.4		x
FERC Plan	III.F.3: Agency Coordination	Develop specific procedures in coordination with the appropriate agencies and landowners, as necessary, to allow for livestock and wildlife movement and protection during construction.	no	NA	NA	3.5.2		x
FERC Plan	III.F.4: Agency Coordination	Develop specific blasting procedures in coordination with the appropriate agencies that address pre- and post-blast inspections; advanced public notification; and mitigation measures for building foundations, groundwater wells, and springs. Use appropriate methods (e.g., blasting mats) to prevent damage to nearby structures and to prevent debris from entering sensitive environmental resource areas.	no	NA	NA	3.1.6.3		x
FERC Plan	III.G: Spill Prevention and Response Procedures	The project sponsor shall develop project-specific Spill Prevention and Response Procedures, as specified in section IV of the staff's Procedures. A copy must be filed with the Secretary of the FERC (Secretary) prior to construction and made available in the field on each construction spread. The filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.	no	NA	NA	6.0		x
FERC Plan	III.H: Residential Construction	For all properties with residences located within 50 feet of construction work areas, project sponsors shall: avoid removal of mature trees and landscaping within the construction work area unless necessary for safe operation of construction equipment, or as specified in landowner agreements; fence the edge of the construction work area for a distance of 100 feet on either side of the residence; and restore all lawn areas and landscaping immediately following clean up operations, or as specified in landowner agreements. If seasonal or other weather conditions prevent compliance with these time frames, maintain and monitor temporary erosion controls (sediment barriers and mulch) until conditions allow completion of restoration.	no	NA	NA	3.5.4		x

Atlantic Coast Pipeline - Virginia

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies	
			yes/no	If yes, list requirements/practices			USFS National Forest	Non-specific Area
FERC Plan	III.I: Winter Construction Plans	If construction is planned to occur during winter weather conditions, project sponsors shall develop and file a project-specific winter construction plan with the FERC application. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations. The plan shall address: 1. winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping); 2. stabilization and monitoring procedures if ground conditions will delay restoration until the following spring (e.g., mulching and erosion controls, inspection and reporting, stormwater control during spring thaw conditions); and 3. final restoration procedures (e.g., subsidence and compaction repair, topsoil replacement, seeding).	no	NA	NA	3.5.5		x
FERC Plan	IV.A.1: Approved Areas of Disturbance	Project-related ground disturbance shall be limited to the construction right-of-way, extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the FERC's Orders. Any project-related ground disturbing activities outside these areas will require prior Director approval. This requirement does not apply to activities needed to comply with the Plan and Procedures (i.e., slope breakers, energy-dissipating devices, dewatering structures, drain tile system repairs) or minor field realignments and workspace shifts per landowner needs and requirements that do not affect other landowners or sensitive environmental resource areas. All construction or restoration activities outside of authorized areas are subject to all applicable survey and permit requirements, and landowner easement agreements.	no	NA	NA	2.12 2.14 2.15		x
FERC Plan	IV.A.2: Approved Areas of Disturbance	The construction right-of-way width for a project shall not exceed 75 feet or that described in the FERC application unless otherwise modified by a FERC Order. However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval to accommodate full construction right-of-way topsoil segregation and to ensure safe construction where topographic conditions (e.g., side-slopes) or soil limitations require it. Twenty-five feet of extra construction right-of-way width may also be used in limited, non-wetland or non-forested areas for truck turn-arounds where no reasonable alternative access exists. Project use of these additional limited areas is subject to landowner or land management agency approval and compliance with all applicable survey and permit requirements. When additional areas are used, each one shall be identified and the need explained in the weekly or biweekly construction reports to the FERC, if required. The following material shall be included in the reports: a. the location of each additional area by station number and reference to previously filed alignment sheets, or updated alignment sheets showing the additional areas; b. identification of the filing at FERC containing evidence that the additional areas were previously surveyed; and c. a statement that landowner approval has been obtained and is available in project files.	no	NA	NA	2.12.1		x
FERC Plan	IV.B.1: Topsoil Segregation	Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in: a. cultivated or rotated croplands, and managed pastures; b. residential areas; c. hayfields; and d. other areas at the landowner's or land managing agency's request.	no	NA	NA Note: Refer to the Construction, Operations, and Maintenance Plan (COM Plan) for practices to be implemented within the George Washington National Forest at the request of the USFS.	3.1.6.1 3.6	x	x
FERC Plan	IV.B.2: Topsoil Segregation	In residential areas, importation of topsoil is an acceptable alternative to topsoil segregation.	no	NA	NA	3.1.6.1		x
FERC Plan	IV.B.3: Topsoil Segregation	Where topsoil segregation is required, the project sponsor must: a. segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil); and b. make every effort to segregate the entire topsoil layer in soils with less than 12 inches of topsoil.	no	NA	NA Note: Refer to the Construction, Operations, and Maintenance Plan (COM Plan) for practices to be implemented within the George Washington National Forest at the request of the USFS.	3.1.6.1 3.6	x	x
FERC Plan	IV.B.4: Topsoil Segregation	Maintain separation of salvaged topsoil and subsoil throughout all construction activities.	no	NA	NA Note: Refer to the Construction, Operations, and Maintenance Plan (COM Plan) for practices to be implemented within the George Washington National Forest at the request of the USFS.	3.1.6.1; 3.6	x	x
FERC Plan	IV.B.5: Topsoil Segregation	Segregated topsoil may not be used for padding the pipe, constructing temporary slope breakers or trench plugs, improving or maintaining roads, or as a fill material.	no	NA	NA	3.1.6.1		x
FERC Plan	IV.B.6: Topsoil Segregation	Stabilize topsoil piles and minimize loss due to wind and water erosion with use of sediment barriers, mulch, temporary seeding, tackifiers, or functional equivalents, where necessary.	yes	VA Minimum Standard MS-1; VA Minimum Standard MS-2; VA Std. & Spec 3.31 (Temporary Seeding); VA Std.&Spec 3.35(Mulching)	Seeding of stockpile must be completed within 7 days of the formation of the stockpile if it is to remain dormant for longer than 14 days in accordance with VA Std. & Spec. 3.31 (Temporary Seeding) and Minimum Standard MS-1 and MS-2. Stabilization of stockpiles with a temporary cover (i.e., mulch) in accordance with VA Std. & Spec. 3.35 (Mulching) is also acceptable. Virginia Minimum Standard MS-2 requires that soil stock piles be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site.	3.1.6.1		x
FERC Plan	IV.C: Drain Tiles	1. Mark locations of drain tiles damaged during construction. 2. Probe all drainage tile systems within the area of disturbance to check for damage. 3. Repair damaged drain tiles to their original or better condition. Do not use filter-covered drain tiles unless the local soil conservation authorities and the landowner agree. Use qualified specialists for testing and repairs. 4. For new pipelines in areas where drain tiles exist or are planned, ensure that the depth of cover over the pipeline is sufficient to avoid interference with drain tile systems. For adjacent pipeline loops in agricultural areas, install the new pipeline with at least the same depth of cover as the existing pipeline(s).	no	NA	NA	3.5.2		x
FERC Plan	IV.D: Irrigation	Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.	no	NA	NA	3.5.2		x
FERC Plan	IV.E: Road Crossings and Access Points	1. Maintain safe and accessible conditions at all road crossings and access points during construction. 2. If crushed stone access pads are used in residential or agricultural areas, place the stone on synthetic fabric to facilitate removal. 3. Minimize the use of tracked equipment on public roadways. Remove any soil or gravel spilled or tracked onto roadways daily or more frequent as necessary to maintain safe road conditions. Repair any damages to roadway surfaces, shoulders, and bar ditches.	no	NA	NA	3.2		x
FERC Plan	IV.F: Temporary Erosion Control	Install temporary erosion controls immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration is complete.	no	NA	NA	3.0 3.1 3.1.5		x

Atlantic Coast Pipeline - Virginia

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies																			
			yes/no	If yes, list requirements/practices			USFS National Forest	Non-specific Area																		
FERC Plan	IV.F.1: Temporary Erosion Control	<p>Temporary Slope Breakers</p> <p>a. Temporary slope breakers are intended to reduce runoff velocity and divert water off the construction right-of-way. Temporary slope breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, or sand bags.</p> <p>b. Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion. Temporary slope breakers must be installed on slopes greater than 5 percent where the base of the slope is less than 50 feet from waterbody, wetland, and road crossings at the following spacing (closer spacing shall be used if necessary)</p> <table border="1"> <thead> <tr> <th>Slope (%)</th> <th>Spacing (feet)</th> </tr> </thead> <tbody> <tr> <td>5-15</td> <td>300</td> </tr> <tr> <td>>15-30</td> <td>200</td> </tr> <tr> <td>>30</td> <td>100</td> </tr> </tbody> </table> <p>c. Direct the outfall of each temporary slope breaker to a stable, well vegetated area or construct an energy-dissipating device at the end of the slope breaker and off the construction right-of-way.</p> <p>d. Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive environmental resource areas.</p>	Slope (%)	Spacing (feet)	5-15	300	>15-30	200	>30	100	yes	VA Std. & Spec. 3.11 (Temporary Right-of-Way Diversion)	<p>VA Std. & Spec 3.11 requires more stringent spacing and construction material (soil and gravel only), as well as specific construction specifications (height,width,grade, etc.).</p> <table border="1"> <thead> <tr> <th>% Slope</th> <th>Spacing (ft.)</th> </tr> </thead> <tbody> <tr> <td>Less than 7%</td> <td>100</td> </tr> <tr> <td>Between 7% and 25%</td> <td>75</td> </tr> <tr> <td>Between 25% and 40%</td> <td>50</td> </tr> <tr> <td>Greater than 40%</td> <td>25</td> </tr> </tbody> </table> <p>The minimum allowable height of the diversion is 18 inches. Side slopes should be 2:1 or flatter to allow the passage of construction traffic, along with a minimum base width of 6 feet. Positive drainage (with less than 2% slope) should be provided to a stabilized outlet, sediment-trapping facility, or a vegetative buffer strip of adequate size.</p> <p>**Note that DTI requested a deviation in its Annual Standards and Specifications (DEQ approval pending) to increase the slope of the temporary ROW diversion to greater than 2%, as necessary to help prevent diversion and overall potential slope failures by allowing the water to move off the limits of disturbance.</p>	% Slope	Spacing (ft.)	Less than 7%	100	Between 7% and 25%	75	Between 25% and 40%	50	Greater than 40%	25	3.1.6.4		x
Slope (%)	Spacing (feet)																									
5-15	300																									
>15-30	200																									
>30	100																									
% Slope	Spacing (ft.)																									
Less than 7%	100																									
Between 7% and 25%	75																									
Between 25% and 40%	50																									
Greater than 40%	25																									
FERC Plan	IV.F.2: Temporary Erosion Control	<p>Temporary Trench Plugs: Temporary trench plugs are intended to segment a continuous open trench prior to backfill.</p> <p>a. Temporary trench plugs may consist of unexcavated portions of the trench, compacted subsoil, sandbags, or some functional equivalent.</p> <p>b. Position temporary trench plugs, as necessary, to reduce trenchline erosion and minimize the volume and velocity of trench water flow at the base of slopes.</p>	no	NA	NA	3.5.11.3		x																		
FERC Plan	IV.F.3: Temporary Erosion Control	<p>Sediment Barriers: Sediment barriers are intended to stop the flow of sediments and to prevent the deposition of sediments beyond approved workspaces or into sensitive resources.</p> <p>a. Sediment barriers may be constructed of materials such as silt fence, staked hay or straw bales, compacted earth (e.g., driveable berms across travelways), sand bags, or other appropriate materials.</p> <p>b. At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until revegetation is successful as defined in this Plan. Leave adequate room between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition.</p> <p>c. Where wetlands or waterbodies are adjacent to and downslope of construction work areas, install sediment barriers along the edge of these areas, as necessary to prevent sediment flow into the wetland or waterbody.</p>	no	NA	NA	3.1.5 3.5.11.3 3.5.12.2 3.5.12.4		x																		
FERC Plan	IV.F.4: Temporary Erosion Control	<p>Mulch:</p> <p>a. Apply mulch on all slopes (except in cultivated cropland) concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing.</p> <p>b. Mulch can consist of weed-free straw or hay, wood fiber hydromulch, erosion control fabric, or some functional equivalent.</p> <p>c. Mulch all disturbed upland areas (except cultivated cropland) before seeding if:</p> <ol style="list-style-type: none"> final grading and installation of permanent erosion control measures will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas), as required in section V.A.1; or construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions. <p>d. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent.</p> <p>e. If wood chips are used as mulch, do not use more than 1 ton/acre and add the equivalent of 11 lbs/acre available nitrogen (at least 50 percent of which is slow release).</p> <p>f. Ensure that mulch is adequately anchored to minimize loss due to wind and water.</p> <p>g. When anchoring with liquid mulch binders, use rates recommended by the manufacturer. Do not use liquid mulch binders within 100 feet of wetlands or waterbodies, except where the product is certified environmentally non-toxic by the appropriate state or federal agency or independent standards-setting organization.</p> <p>h. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat, unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.</p>	yes	VA Minimum Standard MS 1; VA Std. & Spec 3.35 (Mulching)	<p>Virginia Minimum Standard MS-1 is more stringent on timing of mulch placement if used as a temporary soil stabilization method: Permanent or temporary soil stabilization shall be applied to denuded areas within 7 days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within 7 days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than 1 year.</p> <p>VA Std. & Spec 3.35 is more prescriptive on the types of mulch available to use and their application rate (see table 3.35-A of the standard). Other materials may be used with the permission of the local Plan-approving authority. Organic mulches may be used in any area where mulch is required. Select mulch material based on site requirements, availability of materials, and availability of labor and equipment. Prior to Mulching, complete the required grading and install needed sediment control practices. Lime and Fertilizer, should be incorporated and surface roughening accomplished as needed. Seed should be applied prior to mulching except in the following cases:</p> <ol style="list-style-type: none"> Where seed is to be applied as part of a hydroseeder slurry containing fiber mulch. Where seed is to be applied following a straw mulch spread during winter months. <p>VA Std. & Spec 3.35 is more stringent on the application of the mulch. Mulch materials shall be spread uniformly, by hand or machine. When spreading straw mulch by hand, divide the area to be mulched into approximately 1,000 sq. ft. sections and place 70-90 lbs. (1 1/2 to 2 bales) of straw in each section to facilitate uniform distribution.</p> <p>Mulching Anchoring: Straw mulch must be anchored immediately after spreading to prevent displacement. The following methods of anchoring straw may be used:</p> <ol style="list-style-type: none"> Mulch anchoring tool (Krimer Tool), limited to use on slopes no steeper than 3:1, where equipment can operate safely and operate on the contour. Fiber Mulch: Apply fiber mulch by means of a hydroseeder at a rate of 500-750 lbs./acre over top of straw mulch or hay. Liquid Mulch Binders: Application of liquid mulch binders and tackifiers should be heaviest at edges of areas and at crests of ridges and banks, to prevent displacement. Binders may be applied after mulch is spread or may be sprayed into the mulch as it is being blown onto the soil. Following types of binders may be use: Synthetic Binders and Asphalt Mulch Nettings: lightweight plastic, cotton, or paper nets may be stapled over the mulch according to manufacturer's recommendations. Peg and Twine: because it is labor-intensive, this method is feasible only in small areas where other methods can not be used. Drive 8- to 10-Inch wooden pegs to within 3 inches of the soil surface, every 4 feet in all directions. Stakes may be driven before or after straw is spread. Secure mulch by stretching twine between pegs in a criss-cross within a square pattern. Turn twine 2 or more times around each peg. <p>Chemical Mulches may be used alone only in the following situations:</p> <ol style="list-style-type: none"> Where no other mulching material is available In conjunction with temporary seeding during the times when mulch is not required for that practice From March 15-May 1 and August 15-September 30, provided that they are used on areas with slopes no steeper than 4:1, which have been roughened in accordance with surface roughening (Std. & Spec. 3.29) <p>FERC Plan IV.F.4: Temporary Erosion Control is more stringent on uses of mulch and the distance to waterbodies. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent.</p> <p>FERC Plan IV.F.4: Temporary Erosion Control is more stringent if wood chips are used as mulch. Do not use more than 1 ton/acre and add the equivalent of 11 lbs/acre available nitrogen (at least 50 percent of which is slow release).</p>	Appendix R Restoration & Rehabilitation Plan 3.1.4 3.1.6 3.2.4 3.5.12.4		x																		
FERC Plan	V.A.1: Restoration Cleanup	<p>Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (i.e., temporary slope breakers, sediment barriers, and mulch) until conditions allow completion of cleanup.</p> <p>If construction or restoration unexpectedly continues into the winter season when conditions could delay successful decompaction, topsoil replacement, or seeding until the following spring, file with the Secretary for the review and written approval of the Director, a winter construction plan (as specified in section III.I). This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.</p>	yes	VA Minimum Standard MS 1	Virginia Minimum Standard MS-1 is more stringent on timing of temporary and permanent soil stabilization: Permanent or temporary soil stabilization shall be applied to denuded areas within 7 days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within 7 days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than 1 year.	3.1.13		x																		
FERC Plan	V.A.2: Restoration Cleanup	A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed as specified in section IV.F. and inspected and maintained as specified in sections II.B.12 through 14. When access is no longer required the travel lane must be removed and the right-of-way restored.	no	NA	NA	3.1.13		x																		
FERC Plan	V.A.3: Restoration Cleanup	Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench shall be considered construction debris, unless approved for use as mulch or for some other use on the construction work areas by the landowner or land managing agency.	no	NA	NA	3.1.6.3		x																		
FERC Plan	V.A.4: Restoration Cleanup	Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction work area shall be similar to adjacent areas not disturbed by construction. The landowner or land management agency may approve other provisions in writing.	no	NA	NA	3.1.13		x																		
FERC Plan	V.A.5: Restoration Cleanup	Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting.	no	NA	NA	3.1.13		x																		
FERC Plan	V.A.6: Restoration Cleanup	Remove construction debris from all construction work areas unless the landowner or land managing agency approves leaving materials onsite for beneficial reuse, stabilization, or habitat restoration.	no	NA	NA	3.1.13		x																		
FERC Plan	V.A.7: Restoration Cleanup	Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.	yes	VA Minimum Standard MS 18	Minimum Standard MS-18 – All temporary ESC measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed , unless otherwise authorized by the Virginia Erosion and Sedimentation Control Program (VESCP) authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.	3.1.5		x																		
FERC Plan	V.B.1: Permanent Erosion Control Devices	<p>1. Trench Breakers</p> <p>a. Trench breakers are intended to slow the flow of subsurface water along the trench. Trench breakers may be constructed of materials such as sand bags or polyurethane foam. Do not use topsoil in trench breakers.</p> <p>b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers. Otherwise, trench breakers shall be installed at the same spacing as and upslope of permanent slope breakers.</p> <p>c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same spacing as if permanent slope breakers were required.</p> <p>d. At a minimum, install a trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland. Install trench breakers at wetland boundaries, as specified in the Procedures. Do not install trench breakers within a wetland.</p>	no	NA	NA	3.1.7.1		x																		

Atlantic Coast Pipeline - Virginia

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies	
			yes/no	If yes, list requirements/practices			USFS National Forest	Non-specific Area
FERC Plan	V.B.2: Permanent Erosion Control Devices	<p>Permanent Slope Breakers</p> <p>a. Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction right-of-way, and prevent sediment deposition into sensitive resources. Permanent slope breakers may be constructed of materials such as soil, stone, or some functional equivalent.</p> <p>b. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, unless requested by the landowner, using spacing recommendations obtained from the local soil conservation authority or land managing agency. In the absence of written recommendations, use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction right-of-way:</p> <p>Slope (%) Spacing (feet)</p> <p>5 - 15 300</p> <p>>15 - 30 200</p> <p>>30 100</p> <p>c. Construct slope breakers to divert surface flow to a stable area without causing water to pool or erode behind the breaker. In the absence of a stable area, construct appropriate energy-dissipating devices at the end of the breaker.</p> <p>d. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction right-of-way to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction right-of-way, they are subject to compliance with all applicable survey requirements.</p>	no	NA	NA	3.1.13.1 3.1.6.4		x
FERC Plan	V.C.1: Soil Compaction Mitigation	Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests.	no	NA	NA	3.1.13.3		x
FERC Plan	V.C.2: Soil Compaction Mitigation	Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil.	no	NA	NA	3.1.13.3		x
FERC Plan	V.C.3: Soil Compaction Mitigation	If subsequent construction and cleanup activities result in further compaction, conduct additional tilling.	no	NA	NA	3.1.13.3		x
FERC Plan	V.C.3: Soil Compaction Mitigation	Perform appropriate soil compaction mitigation in severely compacted residential areas.	no	NA	NA	3.1.13.3		x
FERC Plan	V.D.1: Revegetation	<p>General:</p> <p>a. The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b.</p> <p>b. Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices.</p>	no	NA	NA	3.1.13.4 Appendix R- Restoration & Rehabilitation Plan		x
FERC Plan	V.D.2: Revegetation	<p>Soil Additives:</p> <p>Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as practicable after application.</p>	no	NA	FERC V.D.2 Revegetation requirement to consult with the local soil conservation authority or land management agency provides more county-specific information and up-to-date guidance than the 1992 Virginia Erosion and Sediment Control Handbook (VESCH).	Appendix R- Restoration & Rehabilitation Plan		x
FERC Plan	V.D.3: Revegetation	<p>Seeding Requirements:</p> <p>a. Prepare a seedbed in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed.</p> <p>b. Seed disturbed areas in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or the request of the landowner or land management agency. Seeding is not required in cultivated croplands unless requested by the landowner.</p> <p>c. Perform seeding of permanent vegetation within the recommended seeding dates. If seeding cannot be done within those dates, use appropriate temporary erosion control measures discussed in section IV.F and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Dormant seeding or temporary seeding of annual species may also be used, if necessary, to establish cover, as approved by the Environmental Inspector. Lawns may be seeded on a schedule established with the landowner.</p> <p>d. In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a through V.D.3.c.</p> <p>e. Base seeding rates on Pure Live Seed. Use seed within 12 months of seed testing.</p> <p>f. Treat legume seed with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydro).</p> <p>g. In the absence of written recommendations from the local soil conservation authorities, landowner, or land managing agency to the contrary, a seed drill equipped with a cultipacker is preferred for seed application.</p> <p>Broadcast or hydroseeding can be used in lieu of drilling at double the recommended seeding rates. Where seed is broadcast, firm the seedbed with a cultipacker or roller after seeding. In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by the Environmental Inspector.</p>	no	NA	FERC V.D.2 Revegetation requirement to consult with the local soil conservation authority or land management agency provides more county-specific information and up-to-date guidance than the 1992 Virginia Erosion and Sediment Control Handbook (VESCH).	Appendix R- Restoration & Rehabilitation Plan	x	
FERC Plan	VI. Off-Road Vehicle Control	To each owner or manager of forested lands, offer to install and maintain measures to control unauthorized vehicle access to the right-of-way. These measures may include:	no	NA	NA	3.1.2		x
FERC Plan	VII.A.1: Post-Construction Activities and Reporting	MONITORING AND MAINTENANCE: Conduct follow-up inspections of all disturbed areas, as necessary, to determine the success of revegetation and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.	no	NA	NA	Appendix R- Restoration & Rehabilitation Plan		x
FERC Plan	VII.A.2: Post-Construction Activities and Reporting	2. Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non- nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful when upon visual survey, crop growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise. Continue revegetation efforts until revegetation is successful.	no	NA	NA	Appendix R- Restoration & Rehabilitation Plan		x
FERC Plan	VII.A.3: Post-Construction Activities and Reporting	Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in agricultural areas until restoration is successful.	no	NA	NA	3.5.2		x
FERC Plan	VII.A.4: Post-Construction Activities and Reporting	Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful, and proper drainage has been restored.	yes	VA Minimum Standard MS-3	Minimum Standard MS-3 more clearly defines the meaning of successful revegetation— A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, is mature enough to survive, and will inhibit erosion.	Appendix R- Restoration & Rehabilitation Plan		x
FERC Plan	VII.A.5: Post-Construction Activities and Reporting	Routine vegetation mowing or clearing over the full width of the permanent right-of-way in uplands shall not be done more frequently than every 3 years. However, to facilitate periodic corrosion/leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency or the U.S. Fish and Wildlife Service.	no	NA	NA	Appendix R- Restoration & Rehabilitation Plan		x
FERC Plan	VII.A.6: Post-Construction Activities and Reporting	Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the project. Maintain signs, gates, and permanent access roads as necessary.	no	NA	NA	3.1.2		x

Atlantic Coast Pipeline - Virginia

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies	
			yes/no	if yes, list requirements/practices			USFS National Forest	Non-specific Area
FERC Plan	VII.B.1: Reporting	1. The project sponsor shall maintain records that identify by milepost: a. method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used; b. acreage treated; c. dates of backfilling and seeding; d. names of landowners requesting special seeding treatment and a description of the follow-up actions; e. the location of any subsurface drainage repairs or improvements made during restoration; and f. any problem areas and how they were addressed.	no	NA	NA	Appendix R- Restoration and Rehabilitation plan		x
FERC Plan	VII.B.2: Reporting	The project sponsor shall file with the Secretary quarterly activity reports documenting the results of follow-up inspections required by section VII.A.1; any problem areas, including those identified by the landowner; and corrective actions taken for at least 2 years following construction. The requirement to file quarterly activity reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advanced notice provisions in the FERC's regulations.	no	NA	NA	Appendix R- Restoration and Rehabilitation plan		x
FERC Wetland and Waterbody Construction and Mitigation Procedures								
FERC Procedures	III.A: Environmental Inspectors	At least one Environmental Inspector having knowledge of the wetland and waterbody conditions in the project area is required for each construction spread. The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.	no	NA	NA	7.1		x
FERC Procedures	III.B: Environmental Inspectors	The Environmental Inspector's responsibilities are outlined in the Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).	no	NA	NA	N/A		x
FERC Procedures	IV.A.1: Preconstruction Planning	The project sponsor shall develop project-specific Spill Prevention and Response Procedures that meet applicable requirements of state and federal agencies. A copy must be filed with the Secretary prior to construction and made available in the field on each construction spread. This filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations. It shall be the responsibility of the project sponsor and its contractors to structure their operations in a manner that reduces the risk of spills or the accidental exposure of fuels or hazardous materials to waterbodies or wetlands. The project sponsor and its contractors must, at a minimum, ensure that: a. all employees handling fuels and other hazardous materials are properly trained; b. all equipment is in good operating order and inspected on a regular basis; c. fuel trucks transporting fuel to on-site equipment travel only on approved access roads; d. all equipment is parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill; e. hazardous materials, including chemicals, fuels, and lubricating oils, are not stored within 100 feet of a wetland, waterbody, or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas; f. concrete coating activities are not performed within 100 feet of a wetland or waterbody boundary, unless the location is an existing industrial site designated for such use. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill; g. pumps operating within 100 feet of a waterbody or wetland boundary utilize appropriate secondary containment systems to prevent spills; and h. bulk storage of hazardous materials, including chemicals, fuels, and lubricating oils have appropriate secondary containment systems to prevent spills.	no	NA	NA	6.0		x
FERC Procedures	IV.A.2: Preconstruction Planning	The project sponsor and its contractors must structure their operations in a manner that provides for the prompt and effective cleanup of spills of fuel and other hazardous materials. At a minimum, the project sponsor and its contractors must: a. ensure that each construction crew (including cleanup crews) has on hand sufficient supplies of absorbent and barrier materials to allow the rapid containment and recovery of spilled materials and knows the procedure for reporting spills and unanticipated discoveries of contamination; b. ensure that each construction crew has on hand sufficient tools and material to stop leaks; c. know the contact names and telephone numbers for all local, state, and federal agencies (including, if necessary, the U. S. Coast Guard and the National Response Center) that must be notified of a spill; and d. follow the requirements of those agencies in cleaning up the spill, in excavating and disposing of soils or other materials contaminated by a spill, and in collecting and disposing of waste generated during spill cleanup.	no	NA	NA	6.0		x
FERC Procedures	IV.B: Agency Coordination	The project sponsor must coordinate with the appropriate local, state, and federal agencies as outlined in these Procedures and in the FERC's Orders.	no	NA	NA	1.0 10.0		x
FERC Procedures	V.A:Waterbody Crossings	NOTIFICATION PROCEDURES AND PERMITS: 1. Apply to the U.S. Army Corps of Engineers (COE), or its delegated agency, for the appropriate wetland and waterbody crossing permits. 2. Provide written notification to authorities responsible for potable surface water supply intakes located within 3 miles downstream of the crossing at least 1 week before beginning work in the waterbody, or as otherwise specified by that authority. 3. Apply for state-issued waterbody crossing permits and obtain individual or generic section 401 water quality certification or waiver. 4. Notify appropriate federal and state authorities at least 48 hours before beginning trenching or blasting within the waterbody, or as specified in applicable permits.	no	NA	NA	3.5.11		x
FERC Procedures	V.B.1:Installation	Time Window for Construction: Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows: a. coldwater fisheries - June 1 through September 30; and b. coolwater and warmwater fisheries - June 1 through November 30.	no	NA	NA Note: Refer to the Construction, Operations, and Maintenance Plan (COM Plan) for practices to be implemented within the George Washington National Forest at the request of the USFS.	3.5.11.1	x	x
FERC Procedures	V.B.2:Installation	Extra Work Areas a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from the water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the conditions that will not permit a 50-foot setback and measures to ensure the waterbody is adequately protected. c. Limit the size of extra work areas to the minimum needed to construct the waterbody crossing.	no	NA	NA	3.5.11		x

Atlantic Coast Pipeline - Virginia

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies	
			yes/no	If yes, list requirements/practices			USFS National Forest	Non-specific Area
FERC Procedures	V.B.3:Installation	<p>General Crossing Procedures</p> <p>a. Comply with the COE, or its delegated agency, permit terms and conditions.</p> <p>b. Construct crossings as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit.</p> <p>c. Where pipelines parallel a waterbody, maintain at least 15 feet of undisturbed vegetation between the waterbody (and any adjacent wetland) and the construction right-of-way, except where maintaining this offset will result in greater environmental impact.</p> <p>d. Where waterbodies meander or have multiple channels, route the pipeline to minimize the number of waterbody crossings.</p> <p>e. Maintain adequate waterbody flow rates to protect aquatic life, and prevent the interruption of existing downstream uses.</p> <p>f. Waterbody buffers (e.g., extra work area setbacks, refueling restrictions) must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.</p> <p>g. Crossing of waterbodies when they are dry or frozen and not flowing may proceed using standard upland construction techniques in accordance with the Plan, provided that the Environmental Inspector verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature. In the event of perceptible flow, the project sponsor must comply with all applicable Procedure requirements for "waterbodies" as defined in section I.B.1.</p>	no	NA	NA	3.5.11		x
FERC Procedures	V.B.4:Installation	<p>Spoil Pile Placement and Control</p> <p>a. All spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings, must be placed in the construction right-of-way at least 10 feet from the water's edge or in additional extra work areas as described in section V.B.2.</p> <p>b. Use sediment barriers to prevent the flow of spoil or silt-laden water into any waterbody.</p>	no	NA	NA	3.5.11.4		x
FERC Procedures	V.B.5:Installation	<p>Equipment Bridges</p> <p>a. Only clearing equipment and equipment necessary for installation of equipment bridges may cross waterbodies prior to bridge installation. Limit the number of such crossings of each waterbody to one per piece of clearing equipment.</p> <p>b. Construct and maintain equipment bridges to allow unrestricted flow and to prevent soil from entering the waterbody. Examples of such bridges include:</p> <ol style="list-style-type: none"> (1) equipment pads and culvert(s); (2) equipment pads or railroad car bridges without culverts; (3) clean rock fill and culvert(s); and (4) flexi-float or portable bridges. <p>Additional options for equipment bridges may be utilized that achieve the performance objectives noted above. Do not use soil to construct or stabilize equipment bridges.</p> <p>c. Design and maintain each equipment bridge to withstand and pass the highest flow expected to occur while the bridge is in place. Align culverts to prevent bank erosion or streambed scour. If necessary, install energy dissipating devices downstream of the culverts.</p> <p>d. Design and maintain equipment bridges to prevent soil from entering the waterbody.</p> <p>e. Remove temporary equipment bridges as soon as practicable after permanent seeding.</p> <p>f. If there will be more than 1 month between final cleanup and the beginning of permanent seeding and reasonable alternative access to the right-of-way is available, remove temporary equipment bridges as soon as practicable after final cleanup.</p> <p>g. Obtain any necessary approval from the COE, or the appropriate state agency for permanent bridges.</p>	yes	<p>VA Minimum Standard, MS-13</p> <p>VA Std. & Spec. 3.24 (Temporary Vehicular Stream Crossing)</p>	<p>VA Minimum Standard MS-13 - When a live watercourse must be crossed by construction vehicles more than twice in any 6-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided. MS-13 is more stringent than FERC Procedure V.B.5.a which limits the number of equipment crossings of waterbodies prior to bridge installation to one crossing per piece of clearing equipment.</p> <p>VA Std. & Spec 3.24 - Temporary Bridge Crossing - (Design) Structures may be designed in various configurations. However, the materials used to construct the bridge must be able to withstand the anticipated loading of the construction traffic. The temporary waterway crossing shall be at right angles to the stream. Where approach conditions dictate, the crossing may vary 15° from a line drawn perpendicular to the center line of the stream at the intended crossing location. The centerline of both roadway approaches shall coincide with the crossing alignment centerline for a minimum distance of 50 feet from each bank of the waterway being crossed. If physical or right-of-way restraints preclude the 50 feet minimum, a shorter distance may be provided. All fill materials associated with the roadway approach shall be limited to a maximum height of 2 feet above the existing flood plain elevation. A water diverting structure such as a dike or swale shall be constructed (across the roadway on both roadway approaches) 50 feet (maximum) on either side of the waterway crossing. If the roadway approach is constructed with a reverse grade away from the waterway, a separate diverting structure is not required. All crossings shall have one traffic lane. The minimum width shall be 12 feet with a maximum width of 20 feet.</p> <p>Temporary Bridge Crossing - (Construction)</p> <p>a. Clearing and excavation of the stream bed and banks shall be kept to a minimum.</p> <p>b. The temporary bridge structure shall be constructed at or above bank elevation to prevent the entrapment of floating materials and debris.</p> <p>c. Abutments shall be placed parallel to and on stable banks.</p> <p>d. Bridges shall be constructed to span the entire channel. If the channel width exceeds 8 feet (as measured from top-of-bank to top-of-bank), then a footing, pier or bridge support may be constructed within the waterway. One additional footing, pier or bridge support will be permitted for each additional 8-foot width of the channel. No footing, pier or bridge support, however, will be permitted within the channel for waterways which are less than 8 feet wide.</p> <p>e. Stringers shall either be logs, sawn timber, prestressed concrete beams, metal beams, or other approved materials.</p> <p>f. Decking materials shall be of sufficient strength to support the anticipated load. All decking members shall be placed perpendicular to the stringers, butted tightly, and securely fastened to the stringers. Decking materials must be butted tightly to prevent any soil material tracked onto the bridge from falling into the waterway below.</p> <p>g. Run planking (optional) shall be securely fastened to the length of the span. One run plank shall be provided for each track of the equipment wheels. Although run planks are optional, they may be necessary to properly distribute loads.</p> <p>h. Curbs or fenders may be installed along the outer sides of the deck. Curbs or fenders are an option which will provide additional safety.</p> <p>i. Bridges shall be securely anchored at only one end using steel cable or chain. Anchoring at only one end will prevent channel obstruction in the event that floodwaters float the bridge. Acceptable anchors are large trees, large boulders, or driven steel anchors. Anchoring shall be sufficient to prevent the bridge from floating downstream and possibly causing an obstruction to the flow.</p> <p>j. All areas disturbed during installation shall be stabilized within 7 calendar days of that disturbance in accordance with Minimum Standard #1.</p> <p>k. When the temporary bridge is no longer needed, all structures including abutments and other bridging materials should be removed immediately.</p> <p>l. Final clean-up shall consist of removal of the temporary bridge from the waterway, protection of banks from erosion, and removal of all construction materials. All removed materials shall be stored outside flood plain of the stream. Removal of the bridge and clean-up of the area shall be accomplished without construction equipment working in the waterway channel.</p> <p>Temporary Culvert Crossing - (Design) Where culverts are installed, VDOT #1 Coarse Aggregate or larger will be used to form the crossing. The depth of stone cover over the culvert shall be equal to one-half the diameter of the culvert or 12 inches, whichever is greater. If the structure will remain in place for up to 14 days, the culvert shall be large enough to convey the flow from a 2-year frequency storm without appreciably altering the stream flow characteristics. If the structure will remain in place 14 days to 1 year, the culvert shall be large enough to convey the flow from a 10-year frequency storm. In this case, the hydrologic calculation and subsequent culvert size must be done for the specific watershed characteristics. If the structure must remain in place over 1 year, it must be designed as a permanent measure by a qualified professional. Multiple culverts may be used in place of one large culvert if they have the equivalent capacity of the larger one. The minimum-sized culvert that may be used is 18 inches. The length of the culvert shall be adequate to extend the full width of the crossing, including side slopes. The slope of the culvert shall be at least 0.25 inch per foot. The temporary waterway crossing shall be at right angles to the stream. Where approach conditions dictate, the crossing may vary 15° from a line drawn perpendicular to the center line of the stream at the intended crossing location. The centerline of both roadway approaches shall coincide with the crossing alignment centerline for a minimum distance of 50 feet from each bank of the waterway being crossed. If physical or right-of-way restraints preclude the 50 feet minimum, a shorter distance may be provided. All fill materials associated with the roadway approach shall be limited to a maximum height of 2 feet above the existing flood plain elevation. A water diverting structure such as a dike or swale shall be constructed (across the roadway on both roadway approaches) 50 feet (maximum) on either side of the waterway crossing. If the roadway approach is constructed with a reverse grade away from the waterway, a separate diverting structure is not required. All crossings shall have one traffic lane. The minimum width shall be 12 feet with a maximum width of 20 feet.</p> <p>**Note that DTI requested a deviation in its Annual Standards and Specifications (DEQ approval pending) to allow the use of the 1-year frequency storm to size culverts that will be in place for up to 14 days since the use of the 2-year frequency storm often results in culverts that are larger than than the waterbody cross-section. DTI also requested a deviation in its Standards and Specifications to select a culvert size that can be accommodated in the cross-section of the waterbody without modification of the stream geometry (DEQ approval pending).</p> <p>Temporary Culvert Crossing - (Construction)</p> <p>a. Clearing and excavation of the stream bed and banks shall be kept to a minimum.</p> <p>b. The invert elevation of the culvert shall be installed on the natural streambed grade to minimize interference with fish migration.</p> <p>c. Filter cloth shall be placed on the streambed and streambanks prior to placement of the pipe culvert(s) and aggregate. The filter cloth shall cover the streambed and extend a minimum of six inches and a maximum of one foot beyond the end of the culvert and bedding material. Filter cloth reduces settlement and improves crossing stability. See Std. & Spec. 3.19, RIPRAP, for required physical qualities of the filter cloth.</p> <p>d. The culvert(s) shall extend a minimum of one foot beyond the upstream and downstream toe of the aggregate placed around the culvert. In no case shall the culvert exceed 40 feet in length.</p> <p>e. The culvert(s) shall be covered with a minimum of one foot of aggregate. If multiple culverts are used, they shall be separated by at least 12 inches of compacted aggregate fill. At a minimum, the bedding and fill material used in the construction of the temporary access culvert crossings shall conform with the aggregate requirements cited in part "i" under "Temporary Culvert Crossing."</p> <p>f. When the crossing has served its purpose, all structures including culverts, bedding and filter cloth materials shall be removed. Removal of the structure and clean-up of the area shall be accomplished without construction equipment working in the waterway channel.</p> <p>g. Upon removal of the structure, the stream shall immediately be shaped to its original cross-section and properly stabilized.</p>	3.5.11.3 3.2.4 Appendix B (DTI Standards and Specifications and ACP Variance Requests)		x
		<p>a. Dry-Ditch Crossing Methods</p> <p>a. Unless approved otherwise by the appropriate federal or state agency, install the pipeline using one of the dry-ditch methods outlined below for crossings of waterbodies up to 30 feet wide (at the water's edge at the time of construction) that are state-designated as either coldwater or significant coolwater or warmwater fisheries, or federally-designated as critical habitat.</p> <p>b. Dam and Pump</p> <p>(1) The dam-and-pump method may be used without prior approval for crossings of waterbodies where pumps can adequately transfer streamflow volumes around the work area, and there are no concerns about sensitive species passage.</p> <p>(2) Implementation of the dam-and-pump crossing method must meet the following performance criteria:</p> <ol style="list-style-type: none"> (i) use sufficient pumps, including on-site backup pumps, to maintain downstream flows; (ii) construct dams with materials that prevent sediment and other pollutants from entering the waterbody (e.g., sandbags or clean gravel with plastic liner); (iii) screen pump intakes to minimize entrainment of fish; (iv) prevent streambed scour at pump discharge; and (v) continuously monitor the dam and pumps to ensure proper operation throughout the waterbody crossing. <p>c. Flume Crossing: The flume crossing method requires implementation of the following steps:</p> <ol style="list-style-type: none"> (1) install flume pipe after blasting (if necessary), but before any trenching; (2) use sand bag or sand bag and plastic sheeting diversion structure or equivalent to develop an effective seal and to divert stream 			<p>VA Std. & Spec 3.25- Flume Pipe Crossing - To be used when in-stream construction will last less than 72 hours and stream is narrow (less than 10 feet wide), making "cofferdam" construction impractical.</p> <p>a. The flume pipe crossing must be made operational prior to the start of construction in the stream.</p> <p>b. The materials used (culvert(s), stone and filter fabric) must meet the physical constraints of those used in VEHICULAR STREAM CROSSING, Std. & Spec. 3.24.</p> <p>c. A large flume pipe (or culvert) of an adequate size to support normal water channel flow (see Table 3.24-A) shall then be installed in the stream bed across the proposed pipeline trench centerline. VDOT #1 Coarse Aggregate (minimum size) or riprap shall be placed close to each end of the flume pipe so as to dam off the creek forcing the water to flow through the flume pipe.</p> <p>d. The entrapped water can then be pumped from the creek within the dammed-off area and in the proposed trench centerline into an approved DEWATERING STRUCTURE (see Std. & Spec. 3.26). The trench can then be dug under the flume pipe. The pipe sections will then be installed to the proper depth under the flume pipe. After pipe sections are installed, the ditch will be backfilled and restabilization shall be carried out.</p> <p>e. Restabilization shall consist of the installation of ungrouted riprap on all disturbed streambank areas (or on the area 6 feet on both sides of the centerline of the utility trench, whichever is greater) with slopes of 3:1 or greater. Refer to Std. & Spec. 3.19, RIPRAP, for installation requirements. For slopes of 3:1 or less, vegetative stabilization may be used, pending approval by the Plan-Approving Authority or inspection authority. Stabilization of its streambed and banks and the approach areas should occur immediately following the attainment of final grade.</p> <p>f. After completion of backfilling operation and restoration of stream/creek banks and leveling of stream bed, the flume pipe can then be removed. The gravel can be removed or spread in the stream bed depending on permit requirements. Sediment control in approach</p>	3.5.11.4 3.5.1		

Atlantic Coast Pipeline - Virginia

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies	
			yes/no	If yes, list requirements/practices			USFS National Forest	Non-specific Area
FERC Procedures	V.B.6:Installation	<p>flow through the flume pipe (some modifications to the stream bottom may be required to achieve an effective seal);</p> <p>(3) properly align flume pipe(s) to prevent bank erosion and streambed scour;</p> <p>(4) do not remove flume pipe during trenching, pipelaying, or backfilling activities, or initial streambed restoration efforts; and</p> <p>(5) remove all flume pipes and dams that are not also part of the equipment bridge as soon as final cleanup of the stream bed and bank is complete.</p> <p>d. Horizontal Directional Drill</p> <p>For each waterbody or wetland that would be crossed using the HDD method, file with the Secretary for the review and written approval by the Director, a plan that includes:</p> <p>(1) site-specific construction diagrams that show the location of mud pits, pipe assembly areas, and all areas to be disturbed or cleared for construction;</p> <p>(2) justification that disturbed areas are limited to the minimum needed to construct the crossing;</p> <p>(3) identification of any aboveground disturbance or clearing between the HDD entry and exit workspaces during construction;</p> <p>(4) a description of how an inadvertent release of drilling mud would be contained and cleaned up; and</p> <p>(5) a contingency plan for crossing the waterbody or wetland in the event the HDD is unsuccessful and how the abandoned drill hole would be sealed, if necessary.</p> <p>The requirement to file HDD plans does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.</p>	yes	VA E&S Std. & Spec 3.25 (Utility Stream Crossing)	<p>areas shall not be removed until all construction is completed in stream/creek crossing area. All ground contours shall be returned to their original condition.</p> <p>**Note that DTI requested a deviation in its Annual Standards and Specifications (DEQ approval pending) to allow use of flume pipe crossing method on streams up to 30 feet wide, consistent with the FERC Procedures. The deviation request also included an extension to the 72 hour timeframe for in-stream construction, if necessary.</p> <p>Cofferdam Utility Crossing - To be used when stream diversion is not practical and stream is wide enough (10 feet or wider) to make cofferdam installation practical.</p> <p>a. Construction is to be performed in low flow periods.</p> <p>b. Crossing shall be accomplished in a manner that will not prohibit the flow of the stream. (See Plate 3.25-4).</p> <p>c. As with all utility line crossings, approach areas must be controlled with perimeter measures such as silt fence or straw bales.</p> <p>d. Remove large rocks, woody vegetation, or other material from the streambed and banks that may get in the way of placing the riprap, sandbags, sheet metal, or wood planks or installing the utility pipe or line.</p> <p>e. Form a cofferdam by placing the riprap (or other non-erodible materials) in a semicircle along the side of the stream in which the utility installation will begin. It must be surrounded and underlain with filter cloth as shown in Plate 3.25-4. The height of and area within the dam will depend upon the size of the work area and the amount of steam flow. Stack materials as high as will be necessary to keep water from overtopping the dam and flooding the work area. When the stream flow is successfully diverted by the cofferdam, dewater the work area and stabilize it with aggregate (VDOT #57 or #68 Coarse Aggregate) or sand. Make sure to discharge the water into a sediment trapping device (see DEWATERING STRUCTURE, Std. & Spec. 3.26).</p> <p>f. Install the utility pipe or line in half the streambed as noted in Plate 3.25-4. Remove the riprap or other materials and begin placing them on the other side of the stream.</p> <p>g. Restabilization shall consist of the installation of ungrouted riprap on all disturbed streambank areas (or on the area 6 feet on both sides of the centerline of its utility trench, whichever is greater) with slopes of 3:1 or greater. Refer to Std. & Spec. 3.19, RIPRAP, for installation requirements. For slopes of 3:1 or less, vegetative stabilization may be used, pending approval by Plan-Approving Authority or Inspection authority. Stabilization of its stream bed and banks and the approach areas should occur immediately following the attainment of final grade.</p>	3.5.11.2 Appendix B (DTI Standards and Specifications and ACP Variance Requests)		x
FERC Procedures	V.B.7:Installation	<p>Crossings of Minor Waterbodies</p> <p>Where a dry-ditch crossing is not required, minor waterbodies may be crossed using the open-cut crossing method, with the following restrictions:</p> <p>a. except for blasting and other rock breaking measures, complete in-stream construction activities (including trenching, pipe installation, backfill, and restoration of the streambed contours) within 24 hours. Streambanks and unconsolidated streambeds may require additional restoration after this period;</p> <p>b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and</p> <p>c. equipment bridges are not required at minor waterbodies that do not have a state-designated fishery classification or protected status (e.g., agricultural or intermittent drainage ditches). However, if an equipment bridge is used it must be constructed as described in section V.B.5.</p>	no	NA	NA	3.5.11.4		x
FERC Procedures	V.B.8:Installation	<p>Crossings of Intermediate Waterbodies</p> <p>Where a dry-ditch crossing is not required, intermediate waterbodies may be crossed using the open-cut crossing method, with the following restrictions:</p> <p>a. complete in-stream construction activities (not including blasting and other rock breaking measures) within 48 hours, unless site-specific conditions make completion within 48 hours infeasible;</p> <p>b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and</p> <p>c. all other construction equipment must cross on an equipment bridge as specified in section V.B.5.</p>	no	NA	NA	3.5.11.4		x
FERC Procedures	V.B.9:Installation	<p>Crossings of Major Waterbodies</p> <p>Before construction, the project sponsor shall file with the Secretary for the review and written approval by the Director a detailed, site-specific construction plan and scaled drawings identifying all areas to be disturbed by construction for each major waterbody crossing (the scaled drawings are not required for any offshore portions of pipeline projects). This plan must be developed in consultation with the appropriate state and federal agencies and shall include extra work areas, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues. The requirement to file major waterbody crossing plans does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.</p> <p>The Environmental Inspector may adjust the final placement of the erosion and sediment control structures in the field to maximize effectiveness.</p>	no	NA	NA	3.5.11.4		x
FERC Procedures	V.B.10:Installation	<p>Temporary Erosion and Sediment Control</p> <p>Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the waterbody or adjacent upland.</p> <p>Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan; however, the following specific measures must be implemented at stream crossings:</p> <p>a. install sediment barriers across the entire construction right-of-way at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. Removable sediment barriers (or driveable berms) must be installed across the travel lane. These removable sediment barriers can be removed during the construction day, but must be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent;</p> <p>b. where waterbodies are adjacent to the construction right-of-way and the right-of-way slopes toward the waterbody, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the waterbody; and</p> <p>c. use temporary trench plugs at all waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the waterbody.</p>	no	NA	NA	3.5.11.3		x
FERC Procedures	V.B.11:Installation	<p>Trench Dewatering</p> <p>Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any waterbody. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.</p>	yes	VA Std. & Spec 3.26 (Dewatering Structure)	<p>VA Std.&Spec 3.26- Design Criteria:</p> <ol style="list-style-type: none"> A dewatering structure must be sized (and operated) to allow pumped water to flow through the filtering device without overtopping the structure. Material from any required excavation shall be stored in an area and protected in a manner that will prevent sediments from eroding and moving off-site. An excavated basin (applicable to "Straw Bale/Silt Fence Pit") may be lined with filter fabric to help reduce scour and to prevent the inclusion of soil from within the structure. <p>Construction Specifications:</p> <ol style="list-style-type: none"> Portable Sediment Tank <ol style="list-style-type: none"> The structure may be constructed with steel drums, sturdy wood or other material suitable for handling the pressure exerted by the volume of water. Sediment tanks will have a minimum depth of two feet. The sediment tank shall be located for easy clean-out and disposal of the trapped sediment and to minimize the interference with construction activities. The following formula shall be used to determine the storage volume of the sediment tank: Pump discharge (g.p.m.) x 16 = cubic feet of storage required Once the water level nears the top of the tank, the pump must be shut off while the tank drains and additional capacity is made available. The tank shall be designed to allow for emergency flow over top of the tank. Clean-out of the tank is required once 1/3 of the original capacity is depleted due to sediment accumulation. The tank shall be clearly marked showing the clean-out point. Filter Box <ol style="list-style-type: none"> The box selected should be made of steel, sturdy wood or other materials suitable to handle the pressure requirements imposed by the volume of water. Fifty-five gallon drums welded top to bottom are normally readily available and, in most cases, will suffice. Bottom of the box shall be made porous by drilling holes (or some other method). VDOT #3 Coarse Aggregate shall be placed over the holes at a minimum depth of 12 inches (metal "hardware" cloth may need to be placed between the aggregate and the holes if holes are drilled larger than the majority of the stone). As a result of the fast rate of flow of sediment-laden water through the aggregate, the effluent must be directed over a well-vegetated strip of at least 50 feet after leaving the base of the filter box. The box shall be sized as follows: Pump discharge (g.p.m.) x 16 = cubic feet of storage required Once the water level nears the top of the box, the pump must be shut off while the box drains and additional capacity is made available. 	3.1.8.1 3.1.8.2 3.1.11 Appendix B (DTI Standards and Specifications and ACP Variance Requests)		x

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FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies	
			yes/no	If yes, list requirements/practices			USFS National Forest	Non-specific Area
					<p>g. The box shall be designed/ constructed to allow for emergency flow over the top of this box.</p> <p>h. Clean-out of the box is required once one-third of the original capacity is depleted due to sediment accumulation. The tank shall be clearly marked showing the clean-out point.</p> <p>i. If the stone filter does become clogged with sediment so that it no longer adequately performs its function, the stones must be pulled away from the inlet, cleaned and replaced.</p> <p>Note: Using a filter box only allows for minimal settling time for sediment particles; therefore, it should only be used when site conditions restrict the use of the other methods.</p> <p>3. Straw Bale /Silt Fence Pit (see Plate 3.26-3):</p> <p>a. Measure shall consist of straw bales or silt fence.</p> <p>b. The structure must have a capacity which is dictated by the following formula: Pump discharge (g.p.m.) x 16 = cubic feet of storage required.</p> <p>In calculating the capacity, one should include the volume available from the floor of the excavation to the crest of the stone weir.</p> <p>c. The perimeter measures must be installed as per the guidelines found in Std. & Spec. 3.04, STRAW BALE BARRIER and Std. & Spec. 3.05, SILT FENCE.</p> <p>d. Once the water level nears the crest of the stone weir (emergency overflow), the pump must be shut off while the structure drains down to the elevation of the wet storage.</p> <p>e. The wet storage pit may be dewatered only after a minimum of 6 hours of sediment settling time. This effluent should be pumped across a well-vegetated area or through a silt fence prior to entering a watercourse.</p> <p>f. Once the wet storage area becomes filled to one-half of the excavated depth, accumulated sediment shall be removed and properly disposed of.</p>			
FERC Procedures	V.C:Restoration	<p>1. Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain coldwater fisheries.</p> <p>2. For open-cut crossings, stabilize waterbody banks and install temporary sediment barriers within 24 hours of completing instream construction activities. For dry-ditch crossings, complete streambed and bank stabilization before returning flow to the waterbody channel.</p> <p>3. Return all waterbody banks to preconstruction contours or to a stable angle of repose as approved by the Environmental Inspector.</p> <p>4. Install erosion control fabric or a functional equivalent on waterbody banks at the time of final bank recontouring. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.</p> <p>5. Application of riprap for bank stabilization must comply with COE, or its delegated agency, permit terms and conditions.</p> <p>6. Unless otherwise specified by state permit, limit the use of riprap to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric.</p> <p>7. Revegetate disturbed riparian areas with native species of conservation grasses, legumes, and woody species, similar in density to adjacent undisturbed lands.</p> <p>8. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent that are less than 50 feet from the waterbody, or as needed to prevent sediment transport into the waterbody. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the waterbody.</p> <p>9. Sections V.C.3 through V.C.7 above also apply to those perennial or intermittent streams not flowing at the time of construction.</p>	no	NA	NA	3.5.11.3 3.5.11.5		x
FERC Procedures	V.D:Post-Construction Maintenance	<p>1. Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in riparian areas that are between HDD entry and exit points.</p> <p>2. Do not use herbicides or pesticides in or within 100 feet of a waterbody except as allowed by the appropriate land management or state agency.</p> <p>3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of riparian areas.</p>	no	NA	NA	3.5.11.6		x
FERC Procedures	VI: Wetland Crossings							
FERC Procedures	V.I.A.1: General	<p>The project sponsor shall conduct a wetland delineation using the current federal methodology and file a wetland delineation report with the Secretary before construction. The requirement to file a wetland delineation report does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.</p> <p>This report shall identify:</p> <p>a. by milepost all wetlands that would be affected;</p> <p>b. the National Wetlands Inventory (NWI) classification for each wetland;</p> <p>c. the crossing length of each wetland in feet; and</p> <p>d. the area of permanent and temporary disturbance that would occur in each wetland by NWI classification type.</p> <p>The requirements outlined in this section do not apply to wetlands in actively cultivated or rotated cropland. Standard upland protective measures, including workspace and topsoiling requirements, apply to these agricultural wetlands.</p>	no	NA	NA	2.19.3 11.0		x
FERC Procedures	V.I.A.2: General	Route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands. Where looping an existing pipeline, overlap the existing pipeline right-of-way with the new construction right-of-way. In addition, locate the loop line no more than 25 feet away from the existing pipeline unless site-specific constraints would adversely affect the stability of the existing pipeline.	no	NA	NA	2.19.3 3.5.12		x
FERC Procedures	V.I.A.3: General	Limit the width of the construction right-of-way to 75 feet or less. Prior written approval of the Director is required where topographic conditions or soil limitations require that the construction right-of-way width within the boundaries of a federally delineated wetland be expanded beyond 75 feet. Early in the planning process the project sponsor is encouraged to identify site-specific areas where excessively wide trenches could occur and/or where spoil piles could be difficult to maintain because existing soils lack adequate unconfined compressive strength.	no	NA	NA	3.5.12		x
FERC Procedures	V.I.A.4: General	Wetland boundaries and buffers must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.	no	NA	NA	3.5.12.1		x
FERC Procedures	V.I.A.5: General	Implement the measures of sections V and VI in the event a waterbody crossing is located within or adjacent to a wetland crossing. If all measures of sections V and VI cannot be met, the project sponsor must file with the Secretary a site-specific crossing plan for review and written approval by the Director before construction. This crossing plan shall address at a minimum:	no	NA	NA	3.5.12		x
FERC Procedures	V.I.A.6: General	Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit compliance with U.S. Department of Transportation regulations.	no	NA	NA	3.5.12		x

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FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies	
			yes/no	If yes, list requirements/practices			USFS National Forest	Non-specific Area
FERC Procedures	VI.B.1: Installation	<p>Extra Work Areas and Access Roads</p> <p>a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land.</p> <p>b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from wetland boundaries, except where adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the site-specific conditions that will not permit a 50-foot setback and measures to ensure the wetland is adequately protected.</p> <p>c. The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction right-of-way has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats). In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall use access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way.</p> <p>d. The only access roads, other than the construction right-of-way, that can be used in wetlands are those existing roads that can be used with no modifications or improvements, other than routine repair, and no impact on the wetland.</p>	no	NA	NA	3.2 3.5.12		x
FERC Procedures	VI.B.2: Installation	<p>Crossing Procedures</p> <p>a. Comply with COE, or its delegated agency, permit terms and conditions.</p> <p>b. Assemble the pipeline in an upland area unless the wetland is dry enough to adequately support skids and pipe.</p> <p>c. Use "push-pull" or "float" techniques to place the pipe in the trench where water and other site conditions allow.</p> <p>d. Minimize the length of time that topsoil is segregated and the trench is open. Do not trench the wetland until the pipeline is assembled and ready for lowering in.</p> <p>e. Limit construction equipment operating in wetland areas to that needed to clear the construction right-of-way, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction right-of-way.</p> <p>f. Cut vegetation just above ground level, leaving existing root systems in place, and remove it from the wetland for disposal. The project sponsor can burn woody debris in wetlands, if approved by the COE and in accordance with state and local regulations, ensuring that all remaining woody debris is removed for disposal.</p> <p>g. Limit pulling of tree stumps and grading activities to directly over the trenchline. Do not grade or remove stumps or root systems from the rest of the construction right-of-way in wetlands unless the Chief Inspector and Environmental Inspector determine that safety-related construction constraints require grading or the removal of tree stumps from under the working side of the construction right-of-way.</p> <p>h. Segregate the top 1 foot of topsoil from the area disturbed by trenching, except in areas where standing water is present or soils are saturated. Immediately after backfilling is complete, restore the segregated topsoil to its original location.</p> <p>i. Do not use rock, soil imported from outside the wetland, tree stumps, or brush riprap to support equipment on the construction right-of-way.</p> <p>j. If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment, or operate normal equipment on timber riprap, prefabricated equipment mats, or terra mats.</p> <p>k. Remove all project-related material used to support equipment on the construction right-of-way upon completion of construction.</p>	No	NA	NA	3.5.12.1 3.5.12.2 3.5.12.3		x
FERC Procedures	VI.B.3: Installation	<p>Temporary Sediment Control</p> <p>Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the wetland or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench). Except as noted below in section VI.B.3.c, maintain sediment barriers until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan.</p> <p>a. Install sediment barriers across the entire construction right-of-way immediately upslope of the wetland boundary at all wetland crossings where necessary to prevent sediment flow into the wetland.</p> <p>b. Where wetlands are adjacent to the construction right-of-way and the right-of-way slopes toward the wetland, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the wetland.</p> <p>c. Install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way through wetlands. Remove these sediment barriers during right-of-way cleanup.</p>	yes	VA Minimum Standard MS-3 VA Minimum Standard MS-18	Minimum Standard MS-3 more clearly defines the meaning of successful revegetation— A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, is mature enough to survive, and will inhibit erosion. Minimum Standard MS-18 – All temporary ESC measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the Virginia Erosion and Sedimentation Control Program (VESCP) authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.	3.5.12.2		x
FERC Procedures	VI.B.4: Installation	<p>Trench Dewatering</p> <p>Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any wetland. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.</p>	yes	VA Std. & Spec 3.26 (Dewatering Structure)	See FERC Procedures V.B.11 above	3.5.12.3		x
FERC Procedures	VI.C: Restoration	<p>1. Where the pipeline trench may drain a wetland, construct trench breakers at the wetland boundaries and/or seal the trench bottom as necessary to maintain the original wetland hydrology.</p> <p>2. Restore pre-construction wetland contours to maintain the original wetland hydrology.</p> <p>3. For each wetland crossed, install a trench breaker at the base of slopes near the boundary between the wetland and adjacent upland areas. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the wetland.</p> <p>4. Do not use fertilizer, lime, or mulch unless required in writing by the appropriate federal or state agency.</p> <p>5. Consult with the appropriate federal or state agencies to develop a project-specific wetland restoration plan. The restoration plan shall include measures for re-establishing herbaceous and/or woody species, controlling the invasion and spread of invasive species and noxious weeds (e.g., purple loosestrife and phragmites), and monitoring the success of the revegetation and weed control efforts. Provide this plan to the FERC staff upon request.</p> <p>6. Until a project-specific wetland restoration plan is developed and/or implemented, temporarily revegetate the construction right-of-way with annual ryegrass at a rate of 40 pounds/acre (unless standing water is present).</p> <p>7. Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species.</p> <p>8. Remove temporary sediment barriers located at the boundary between wetland and adjacent upland areas after revegetation and stabilization of adjacent upland areas are judged to be successful as specified in section VII.A.4 of the Plan.</p>	yes	VA Minimum Standard MS-3 VA Minimum Standard MS-18	Minimum Standard MS-3 more clearly defines the meaning of successful revegetation— A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, is mature enough to survive, and will inhibit erosion. Minimum Standard MS-18 – All temporary ESC measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the Virginia Erosion and Sedimentation Control Program (VESCP) authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.	3.5.12.4		x
FERC Procedures	VI.D: Post-Construction Maintenance And Reporting	<p>1. Do not conduct routine vegetation mowing or clearing over the full width of the permanent right-of-way in wetlands. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in wetlands that are between HDD entry and exit points.</p> <p>2. Do not use herbicides or pesticides in or within 100 feet of a wetland, except as allowed by the appropriate federal or state agency.</p> <p>3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of wetland areas.</p> <p>4. Monitor and record the success of wetland revegetation annually until wetland revegetation is successful.</p> <p>5. Wetland revegetation shall be considered successful if all of the following criteria are satisfied:</p> <p>a. the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation);</p> <p>b. vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction;</p> <p>c. if natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and</p> <p>d. invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction.</p> <p>6. Within 3 years after construction, file a report with the Secretary identifying the status of the wetland revegetation efforts and documenting success as defined in section VI.D.5, above. The requirement to file wetland restoration reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advance notice provisions in the FERC's regulations.</p> <p>For any wetland where revegetation is not successful at the end of 3 years after construction, develop and implement (in consultation with a professional wetland ecologist) a remedial revegetation plan to actively revegetate wetlands. Continue revegetation efforts and file a report annually documenting progress in these wetlands until wetland revegetation is successful.</p>	yes	GWNF LRMP FW-111 GWNF LRMP FW-116	<p>FERC Procedures VI.D: Wetland Crossings, Post-Construction Maintenance And Reporting states: "Do not use herbicides or pesticides in or within 100 feet of a wetland..."</p> <p>GWNF LRMP FW-111 states: No herbicide is aerially applied within 200 horizontal feet, nor ground-applied within 30 horizontal feet, of lakes, wetlands, perennial or intermittent springs and streams. No herbicide is applied within 100 horizontal feet of any public or domestic water source. Selective treatments (which require added site-specific analysis and use of aquatic-labeled pesticides) may occur within these buffers only to prevent significant environmental damage such as non-native invasive plant infestations. Buffers are clearly marked before treatment, so applicators can easily see and avoid them.</p> <p>GWNF LRMP FW-116 state: Herbicide mixing, loading, or cleaning areas in the field are not located within 200 feet of private land, riparian corridors, open water or wells, or other sensitive areas.</p> <p>All other requirements in FERC Procedures VI.D: Wetland Crossings, Post-Construction Maintenance And Reporting are most stringent.</p>	3.5.12 Appendix R Restoration & Rehabilitation Plan	x	

Atlantic Coast Pipeline - Virginia

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirements/practices	Reference in SWPPP	Where Requirement/Practice Applies	
			yes/no	If yes, list requirements/practices			USFS National Forest	Non-specific Area
FERC Procedures	VII: Hydrostatic Testing							
FERC Procedures	VII.A: Notification Procedures and Permits	<ol style="list-style-type: none"> Apply for state-issued water withdrawal permits, as required. Apply for National Pollutant Discharge Elimination System (NPDES) or state-issued discharge permits, as required. Notify appropriate state agencies of intent to use specific sources at least 48 hours before testing activities unless they waive this requirement in writing. 	no	NA	NA	3.1.11		x
FERC Procedures	VII.B: General	<ol style="list-style-type: none"> Perform 100 percent radiographic inspection of all pipeline section welds or hydrotest the pipeline sections, before installation under waterbodies or wetlands. If pumps used for hydrostatic testing are within 100 feet of any waterbody or wetland, address secondary containment and refueling of these pumps in the project's Spill Prevention and Response Procedures. The project sponsor shall file with the Secretary before construction a list identifying the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations. 	no	NA	NA	3.1.11		x
FERC Procedures	VII.C: Intake Source and Rate	<ol style="list-style-type: none"> Screen the intake hose to minimize the potential for entrainment of fish. Do not use state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and/or local permitting agencies grant written permission. Maintain adequate flow rates to protect aquatic life, provide for all waterbody uses, and provide for downstream withdrawals of water by existing users. Locate hydrostatic test manifolds outside wetlands and riparian areas to the maximum extent practicable. 	no	NA	NA	3.1.11		x
FERC Procedures	VII.D: Discharge Location, Method, and Rate	<ol style="list-style-type: none"> Regulate discharge rate, use energy dissipation device(s), and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow. Do not discharge into state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and local permitting agencies grant written permission. 	no	NA	NA	3.1.11		x

Atlantic Coast Pipeline - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Upland Erosion Control, Revegetation, and Maintenance Plan								
FERC Plan	II.A.1: Environmental Inspection	At least one Environmental Inspector is required for each construction spread during construction and restoration (as defined by section V). The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.	No	NA	NA	Section 18.1		x
FERC Plan	II.A.2: Environmental Inspection	Environmental Inspectors shall have peer status with all other activity inspectors.	No	NA	NA	Section 18.1		x
FERC Plan	II.A.3: Environmental Inspection	Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the FERC's Orders, stipulations of other environmental permits or approvals, or landowner easement agreements; and to order appropriate corrective action.	No	NA	NA	Section 18.1		x
FERC Plan	II.B.1: Responsibilities of Environmental Inspectors	Inspecting construction activities for compliance with the requirements of this Plan, the Procedures, the environmental conditions of the FERC's Orders, the mitigation measures proposed by the project sponsor (as approved and/or modified by the Order), other environmental permits and approvals, and environmental requirements in landowner easement agreements.	No	NA	NA	Section 18.1		x
FERC Plan	II.B.2: Responsibilities of Environmental Inspectors	Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.3: Responsibilities of Environmental Inspectors	Verifying that the limits of authorized construction work areas and locations of access roads are visibly marked before clearing, and maintained throughout construction;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.4: Responsibilities of Environmental Inspectors	Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.5: Responsibilities of Environmental Inspectors	Identifying erosion/sediment control and soil stabilization needs in all areas	No	NA	NA	Section 18.1		x
FERC Plan	II.B.6: Responsibilities of Environmental Inspectors	Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.7: Responsibilities of Environmental Inspectors	Verifying that dewatering activities are properly monitored and do not result in the deposition of sand, silt, and/or sediment into sensitive environmental resource areas, including wetlands, waterbodies, cultural resource sites, and sensitive species habitats; stopping dewatering activities if such deposition is occurring and ensuring the design of the discharge is changed to prevent reoccurrence; and verifying that dewatering structures are removed after completion of dewatering activities;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.8: Responsibilities of Environmental Inspectors	Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action	No	NA	NA	Section 18.1		x
FERC Plan	II.B.9: Responsibilities of Environmental Inspectors	Advising the Chief Construction Inspector when environmental conditions (such as wet weather or frozen soils) make it advisable to restrict or delay construction activities to avoid topsoil mixing or excessive compaction;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.10: Responsibilities of Environmental Inspectors	Ensuring restoration of contours and topsoil;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.11: Responsibilities of Environmental Inspectors	Verifying that the soils imported for agricultural or residential use are certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner;	No	NA	NA	Section 18.1		x

Atlantic Coast Pipeline - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Plan	II.B.12: Responsibilities of Environmental Inspectors	Ensuring that erosion control devices are properly installed to prevent sediment flow into sensitive environmental resource areas (e.g., wetlands, waterbodies, cultural resource sites, and sensitive species habitats) and onto roads, and determining the need for additional erosion control devices;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.13: Responsibilities of Environmental Inspectors	Inspecting and ensuring the maintenance of temporary erosion control measures at least: a. on a daily basis in areas of active construction or equipment operation; b. on a weekly basis in areas with no construction or equipment operation; and c. within 24 hours of each 0.5 inch of rainfall;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.14: Responsibilities of Environmental Inspectors	Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.15: Responsibilities of Environmental Inspectors	Keeping records of compliance with the environmental conditions of the FERC's Orders, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other federal or state environmental permits during active construction and restoration;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.16: Responsibilities of Environmental Inspectors	Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase; and	No	NA	NA	Section 18.1		x
FERC Plan	II.B.17: Responsibilities of Environmental Inspectors	Verifying that locations for any disposal of excess construction materials for beneficial reuse comply with section III.E.	No	NA	NA	Section 18.1		x
FERC Plan	III.A.1: Construction Work Areas	Identify all construction work areas (e.g., construction right-of-way, extra work space areas, pipe storage and contractor yards, borrow and disposal areas, access roads) that would be needed for safe construction. The project sponsor must ensure that appropriate cultural resources and biological surveys are conducted, as determined necessary by the appropriate federal and state agencies.	No	NA	NA	Sections 9.4.1, 9.4.2, 9.6, 11.0, & 18.1 Construction Alignment Sheets		x
FERC Plan	III.A.2: Construction Work Areas	Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of authorized work areas.	No	NA	NA	Sections 9.4.1, 9.4.2, 9.6, 11.0, & 18.1 Construction Alignment Sheets		x
FERC Plan	III.A.3: Construction Work Areas	Plan construction sequencing to limit the amount and duration of open trench sections, as necessary, to prevent excessive erosion or sediment flow into sensitive environmental resource areas.	No	NA	NA	Section 13.2 Construction Alignment Sheets		x
FERC Plan	III.B.1: Drain Tile and Irrigation Systems	Attempt to locate existing drain tiles and irrigation systems.	No	NA	NA	Sections 9.4.10, 13.1.1, 13.1.4, 18.1 Construction Alignment Sheets		x
FERC Plan	III.B.2: Drain Tile and Irrigation Systems	Contact landowners and local soil conservation authorities to determine the locations of future drain tiles that are likely to be installed within 3 years of the authorized construction.	No	NA	NA	Section 9.4.10 Construction Alignment Sheets		x
FERC Plan	III.B.3: Drain Tile and Irrigation Systems	Develop procedures for constructing through drain-tiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.	No	NA	NA	Section 9.4.10 Construction Alignment Sheets		x
FERC Plan	III.B.4: Drain Tile and Irrigation Systems	Engage qualified drain tile specialists, as needed to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialists from the project area, if available.	No	NA	NA	Section 9.4.10 Construction Alignment Sheets		x
FERC Plan	III.C: Grazing Deferment	Develop grazing deferment plans with willing landowners, grazing permittees, and land management agencies to minimize grazing disturbance of revegetation efforts.	No	NA	NA	Section 9.4.10		x
FERC Plan	III.D: Road Crossings and Access Points	Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.	No	NA	NA	Section 9.6		x

Atlantic Coast Pipeline - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Plan	III.E: Disposal Planning	Determine methods and locations for the regular collection, containment, and disposal of excess construction materials and debris (e.g., timber, slash, mats, garbage, drill cuttings and fluids, excess rock) throughout the construction process. Disposal of materials for beneficial reuse must not result in adverse environmental impact and is subject to compliance with all applicable survey, landowner or land management agency approval, and permit requirements.	Yes	WV General Water Pollution Control Permit GP G.4.e.2.C.i	All solid waste and construction/demolition material must be disposed of in accordance with the Code of West Virginia and Legislative Rule Title 33 Series 1, (Solid Waste Management Rule).	Section 18.4.1		x
FERC Plan	III.F.1: Agency Coordination	Obtain written recommendations from the local soil conservation authorities or land management agencies regarding permanent erosion control and revegetation specifications.	No	NA	NA	Section 9.4.10 Appendix P Restoration and Rehabilitation Plan		x
FERC Plan	III.F.2: Agency Coordination	Develop specific procedures in coordination with the appropriate agencies to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities.	No	NA	NA	Sections 13.3.2, 15.1, & 18.1 Appendix P Restoration and Rehabilitation Plan		x
FERC Plan	III.F.3: Agency Coordination	Develop specific procedures in coordination with the appropriate agencies and landowners, as necessary, to allow for livestock and wildlife movement and protection during construction.	No	NA	NA	Sections 9.4.10 & 13.1		x
FERC Plan	III.F.4: Agency Coordination	Develop specific blasting procedures in coordination with the appropriate agencies that address pre- and post-blast inspections; advanced public notification; and mitigation measures for building foundations, groundwater wells, and springs. Use appropriate methods (e.g., blasting mats) to prevent damage to nearby structures and to prevent debris from entering sensitive environmental resource areas.	No	NA	NA	Section 15.11 Appendix S - Blasting Plan		x
FERC Plan	III.G: Spill Prevention and Response Procedures	The project sponsor shall develop project-specific Spill Prevention and Response Procedures, as specified in section IV of the staff's Procedures. A copy must be filed with the Secretary of the FERC (Secretary) prior to construction and made available in the field on each construction spread. The filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.	No	NA	NA	Section 19.0		x
FERC Plan	III.H: Residential Construction	For all properties with residences located within 50 feet of construction work areas, project sponsors shall: avoid removal of mature trees and landscaping within the construction work area unless necessary for safe operation of construction equipment, or as specified in landowner agreements; fence the edge of the construction work area for a distance of 100 feet on either side of the residence; and restore all lawn areas and landscaping immediately following clean up operations, or as specified in landowner agreements. If seasonal or other weather conditions prevent compliance with these time frames, maintain and monitor temporary erosion controls (sediment barriers and mulch) until conditions allow completion of restoration.	No	NA	NA	Section 9.4.8		x
FERC Plan	III.I: Winter Construction Plans	If construction is planned to occur during winter weather conditions, project sponsors shall develop and file a project-specific winter construction plan with the FERC application. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations. The plan shall address: 1. winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping); 2. stabilization and monitoring procedures if ground conditions will delay restoration until the following spring (e.g., mulching and erosion controls, inspection and reporting, stormwater control during spring thaw conditions); and 3. final restoration procedures (e.g., subsidence and compaction repair, topsoil replacement, seeding).	No	NA	NA	Section 9.4.9		x
FERC Plan	IV.A.1: Approved Areas of Disturbance	Project-related ground disturbance shall be limited to the construction right-of-way, extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the FERC's Orders. Any project-related ground disturbing activities outside these areas will require prior Director approval. This requirement does not apply to activities needed to comply with the Plan and Procedures (i.e., slope breakers, energy-dissipating devices, dewatering structures, drain tile system repairs) or minor field realignments and workspace shifts per landowner needs and requirements that do not affect other landowners or sensitive environmental resource areas. All construction or restoration activities outside of authorized areas are subject to all applicable survey and permit requirements, and landowner easement agreements.	No	NA	NA	Sections 11.0 & 13.0		x
FERC Plan	IV.A.2: Approved Areas of Disturbance	The construction right-of-way width for a project shall not exceed 75 feet or that described in the FERC application unless otherwise modified by a FERC Order. However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval to accommodate full construction right-of-way topsoil segregation and to ensure safe construction where topographic conditions (e.g., side-slopes) or soil limitations require it. Twenty-five feet of extra construction right-of-way width may also be used in limited, non-wetland or non-forested areas for truck turn-arounds where no reasonable alternative access exists. Project use of these additional limited areas is subject to landowner or land management agency approval and compliance with all applicable survey and permit requirements. When additional areas are used, each one shall be identified and the need explained in the weekly or biweekly construction reports to the FERC, if required. The following material shall be included in the reports: a. the location of each additional area by station number and reference to previously filed alignment sheets, or updated alignment sheets showing the additional areas; b. identification of the filing at FERC containing evidence that the additional areas were previously surveyed; and c. a statement that landowner approval has been obtained and is available in project files.	No	NA	NA	Section 11.0 Construction Alignment Sheets		x

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Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Plan	IV.B.1: Topsoil Segregation	Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in: a. cultivated or rotated croplands, and managed pastures; b. residential areas; c. hayfields; and d. other areas at the landowner's or land managing agency's request.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.B.2: Topsoil Segregation	In residential areas, importation of topsoil is an acceptable alternative to topsoil segregation.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.B.3: Topsoil Segregation	Where topsoil segregation is required, the project sponsor must: a. segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil); and b. make every effort to segregate the entire topsoil layer in soils with less than 12 inches of topsoil.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.B.4: Topsoil Segregation	Maintain separation of salvaged topsoil and subsoil throughout all construction activities.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.B.5: Topsoil Segregation	Segregated topsoil may not be used for padding the pipe, constructing temporary slope breakers or trench plugs, improving or maintaining roads, or as a fill material.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.B.6: Topsoil Segregation	Stabilize topsoil piles and minimize loss due to wind and water erosion with use of sediment barriers, mulch, temporary seeding, tackifiers, or functional equivalents, where necessary.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.C: Drain Tiles	1. Mark locations of drain tiles damaged during construction. 2. Probe all drainage tile systems within the area of disturbance to check for damage. 3. Repair damaged drain tiles to their original or better condition. Do not use filter-covered drain tiles unless the local soil conservation authorities and the landowner agree. Use qualified specialists for testing and repairs. 4. For new pipelines in areas where drain tiles exist or are planned, ensure that the depth of cover over the pipeline is sufficient to avoid interference with drain tile systems. For adjacent pipeline loops in agricultural areas, install the new pipeline with at least the same depth of cover as the existing pipeline(s).	No	NA	NA	Sections 9.4.10, 13.1.1, & 13.1.4 Construction Alignment Sheets		x
FERC Plan	IV.D: Irrigation	Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.	No	NA	NA	Section 9.4.10 Construction Alignment Sheets		x
FERC Plan	IV.E: Road Crossings and Access Points	1. Maintain safe and accessible conditions at all road crossings and access points during construction. 2. If crushed stone access pads are used in residential or agricultural areas, place the stone on synthetic fabric to facilitate removal. 3. Minimize the use of tracked equipment on public roadways. Remove any soil or gravel spilled or tracked onto roadways daily or more frequent as necessary to maintain safe road conditions. Repair any damages to roadway surfaces, shoulders, and bar ditches.	No	NA	NA	Section 13.1.2 & 15.2		x
FERC Plan	IV.F: Temporary Erosion Control	Install temporary erosion controls immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration is complete.	No	NA	NA	Section 13.4.1		x
FERC Plan	IV.F.1: Temporary Erosion Control	1. Temporary Slope Breakers a. Temporary slope breakers are intended to reduce runoff velocity and divert water off the construction right-of-way. Temporary slope breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, or sand bags. b. Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion. Temporary slope breakers must be installed on slopes greater than 5 percent where the base of the slope is less than 50 feet from waterbody, wetland, and road crossings at the following spacing (closer spacing shall be used if necessary) <u>Slope (%) Spacing (feet)</u> 5-15 300 >15-30 200 >30 100 c. Direct the outfall of each temporary slope breaker to a stable, well vegetated area or construct an energy-dissipating device at the end of the slope breaker and off the construction right-of-way. d. Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive environmental resource areas.	Yes	WV BMP 3.18 Right-of-Way Diversion WV BMP 3.27 Silt fence WV General Water Pollution Control Permit G.4.e.2.A.ii.k	WV BMP Manual used for temporary and permanent slope breaker Slope (%) Spacing (feet) < 5 300 10 175 15 125 20 100 >25 75 Silt fence should never be installed in streams or swales or in any area where there is a reasonable chance of concentrated flow. Hay or straw bales are not acceptable BMPs.	Section 13.4.1.4		x
FERC Plan	IV.F.2: Temporary Erosion Control	Temporary Trench Plugs: Temporary trench plugs are intended to segment a continuous open trench prior to backfill. a. Temporary trench plugs may consist of unexcavated portions of the trench, compacted subsoil, sandbags, or some functional equivalent. b. Position temporary trench plugs, as necessary, to reduce trenchline erosion and minimize the volume and velocity of trench water flow at the base of slopes.	No	NA	NA	Section 13.4.2.1		x
FERC Plan	IV.F.3: Temporary Erosion Control	Sediment Barriers: Sediment barriers are intended to stop the flow of sediments and to prevent the deposition of sediments beyond approved workspaces or into sensitive resources. a. Sediment barriers may be constructed of materials such as silt fence, staked hay or straw bales, compacted earth (e.g., driveable berms across travelways), sand bags, or other appropriate materials. b. At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until revegetation is successful as defined in this Plan. Leave adequate room between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition. c. Where wetlands or waterbodies are adjacent to and downslope of construction work areas, install sediment barriers along the edge of these areas, as necessary to prevent sediment flow into the wetland or waterbody.	Yes	WV General Water Pollution Control Permit G.4.e.2.A.ii.k WV BMP 3.27 Silt fence	Hay or straw bales are not acceptable BMPs. Silt fence should never be installed in streams or swales or in any area where there is a reasonable chance of concentrated flow.	Section 13.4.1.1		x

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Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Plan	IV.F.4: Temporary Erosion Control	Mulch: a. Apply mulch on all slopes (except in cultivated cropland) concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing. b. Mulch can consist of weed-free straw or hay, wood fiber hydromulch, erosion control fabric, or some functional equivalent. c. Mulch all disturbed upland areas (except cultivated cropland) before seeding if: (1) final grading and installation of permanent erosion control measures will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas), as required in section V.A.1; or (2) construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions. d. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent. e. If wood chips are used as mulch, do not use more than 1 ton/acre and add the equivalent of 11 lbs/acre available nitrogen (at least 50 percent of which is slow release). f. Ensure that mulch is adequately anchored to minimize loss due to wind and water. g. When anchoring with liquid mulch binders, use rates recommended by the manufacturer. Do not use liquid mulch binders within 100 feet of wetlands or waterbodies, except where the product is certified environmentally non-toxic by the appropriate state or federal agency or independent standards-setting organization. h. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat, unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.	No	NA	NA	Section 13.3.4 Appendix P - Restoration and Rehabilitation Plan		x
FERC Plan	V.A.1: Restoration Cleanup	Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (i.e., temporary slope breakers, sediment barriers, and mulch) until conditions allow completion of cleanup. If construction or restoration unexpectedly continues into the winter season when conditions could delay successful decompaction, topsoil replacement, or seeding until the following spring, file with the Secretary for the review and written approval of the Director, a winter construction plan (as specified in section III.I). This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.	No	NA	NA	Section 13.2		x
FERC Plan	V.A.2: Restoration Cleanup	A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed as specified in section IV.F. and inspected and maintained as specified in sections II.B.12 through 14. When access is no longer required the travel lane must be removed and the right-of-way restored.	No	NA	NA	Section 13.2		x
FERC Plan	V.A.3: Restoration Cleanup	Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench shall be considered construction debris, unless approved for use as mulch or for some other use on the construction work areas by the landowner or land managing agency.	No	NA	NA	Section 15.11		x
FERC Plan	V.A.4: Restoration Cleanup	Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction work area shall be similar to adjacent areas not disturbed by construction. The landowner or land management agency may approve other provisions in writing.	No	NA	NA	Section 13.2		x
FERC Plan	V.A.5: Restoration Cleanup	Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting.	No	NA	NA	Section 13.2		x
FERC Plan	V.A.6: Restoration Cleanup	Remove construction debris from all construction work areas unless the landowner or land managing agency approves leaving materials onsite for beneficial reuse, stabilization, or habitat restoration.	No	NA	NA	Section 13.2		x
FERC Plan	V.A.7: Restoration Cleanup	Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.	No	NA	NA	Section 13.4.1.1		x
FERC Plan	V.B.1: Permanent Erosion Control Devices	1. Trench Breakers a. Trench breakers are intended to slow the flow of subsurface water along the trench. Trench breakers may be constructed of materials such as sand bags or polyurethane foam. Do not use topsoil in trench breakers. b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers. Otherwise, trench breakers shall be installed at the same spacing as and upslope of permanent slope breakers. c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same spacing as if permanent slope breakers were required. d. At a minimum, install a trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland. Install trench breakers at wetland boundaries, as specified in the Procedures. Do not install trench breakers within a wetland.	No	NA	NA	Section 13.4.2.1		x

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Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies																	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area																
FERC Plan	V.B.2: Permanent Erosion Control Devices	<p>Permanent Slope Breakers</p> <p>a. Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction right-of-way, and prevent sediment deposition into sensitive resources. Permanent slope breakers may be constructed of materials such as soil, stone, or some functional equivalent.</p> <p>b. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, unless requested by the landowner, using spacing recommendations obtained from the local soil conservation authority or land managing agency.</p> <p>In the absence of written recommendations, use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction right-of-way:</p> <p>Slope (%) Spacing (feet)</p> <table border="0"> <tr> <td>5 - 15</td> <td>300</td> </tr> <tr> <td>>15 - 30</td> <td>200</td> </tr> <tr> <td>>30</td> <td>100</td> </tr> </table> <p>c. Construct slope breakers to divert surface flow to a stable area without causing water to pool or erode behind the breaker. In the absence of a stable area, construct appropriate energy-dissipating devices at the end of the breaker.</p> <p>d. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction right-of-way to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction right-of-way, they are subject to compliance with all applicable survey requirements.</p>	5 - 15	300	>15 - 30	200	>30	100	Yes	WV BMP 3.18 Right-of-Way Diversion	<p>WV BMP Manual used for temporary and permanent slope breaker</p> <p>Slope (%) Spacing (feet)</p> <table border="0"> <tr> <td>< 5</td> <td>300</td> </tr> <tr> <td>10</td> <td>175</td> </tr> <tr> <td>15</td> <td>125</td> </tr> <tr> <td>20</td> <td>100</td> </tr> <tr> <td>>25</td> <td>75</td> </tr> </table>	< 5	300	10	175	15	125	20	100	>25	75	Sections 13.4.2.3		x
5 - 15	300																							
>15 - 30	200																							
>30	100																							
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10	175																							
15	125																							
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FERC Plan	V.C.1: Soil Compaction Mitigation	Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests.	No	NA	NA	Section 13.4.2.8		x																
FERC Plan	V.C.2: Soil Compaction Mitigation	<p>Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil.</p> <p>If subsequent construction and cleanup activities result in further compaction, conduct additional tilling.</p>	No	NA	NA	Section 13.4.2.8		x																
FERC Plan	V.C.3: Soil Compaction Mitigation	Perform appropriate soil compaction mitigation in severely compacted residential areas.	No	NA	NA	Section 13.4.2.8		x																
FERC Plan	V.D.1: Revegetation	<p>General:</p> <p>a. The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b.</p> <p>b. Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices.</p>	No	NA	NA	Section 13.3.6 Appendix P - Restoration and Rehabilitation Plan		x																
FERC Plan	V.D.2: Revegetation	<p>Soil Additives:</p> <p>Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as practicable after application.</p>	No	NA	NA	Sections 13.3.7 & 13.3.8 Appendix P - Restoration and Rehabilitation Plan		x																
FERC Plan	V.D.3: Revegetation	<p>Seeding Requirements:</p> <p>a. Prepare a seedbed in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed.</p> <p>b. Seed disturbed areas in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or the request of the landowner or land management agency. Seeding is not required in cultivated croplands unless requested by the landowner.</p> <p>c. Perform seeding of permanent vegetation within the recommended seeding dates. If seeding cannot be done within those dates, use appropriate temporary erosion control measures discussed in section IV.F and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Dormant seeding or temporary seeding of annual species may also be used, if necessary, to establish cover, as approved by the Environmental Inspector. Lawns may be seeded on a schedule established with the landowner.</p> <p>d. In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a through V.D.3.c.</p> <p>e. Base seeding rates on Pure Live Seed. Use seed within 12 months of seed testing.</p> <p>f. Treat legume seed with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydro).</p> <p>g. In the absence of written recommendations from the local soil conservation authorities, landowner, or land managing agency to the contrary, a seed drill equipped with a cultipacker is preferred for seed application.</p> <p>Broadcast or hydroseeding can be used in lieu of drilling at double the recommended seeding rates. Where seed is broadcast, firm the seedbed with a cultipacker or roller after seeding. In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by the Environmental Inspector.</p>	No	NA	NA	Section 13.3.5 Appendix P - Restoration and Rehabilitation Plan		x																
FERC Plan	VI. Off-Road Vehicle Control	To each owner or manager of forested lands, offer to install and maintain measures to control unauthorized vehicle access to the right-of-way. These measures may include: <p>A. signs;</p> <p>B. fences with locking gates;</p> <p>C. slash and timber barriers, pipe barriers, or a line of boulders across the right-of-way; and</p> <p>D. conifers or other appropriate trees or shrubs across the right-of-way.</p>	No	NA	NA	Section 15.3		x																
FERC Plan	VII.A.1: Post-Construction Activities and Reporting	<p>MONITORING AND MAINTENANCE:</p> <p>Conduct follow-up inspections of all disturbed areas, as necessary, to determine the success of revegetation and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.</p>	No	NA	NA	Section 18.1 Appendix P - Restoration and Rehabilitation Plan		x																

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FERC Plan	VII.A.2: Post-Construction Activities and Reporting	Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non- nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful when upon visual survey, crop growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise. Continue revegetation efforts until revegetation is successful.	Yes	WV General Water Pollution Control Permit G.4.e.2.A.i.c for all areas and MNF LRMP SW05 for areas located in the MNF	The GP specifies that at least 70% of the disturbed areas in West Virginia must be germinated adequately within 30 days of seed planting. For disturbed areas in the MNF, 85% of the area must be planted.	Appendix P - Restoration and Rehabilitation Plan	x	
FERC Plan	VII.A.3: Post-Construction Activities and Reporting	Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in agricultural areas until restoration is successful.	No	NA	NA	Section 9.4.10		x
FERC Plan	VII.A.4: Post-Construction Activities and Reporting	Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful, and proper drainage has been restored.	No	NA	NA	Section 13.3.8 Appendix P - Restoration and Rehabilitation Plan		x
FERC Plan	VII.A.5: Post-Construction Activities and Reporting	Routine vegetation mowing or clearing over the full width of the permanent right-of-way in uplands shall not be done more frequently than every 3 years. However, to facilitate periodic corrosion/leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency or the U.S. Fish and Wildlife Service.	No	NA	NA	Section 14.1.5 Appendix P - Restoration and Rehabilitation Plan		x
FERC Plan	VII.A.6: Post-Construction Activities and Reporting	Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the project. Maintain signs, gates, and permanent access roads as necessary.	No	NA	NA	Section 15.3		x
FERC Plan	VII.B.1: Reporting	1. The project sponsor shall maintain records that identify by milepost: a. method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used; b. acreage treated; c. dates of backfilling and seeding; d. names of landowners requesting special seeding treatment and a description of the follow-up actions; e. the location of any subsurface drainage repairs or improvements made during restoration; and f. any problem areas and how they were addressed.	No	NA	NA	Appendix P - Restoration and Rehabilitation Plan		x
FERC Plan	VII.B.2: Reporting	The project sponsor shall file with the Secretary quarterly activity reports documenting the results of follow-up inspections required by section VII.A.1; any problem areas, including those identified by the landowner; and corrective actions taken for at least 2 years following construction. The requirement to file quarterly activity reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advanced notice provisions in the FERC's regulations.	No	NA	NA	Appendix P - Restoration and Rehabilitation Plan		x
FERC Wetland and Waterbody Construction and Mitigation Procedures								
FERC Procedures	III.A: Environmental Inspectors	At least one Environmental Inspector having knowledge of the wetland and waterbody conditions in the project area is required for each construction spread. The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.	No	NA	NA	Section 18.1		x
FERC Procedures	III.B: Environmental Inspectors	The Environmental Inspector's responsibilities are outlined in the Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).	No	NA	NA	NA		x
FERC Procedures	IV.A.1: Preconstruction Planning	The project sponsor shall develop project-specific Spill Prevention and Response Procedures that meet applicable requirements of state and federal agencies. A copy must be filed with the Secretary prior to construction and made available in the field on each construction spread. This filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations. It shall be the responsibility of the project sponsor and its contractors to structure their operations in a manner that reduces the risk of spills or the accidental exposure of fuels or hazardous materials to waterbodies or wetlands. The project sponsor and its contractors must, at a minimum, ensure that: a. all employees handling fuels and other hazardous materials are properly trained; b. all equipment is in good operating order and inspected on a regular basis; c. fuel trucks transporting fuel to on-site equipment travel only on approved access roads; d. all equipment is parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill; e. hazardous materials, including chemicals, fuels, and lubricating oils, are not stored within 100 feet of a wetland, waterbody, or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas; f. concrete coating activities are not performed within 100 feet of a wetland or waterbody boundary, unless the location is an existing industrial site designated for such use. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill; g. pumps operating within 100 feet of a waterbody or wetland boundary utilize appropriate secondary containment systems to prevent spills; and h. bulk storage of hazardous materials, including chemicals, fuels, and lubricating oils have appropriate secondary containment systems to prevent spills.	No	NA	NA	Section 19.0		x

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			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Procedures	IV.A.2: Preconstruction Planning	The project sponsor and its contractors must structure their operations in a manner that provides for the prompt and effective cleanup of spills of fuel and other hazardous materials. At a minimum, the project sponsor and its contractors must: <ol style="list-style-type: none"> ensure that each construction crew (including cleanup crews) has on hand sufficient supplies of absorbent and barrier materials to allow the rapid containment and recovery of spilled materials and knows the procedure for reporting spills and unanticipated discoveries of contamination; ensure that each construction crew has on hand sufficient tools and material to stop leaks; know the contact names and telephone numbers for all local, state, and federal agencies (including, if necessary, the U. S. Coast Guard and the National Response Center) that must be notified of a spill; and follow the requirements of those agencies in cleaning up the spill, in excavating and disposing of soils or other materials contaminated by a spill, and in collecting and disposing of waste generated during spill cleanup. 	No	NA	NA	Section 19.0		x
FERC Procedures	IV.B: Agency Coordination	The project sponsor must coordinate with the appropriate local, state, and federal agencies as outlined in these Procedures and in the FERC's Orders.	No	NA	NA	Sections 10.0, 11.0, & 19.0		x
FERC Procedures	V.A: Waterbody Crossings	NOTIFICATION PROCEDURES AND PERMITS: <ol style="list-style-type: none"> Apply to the U.S. Army Corps of Engineers (COE), or its delegated agency, for the appropriate wetland and waterbody crossing permits. Provide written notification to authorities responsible for potable surface water supply intakes located within 3 miles downstream of the crossing at least 1 week before beginning work in the waterbody, or as otherwise specified by that authority. Apply for state-issued waterbody crossing permits and obtain individual or generic section 401 water quality certification or waiver. Notify appropriate federal and state authorities at least 48 hours before beginning trenching or blasting within the waterbody, or as specified in applicable permits. 	No	NA	NA	Section 10.1		x
FERC Procedures	V.B.1:Installation	Time Window for Construction: Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows: <ol style="list-style-type: none"> coldwater fisheries - June 1 through September 30; and coolwater and warmwater fisheries - June 1 through November 30. 	No	NA	NA	Section 14.1.1		x
FERC Procedures	V.B.2:Installation	Extra Work Areas <ol style="list-style-type: none"> Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from the water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the conditions that will not permit a 50-foot setback and measures to ensure the waterbody is adequately protected. Limit the size of extra work areas to the minimum needed to construct the waterbody crossing. 	No	NA	NA	Sections 13.2 & 14.1		x
FERC Procedures	V.B.3:Installation	General Crossing Procedures <ol style="list-style-type: none"> Comply with the COE, or its delegated agency, permit terms and conditions. Construct crossings as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit. Where pipelines parallel a waterbody, maintain at least 15 feet of undisturbed vegetation between the waterbody (and any adjacent wetland) and the construction right-of-way, except where maintaining this offset will result in greater environmental impact. Where waterbodies meander or have multiple channels, route the pipeline to minimize the number of waterbody crossings. Maintain adequate waterbody flow rates to protect aquatic life, and prevent the interruption of existing downstream uses. Waterbody buffers (e.g., extra work area setbacks, refueling restrictions) must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete. Crossing of waterbodies when they are dry or frozen and not flowing may proceed using standard upland construction techniques in accordance with the Plan, provided that the Environmental Inspector verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature. In the event of perceptible flow, the project sponsor must comply with all applicable Procedure requirements for "waterbodies" as defined in section I.B.1. 	No	NA	NA	Sections 13.2, 14.0, 14.1, & 14.3		x
FERC Procedures	V.B.4:Installation	Spoil Pile Placement and Control <ol style="list-style-type: none"> All spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings, must be placed in the construction right-of-way at least 10 feet from the water's edge or in additional extra work areas as described in section V.B.2. Use sediment barriers to prevent the flow of spoil or silt-laden water into any waterbody. 	No	NA	NA	Section 14.1		x
FERC Procedures	V.B.5:Installation	Equipment Bridges <ol style="list-style-type: none"> Only clearing equipment and equipment necessary for installation of equipment bridges may cross waterbodies prior to bridge installation. Limit the number of such crossings of each waterbody to one per piece of clearing equipment. Construct and maintain equipment bridges to allow unrestricted flow and to prevent soil from entering the waterbody. Examples of such bridges include: <ol style="list-style-type: none"> equipment pads and culvert(s); equipment pads or railroad car bridges without culverts; clean rock fill and culvert(s); and flexi-float or portable bridges. Additional options for equipment bridges may be utilized that achieve the performance objectives noted above. Do not use soil to construct or stabilize equipment bridges. <ol style="list-style-type: none"> Design and maintain each equipment bridge to withstand and pass the highest flow expected to occur while the bridge is in place. Align culverts to prevent bank erosion or streambed scour. If necessary, install energy dissipating devices downstream of the culverts. Design and maintain equipment bridges to prevent soil from entering the waterbody. Remove temporary equipment bridges as soon as practicable after permanent seeding. If there will be more than 1 month between final cleanup and the beginning of permanent seeding and reasonable alternative access to the right-of-way is available, remove temporary equipment bridges as soon as practicable after final cleanup. Obtain any necessary approval from the COE, or the appropriate state agency for permanent bridges. 	No	NA	NA	Section 14.1.2		x

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			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Procedures	V.B.6:Installation	<p>a. Dry-Ditch Crossing Methods</p> <p>a. Unless approved otherwise by the appropriate federal or state agency, install the pipeline using one of the dry-ditch methods outlined below for crossings of waterbodies up to 30 feet wide (at the water's edge at the time of construction) that are state-designated as either coldwater or significant coolwater or warmwater fisheries, or federally-designated as critical habitat.</p> <p>b. Dam and Pump</p> <p>(1) The dam-and-pump method may be used without prior approval for crossings of waterbodies where pumps can adequately transfer streamflow volumes around the work area, and there are no concerns about sensitive species passage.</p> <p>(2) Implementation of the dam-and-pump crossing method must meet the following performance criteria:</p> <p>(i) use sufficient pumps, including on-site backup pumps, to maintain downstream flows;</p> <p>(ii) construct dams with materials that prevent sediment and other pollutants from entering the waterbody (e.g., sandbags or clean gravel with plastic liner);</p> <p>(iii) screen pump intakes to minimize entrainment of fish;</p> <p>(iv) prevent streambed scour at pump discharge; and</p> <p>(v) continuously monitor the dam and pumps to ensure proper operation throughout the waterbody crossing.</p> <p>c. Flume Crossing: The flume crossing method requires implementation of the following steps:</p> <p>(1) install flume pipe after blasting (if necessary), but before any trenching;</p> <p>(2) use sand bag or sand bag and plastic sheeting diversion structure or equivalent to develop an effective seal and to divert stream flow through the flume pipe (some modifications to the stream bottom may be required to achieve an effective seal);</p> <p>(3) properly align flume pipe(s) to prevent bank erosion and streambed scour;</p> <p>(4) do not remove flume pipe during trenching, pipelaying, or backfilling activities, or initial streambed restoration efforts; and</p> <p>(5) remove all flume pipes and dams that are not also part of the equipment bridge as soon as final cleanup of the stream bed and bank is complete.</p> <p>d. Horizontal Directional Drill</p> <p>For each waterbody or wetland that would be crossed using the HDD method, file with the Secretary for the review and written approval by the Director, a plan that includes:</p> <p>(1) site-specific construction diagrams that show the location of mud pits, pipe assembly areas, and all areas to be disturbed or cleared for construction;</p> <p>(2) justification that disturbed areas are limited to the minimum needed to construct the crossing;</p> <p>(3) identification of any aboveground disturbance or clearing between the HDD entry and exit workspaces during construction;</p> <p>(4) a description of how an inadvertent release of drilling mud would be contained and cleaned up; and</p> <p>(5) a contingency plan for crossing the waterbody or wetland in the event the HDD is unsuccessful and how the abandoned drill hole would be sealed, if necessary.</p> <p>The requirement to file HDD plans does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.</p>	No	NA	NA	Sections 13.1, 14.1.3.3, 14.1.3.4, 14.1.3.5, & 15.4		x
FERC Procedures	V.B.7:Installation	<p>Crossings of Minor Waterbodies</p> <p>Where a dry-ditch crossing is not required, minor waterbodies may be crossed using the open-cut crossing method, with the following restrictions:</p> <p>a. except for blasting and other rock breaking measures, complete instream construction activities (including trenching, pipe installation, backfill, and restoration of the streambed contours) within 24 hours. Streambanks and unconsolidated streambeds may require additional restoration after this period;</p> <p>b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and</p> <p>c. equipment bridges are not required at minor waterbodies that do not have a state-designated fishery classification or protected status (e.g., agricultural or intermittent drainage ditches). However, if an equipment bridge is used it must be constructed as described in section V.B.5.</p>	No	NA	NA	Sections 13.1 & 14.1.4.1		x
FERC Procedures	V.B.8:Installation	<p>Crossings of Intermediate Waterbodies</p> <p>Where a dry-ditch crossing is not required, intermediate waterbodies may be crossed using the open-cut crossing method, with the following restrictions:</p> <p>a. complete instream construction activities (not including blasting and other rock breaking measures) within 48 hours, unless site-specific conditions make completion within 48 hours infeasible;</p> <p>b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and</p> <p>c. all other construction equipment must cross on an equipment bridge as specified in section V.B.5.</p>	No	NA	NA	Sections 13.1 & 14.1.4.2		x
FERC Procedures	V.B.9:Installation	<p>Crossings of Major Waterbodies</p> <p>Before construction, the project sponsor shall file with the Secretary for the review and written approval by the Director a detailed, site-specific construction plan and scaled drawings identifying all areas to be disturbed by construction for each major waterbody crossing (the scaled drawings are not required for any offshore portions of pipeline projects). This plan must be developed in consultation with the appropriate state and federal agencies and shall include extra work areas, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues. The requirement to file major waterbody crossing plans does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.</p> <p>The Environmental Inspector may adjust the final placement of the erosion and sediment control structures in the field to maximize effectiveness.</p>	No	NA	NA	Sections 13.1 & 14.1.4.3		x
FERC Procedures	V.B.10:Installation	<p>Temporary Erosion and Sediment Control</p> <p>Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the waterbody or adjacent upland.</p> <p>Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan; however, the following specific measures must be implemented at stream crossings:</p> <p>a. install sediment barriers across the entire construction right-of-way at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. Removable sediment barriers (or driveable berms) must be installed across the travel lane. These removable sediment barriers can be removed during the construction day, but must be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent;</p> <p>b. where waterbodies are adjacent to the construction right-of-way and the right-of-way slopes toward the waterbody, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the waterbody; and</p> <p>c. use temporary trench plugs at all waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the waterbody.</p>	No	NA	NA	Sections 13.1, 13.3, & 13.4		x
FERC Procedures	V.B.11:Installation	<p>Trench Dewatering</p> <p>Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any waterbody. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.</p>	Yes	WV General Water Pollution Control Permit G.4.e.2.A.ii.i	The GP G.4.e.2.A.ii.i has additional requirements for how and where to dewater. The requirement also requires a procedure to be implemented	Sections 13.1 & 13.4.1.5		x

Atlantic Coast Pipeline - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Procedures	V.C: Restoration	<p>1. Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain coldwater fisheries.</p> <p>2. For open-cut crossings, stabilize waterbody banks and install temporary sediment barriers within 24 hours of completing instream construction activities. For dry-ditch crossings, complete streambed and bank stabilization before returning flow to the waterbody channel.</p> <p>3. Return all waterbody banks to preconstruction contours or to a stable angle of repose as approved by the Environmental Inspector.</p> <p>4. Install erosion control fabric or a functional equivalent on waterbody banks at the time of final bank recontouring. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.</p> <p>5. Application of riprap for bank stabilization must comply with COE, or its delegated agency, permit terms and conditions.</p> <p>6. Unless otherwise specified by state permit, limit the use of riprap to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric.</p> <p>7. Revegetate disturbed riparian areas with native species of conservation grasses, legumes, and woody species, similar in density to adjacent undisturbed lands.</p> <p>8. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent that are less than 50 feet from the waterbody, or as needed to prevent sediment transport into the waterbody. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the waterbody.</p> <p>9. Sections V.C.3 through V.C.7 above also apply to those perennial or intermittent streams not flowing at the time of construction.</p>	No	NA	NA	Sections 13.1, 13.4.2.3, 13.4.2.4, & 13.4.2.6		x
FERC Procedures	V.D: Post-Construction Maintenance	<p>1. Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in riparian areas that are between HDD entry and exit points.</p> <p>2. Do not use herbicides or pesticides in or within 100 feet of a waterbody except as allowed by the appropriate land management or state agency.</p> <p>3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of riparian areas.</p>	No	NA	NA	Section 14.0		x
FERC Procedures	VI.A.1: General	<p>The project sponsor shall conduct a wetland delineation using the current federal methodology and file a wetland delineation report with the Secretary before construction. The requirement to file a wetland delineation report does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.</p> <p>This report shall identify:</p> <ul style="list-style-type: none"> a. by milepost all wetlands that would be affected; b. the National Wetlands Inventory (NWI) classification for each wetland; c. the crossing length of each wetland in feet; and d. the area of permanent and temporary disturbance that would occur in each wetland by NWI classification type. <p>The requirements outlined in this section do not apply to wetlands in actively cultivated or rotated cropland. Standard upland protective measures, including workspace and topsoiling requirements, apply to these agricultural wetlands.</p>	No	NA	NA	Sections 9.4.7 & 14.2		x
FERC Procedures	VI.A.2: General	Route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands. Where looping an existing pipeline, overlap the existing pipeline right-of-way with the new construction right-of-way. In addition, locate the loop line no more than 25 feet away from the existing pipeline unless site-specific constraints would adversely affect the stability of the existing pipeline.	Yes	MNF LRMP MG33	Pipelines are not allowed in wetlands in the MNF	Sections 9.4.7 & 14.2	x	
FERC Procedures	VI.A.3: General	Limit the width of the construction right-of-way to 75 feet or less. Prior written approval of the Director is required where topographic conditions or soil limitations require that the construction right-of-way width within the boundaries of a federally delineated wetland be expanded beyond 75 feet. Early in the planning process the project sponsor is encouraged to identify site-specific areas where excessively wide trenches could occur and/or where spoil piles could be difficult to maintain because existing soils lack adequate unconfined compressive strength.	No	NA	NA	Sections 9.4.7 & 14.2		x
FERC Procedures	VI.A.4: General	Wetland boundaries and buffers must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.	No	NA	NA	Sections 9.4.7 & 14.2		x
FERC Procedures	VI.A.5: General	Implement the measures of sections V and VI in the event a waterbody crossing is located within or adjacent to a wetland crossing. If all measures of sections V and VI cannot be met, the project sponsor must file with the Secretary a site-specific crossing plan for review and written approval by the Director before construction. This crossing plan shall address at a minimum:	No	NA	NA	Sections 9.4.7 & 14.2		x
FERC Procedures	VI.A.6: General	Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit compliance with U.S. Department of Transportation regulations.	No	NA	NA	Sections 9.4.7 & 14.2		x

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FERC Procedures	VI.B.1: Installation	<p>Extra Work Areas and Access Roads</p> <p>a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land.</p> <p>b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from wetland boundaries, except where adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the site-specific conditions that will not permit a 50-foot setback and measures to ensure the wetland is adequately protected.</p> <p>c. The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction right-of-way has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats). In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall use access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way.</p> <p>d. The only access roads, other than the construction right-of-way, that can be used in wetlands are those existing roads that can be used with no modifications or improvements, other than routine repair, and no impact on the wetland.</p>	No	NA	NA	Sections 9.4.7 & 14.2		x
FERC Procedures	VI.B.2: Installation	<p>Crossing Procedures</p> <p>a. Comply with COE, or its delegated agency, permit terms and conditions.</p> <p>b. Assemble the pipeline in an upland area unless the wetland is dry enough to adequately support skids and pipe.</p> <p>c. Use "push-pull" or "float" techniques to place the pipe in the trench where water and other site conditions allow.</p> <p>d. Minimize the length of time that topsoil is segregated and the trench is open. Do not trench the wetland until the pipeline is assembled and ready for lowering in.</p> <p>e. Limit construction equipment operating in wetland areas to that needed to clear the construction right-of-way, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction right-of-way.</p> <p>f. Cut vegetation just above ground level, leaving existing root systems in place, and remove it from the wetland for disposal. The project sponsor can burn woody debris in wetlands, if approved by the COE and in accordance with state and local regulations, ensuring that all remaining woody debris is removed for disposal.</p> <p>g. Limit pulling of tree stumps and grading activities to directly over the trenchline. Do not grade or remove stumps or root systems from the rest of the construction right-of-way in wetlands unless the Chief Inspector and Environmental Inspector determine that safety-related construction constraints require grading or the removal of tree stumps from under the working side of the construction right-of-way.</p> <p>h. Segregate the top 1 foot of topsoil from the area disturbed by trenching, except in areas where standing water is present or soils are saturated. Immediately after backfilling is complete, restore the segregated topsoil to its original location.</p> <p>i. Do not use rock, soil imported from outside the wetland, tree stumps, or brush riprap to support equipment on the construction right-of-way.</p> <p>j. If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment, or operate normal equipment on timber riprap, prefabricated equipment mats, or terra mats.</p> <p>k. Remove all project-related material used to support equipment on the construction right-of-way upon completion of construction.</p>	No	NA	NA	Section 14.2		x
FERC Procedures	VI.B.3: Installation	<p>Temporary Sediment Control</p> <p>Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the wetland or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench). Except as noted below in section VI.B.3.c, maintain sediment barriers until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan.</p> <p>a. Install sediment barriers across the entire construction right-of-way immediately upslope of the wetland boundary at all wetland crossings where necessary to prevent sediment flow into the wetland.</p> <p>b. Where wetlands are adjacent to the construction right-of-way and the right-of-way slopes toward the wetland, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the wetland.</p> <p>c. Install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way through wetlands. Remove these sediment barriers during right-of-way cleanup.</p>	No	NA	NA	Sections 13.1, 13.3, & 13.4, 14.2		x
FERC Procedures	VI.B.4: Installation	<p>Trench Dewatering</p> <p>Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any wetland. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.</p>	Yes	WV General Water Pollution Control Permit G.4.e.2.A.ii.i	Requirements for how and where to dewater and required to have procedure in place	Sections 13.1 & 13.4.1.5		x
FERC Procedures	VI.C: Restoration	<p>1. Where the pipeline trench may drain a wetland, construct trench breakers at the wetland boundaries and/or seal the trench bottom as necessary to maintain the original wetland hydrology.</p> <p>2. Restore pre-construction wetland contours to maintain the original wetland hydrology.</p> <p>3. For each wetland crossed, install a trench breaker at the base of slopes near the boundary between the wetland and adjacent upland areas. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the wetland.</p> <p>4. Do not use fertilizer, lime, or mulch unless required in writing by the appropriate federal or state agency.</p> <p>5. Consult with the appropriate federal or state agencies to develop a project-specific wetland restoration plan. The restoration plan shall include measures for re-establishing herbaceous and/or woody species, controlling the invasion and spread of invasive species and noxious weeds (e.g., purple loosestrife and phragmites), and monitoring the success of the revegetation and weed control efforts. Provide this plan to the FERC staff upon request.</p> <p>6. Until a project-specific wetland restoration plan is developed and/or implemented, temporarily revegetate the construction right-of-way with annual ryegrass at a rate of 40 pounds/acre (unless standing water is present).</p> <p>7. Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species.</p> <p>8. Remove temporary sediment barriers located at the boundary between wetland and adjacent upland areas after revegetation and stabilization of adjacent upland areas are judged to be successful as specified in section VII.A.4 of the Plan.</p>	No	NA	NA	Sections 13.1 & 13.4.2.1		x

Atlantic Coast Pipeline - West Virginia

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			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Procedures	VI.D: Post-Construction Maintenance And Reporting	<p>1. Do not conduct routine vegetation mowing or clearing over the full width of the permanent right-of-way in wetlands. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in wetlands that are between HDD entry and exit points.</p> <p>2. Do not use herbicides or pesticides in or within 100 feet of a wetland, except as allowed by the appropriate federal or state agency.</p> <p>3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of wetland areas.</p> <p>4. Monitor and record the success of wetland revegetation annually until wetland revegetation is successful.</p> <p>5. Wetland revegetation shall be considered successful if all of the following criteria are satisfied:</p> <ul style="list-style-type: none"> a. the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation); b. vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction; c. if natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and d. invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction. <p>6. Within 3 years after construction, file a report with the Secretary identifying the status of the wetland revegetation efforts and documenting success as defined in section VI.D.5, above. The requirement to file wetland restoration reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advance notice provisions in the FERC’s regulations.</p> <p>For any wetland where revegetation is not successful at the end of 3 years after construction, develop and implement (in consultation with a professional wetland ecologist) a remedial revegetation plan to actively revegetate wetlands. Continue revegetation efforts and file a report annually documenting progress in these wetlands until wetland revegetation is successful.</p>	No	NA	NA	Sections 13.3.8, 14.1.6, & 14.2 Appendix P - Restoration and Rehabilitation Plan		x
FERC Procedures	VII.A: Notification Procedures and Permits	<p>1. Apply for state-issued water withdrawal permits, as required.</p> <p>2. Apply for National Pollutant Discharge Elimination System (NPDES) or state-issued discharge permits, as required.</p> <p>3. Notify appropriate state agencies of intent to use specific sources at least 48 hours before testing activities unless they waive this requirement in writing.</p>	No	NA	NA	NA Separate NPDES Permit not included in SWPPP		x
FERC Procedures	VII.B: General	<p>1. Perform 100 percent radiographic inspection of all pipeline section welds or hydrotest the pipeline sections, before installation under waterbodies or wetlands.</p> <p>2. If pumps used for hydrostatic testing are within 100 feet of any waterbody or wetland, address secondary containment and refueling of these pumps in the project’s Spill Prevention and Response Procedures.</p> <p>3. The project sponsor shall file with the Secretary before construction a list identifying the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC’s regulations.</p>	No	NA	NA	NA Separate NPDES Permit not included in SWPPP		x
FERC Procedures	VII.C: Intake Source and Rate	<p>1. Screen the intake hose to minimize the potential for entrainment of fish.</p> <p>2. Do not use state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and/or local permitting agencies grant written permission.</p> <p>3. Maintain adequate flow rates to protect aquatic life, provide for all waterbody uses, and provide for downstream withdrawals of water by existing users.</p> <p>4. Locate hydrostatic test manifolds outside wetlands and riparian areas to the maximum extent practicable.</p>	No	NA	NA	NA Separate NPDES Permit not included in SWPPP		x
FERC Procedures	VII.D: Discharge Location, Method, and Rate	<p>1. Regulate discharge rate, use energy dissipation device(s), and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow.</p> <p>2. Do not discharge into state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and local permitting agencies grant written permission.</p>	No	NA	NA	NA Separate NPDES Permit not included in SWPPP		x

Supply Header Project - Pennsylvania

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements		Description of more stringent requirements/practices	Reference in Westmoreland County ESCGP-2	Reference in Greene County ESCGP-2	Where Requirement/Practice	
			yes/no	If yes, list requirements/practices				Steep Slopes	Non-specific Area
FERC Upland Erosion Control, Revegetation, and Maintenance Plan									
FERC Plan	II.A.1: Environmental Inspection	At least one Environmental Inspector is required for each construction spread during construction and restoration (as defined by section V). The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.A.2: Environmental Inspection	Environmental Inspectors shall have peer status with all other activity inspectors.	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.A.3: Environmental Inspection	Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the FERC's Orders, stipulations of other environmental permits or approvals, or landowner easement agreements; and to order appropriate corrective	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.1: Responsibilities of Environmental Inspectors	Inspecting construction activities for compliance with the requirements of this Plan, the Procedures, the environmental conditions of the FERC's Orders, the mitigation measures proposed by the project sponsor (as approved and/or modified by the Order), other environmental permits and approvals, and environmental requirements in landowner easement agreements.	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.2: Responsibilities of Environmental Inspectors	Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.3: Responsibilities of Environmental Inspectors	Verifying that the limits of authorized construction work areas and locations of access roads are visibly marked before clearing, and maintained throughout construction;	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.4: Responsibilities of Environmental Inspectors	Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.5: Responsibilities of Environmental Inspectors	Identifying erosion/sediment control and soil stabilization needs in all areas	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.6: Responsibilities of Environmental Inspectors	Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats;	no	NA	NA	4.16.1.1	NA		x
FERC Plan	II.B.7: Responsibilities of Environmental Inspectors	Verifying that dewatering activities are properly monitored and do not result in the deposition of sand, silt, and/or sediment into sensitive environmental resource areas, including wetlands, waterbodies, cultural resource sites, and sensitive species habitats; stopping dewatering activities if such deposition is occurring and ensuring the design of the discharge is changed to prevent	no	NA	NA	4.16.1.1	NA		x
FERC Plan	II.B.8: Responsibilities of Environmental Inspectors	Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action	no	NA	NA	4.16.1.1	NA		x
FERC Plan	II.B.9: Responsibilities of Environmental Inspectors	Advising the Chief Construction Inspector when environmental conditions (such as wet weather or frozen soils) make it advisable to restrict or delay construction activities to avoid topsoil mixing or excessive compaction;	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.10: Responsibilities of Environmental Inspectors	Ensuring restoration of contours and topsoil;	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.11: Responsibilities of Environmental Inspectors	Verifying that the soils imported for agricultural or residential use are certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner;	no	NA	NA	4.16.1.1	NA		x
FERC Plan	II.B.12: Responsibilities of Environmental Inspectors	Ensuring that erosion control devices are properly installed to prevent sediment flow into sensitive environmental resource areas (e.g., wetlands, waterbodies, cultural resource sites, and sensitive species habitats) and onto roads, and determining the need for additional erosion control devices;	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.13: Responsibilities of Environmental Inspectors	Inspecting and ensuring the maintenance of temporary erosion control measures at least: a. on a daily basis in areas of active construction or equipment operation; b. on a weekly basis in areas with no construction or equipment operation; and c. within 24 hours of each 0.5 inch of rainfall;	yes	PA Code § 102.1	Inspections will be in compliance with the FERC Plan II.B.13 and the PADEP considers stormwater events as, "Runoff from precipitation, snowmelt, surface runoff and drainage." Therefore the Project will be inspected within 24 hours of each stormwater event (runoff from precipitation, snowmelt, surface runoff and drainage, as defined by Pennsylvania Chapter 102 Regulations), including rainfall events resulting in 0.5 inches or more.	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.14: Responsibilities of Environmental Inspectors	Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts;	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.15: Responsibilities of Environmental Inspectors	Keeping records of compliance with the environmental conditions of the FERC's Orders, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other federal or state environmental permits during active construction and restoration;	yes	PADEP Visual Inspection Form: Form 3150-FM-BWEW0083 PA Code § 102.4 (b)(8-9), § 102.5 (e)	PADEP Visual Inspection Form: Form 3150-FM-BWEW0083 -Inspections will be documented on the PADEP Visual Site Inspection Report. PA Code § 102.4 (b)(8-9) - The E&S Plan, inspection reports, and monitoring records shall be available for review and inspection by the Department or the conservation district at the project site during all stages of the earth disturbance activity. Upon complaint or site inspection, the Department or conservation district may require that the E&S Plan be submitted for review and approval to ensure compliance with [PA Code Chapter 102]. PA Code § 102.5 (e) - For earth disturbance activities authorized by a permit under this chapter, a preconstruction meeting is required unless the permittee has been notified otherwise in writing by the Department or conservation district. The permittee shall invite the Department or conservation district to attend the preconstruction meeting and provide at least 7 days notice of the preconstruction meeting to all invited attendees. Permittees, co-permittees, operators, and licensed professionals or designees responsible for the earth disturbance activity, including implementation of E&S and PCSM Plans and critical stages of	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.16: Responsibilities of Environmental Inspectors	Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase; and	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Plan	II.B.17: Responsibilities of Environmental Inspectors	Verifying that locations for any disposal of excess construction materials for beneficial reuse comply with section III.E.	no	NA	NA	4.16.1.1	4.12.1.1		x

Supply Header Project - Pennsylvania

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			yes/no	If yes, list requirements/practices				Steep Slopes	Non-specific Area
FERC Plan	III.A.1: Construction Work Areas	Identify all construction work areas (e.g., construction right-of-way, extra work space areas, pipe storage and contractor yards, borrow and disposal areas, access roads) that would be needed for safe construction. The project sponsor must ensure that appropriate cultural resources and biological surveys are conducted, as determined necessary by the appropriate federal and state agencies.	no	NA	NA	4.10; 4.0 Appendix A, Cultural Resource Notice filed with the Chapter 105 & PAG 10 Applications	4.7; 4.0 Appendix A, Cultural Resource Notice filed with the Chapter 105 & PAG 10 Applications		x
FERC Plan	III.A.2: Construction Work Areas	Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of authorized work areas.	no	NA	NA	4.1, 4.10.2, 6.0	4.1, 4.7.2, 6.0		x
FERC Plan	III.A.3: Construction Work Areas	Plan construction sequencing to limit the amount and duration of open trench sections, as necessary, to prevent excessive erosion or sediment flow into sensitive environmental resource areas.	yes	PA E&S Manual Chapter 13 - Utility Line Projects	PA E&S Manual Chapter 13 - Utility Line Projects - Steel pipelines with welded joints typically require a relatively long open trench. For such installations, the length of time required for open trench operations at any station along the right-of-way should be specified in the E&S Plan. This time period should be the minimum time necessary to efficiently excavate the trench, install the pipe, backfill the trench and begin stabilization of the disturbed areas. For most installations, this time period should not exceed 30	4.10.6	N/A		x
FERC Plan	III.B.1: Drain Tile and Irrigation Systems	Attempt to locate existing drain tiles and irrigation systems.	no	NA	NA	4.11.1	N/A		x
FERC Plan	III.B.2: Drain Tile and Irrigation Systems	Contact landowners and local soil conservation authorities to determine the locations of future drain tiles that are likely to be installed within 3 years of the authorized construction.	no	NA	NA	4.11.1	N/A		x
FERC Plan	III.B.3: Drain Tile and Irrigation Systems	Develop procedures for constructing through drain-tiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.	no	NA	NA	4.11.1	N/A		x
FERC Plan	III.B.4: Drain Tile and Irrigation Systems	Engage qualified drain tile specialists, as needed to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialists from the project area, if available.	no	NA	NA	4.11.1	N/A		x
FERC Plan	III.C: Grazing Deferment	Develop grazing deferment plans with willing landowners, grazing permittees, and land management agencies to minimize grazing disturbance of revegetation efforts.	NA	NA	NA	4.11.1	N/A		x
FERC Plan	III.D: Road Crossings and Access Points	Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.	no	NA	NA	4.10.3	4.7.3		x
FERC Plan	III.E: Disposal Planning	Determine methods and locations for the regular collection, containment, and disposal of excess construction materials and debris (e.g., timber, slash, mats, garbage, drill cuttings and fluids, excess rock) throughout the construction process. Disposal of materials for beneficial reuse must not result in adverse environmental impact and is subject to compliance with all applicable survey, landowner or land management agency approval, and permit requirements.	yes	PA E&S Manual Chapter 1 - Required E&S Plan Content	Procedures which ensure that the proper measures for the recycling or disposal of materials associated with or from the project site will be undertaken in accordance with Department regulations. Individuals responsible for earth disturbance activities must ensure that proper mechanisms are in place to control waste materials. Construction wastes include, but are not limited to, excess soil materials, building materials, concrete wash water, sanitary wastes, etc. that could adversely impact water quality. Measures should be planned and implemented for housekeeping, materials management, and litter control. Wherever possible, recycling of excess materials is preferred, rather than disposal. A note requiring recycling of waste materials, where feasible, should be added to the drawings.	4.17.0	4.13.0		x
FERC Plan	III.F.1: Agency Coordination	Obtain written recommendations from the local soil conservation authorities or land management agencies regarding permanent erosion control and revegetation specifications.	no	NA	NA	4.10.10	4.9.1		x
FERC Plan	III.F.2: Agency Coordination	Develop specific procedures in coordination with the appropriate agencies to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities.	yes	PA E&S Manual Chapter 11 - Stabilization Methods and Standards - Seeding	In addition to consulting with the agencies to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities, the E&S Manual has specific requirements for seed mixtures and procedures to minimize the spread of invasive species, noxious weeds, and soil pests. Per the E&S Manual, seed mixtures appropriate for site conditions (e.g. soil pH and fertility, slope, available sunlight, anticipated use, etc.) should be specified. Tables 11.3, 11.4 and 11.5, adapted from the Penn State Erosion Control and Conservation Plantings on Noncropland Manual, should be used for selection of species, seed specifications, mixtures, liming and fertilizing, time of seeding, and seeding methods. Specifications for these items may also be obtained from PennDOT's Publication # 408, Section 804 or from the local conservation district. Other sources can be approved on a case-by-case basis. Upon selection of a reference, that reference should be used to provide all specifications for seeding, mulching, and soil amendments unless otherwise approved. Indicate the reference being used in the plan submittal. Seed mixtures that contain potentially invasive species or species that may be harmful to native plant communities should be avoided. Standard E&S Worksheet #21 should be used to provide seeding,	4.10.0, 4.0 Appendix A Chapter 105 application (Invasive Species Management Plan)	4.7.0, 4.0 Appendix A Chapter 105 application (Invasive Species Management Plan)		x
FERC Plan	III.F.3: Agency Coordination	Develop specific procedures in coordination with the appropriate agencies and landowners, as necessary, to allow for livestock and wildlife movement and protection during construction.	no	NA	NA	4.5.5, 4.10.10	N/A		x
FERC Plan	III.F.4: Agency Coordination	Develop specific blasting procedures in coordination with the appropriate agencies that address pre- and post-blast inspections; advanced public notification; and mitigation measures for building foundations, groundwater wells, and springs. Use appropriate	no	NA	NA	4.10.10	N/A		x
FERC Plan	III.G: Spill Prevention and Response Procedures	The project sponsor shall develop project-specific Spill Prevention and Response Procedures, as specified in section IV of the staff's Procedures. A copy must be filed with the Secretary of the FERC (Secretary) prior to construction and made available in the field on each construction spread. The filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.	yes	PA Code § 102.5	In addition to the FERC requirements, Pennsylvania requires a Preparedness, Prevention, and Contingency (PPC) Plan. PA Code § 102.5 - A person shall prepare and implement a PPC Plan when storing, using or transporting materials including: fuels, chemicals, solvents, pesticides, fertilizers, lime, petrochemicals, wastewater, wash water, core drilling wastewater, cement, sanitary wastes, solid wastes or hazardous materials onto, on or from the project site during earth disturbance activities. The PPC Plan shall	4.23.0, Chapter 105/ 401WQC/ PAG-10 (PPC Plan)	4.19.0, Chapter 105/ 401WQC/ PAG-10 (PPC Plan)		x
FERC Plan	III.H: Residential Construction	For all properties with residences located within 50 feet of construction work areas, project sponsors shall: avoid removal of mature trees and landscaping within the construction work area unless necessary for safe operation of construction equipment, or as specified in landowner agreements; fence the edge of the construction work area for a distance of 100 feet on either side of the residence; and restore all lawn areas and landscaping immediately following clean up operations, or as specified in landowner	no	NA	NA	4.11.3	NA		x
FERC Plan	III.I: Winter Construction Plans	If construction is planned to occur during winter weather conditions, project sponsors shall develop and file a project-specific winter construction plan with the FERC application. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations. The plan shall address: 1. winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping);	no	NA	NA	4.10.11.5	4.7.10.4		x
FERC Plan	IV.A.1: Approved Areas of Disturbance	Project-related ground disturbance shall be limited to the construction right-of-way, extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the FERC's Orders. Any project-related ground disturbing activities outside these areas will require prior Director approval. This requirement does not apply to activities needed to comply with the Plan and Procedures (i.e., slope breakers, energy-dissipating devices, dewatering structures, drain tile system repairs) or	no	NA	NA	4.10.6, 4.0 Appendix A	4.7.6, 4.0 Appendix A		x
FERC Plan	IV.A.2: Approved Areas of Disturbance	The construction right-of-way width for a project shall not exceed 75 feet or that described in the FERC application unless otherwise modified by a FERC Order. However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval to accommodate full construction right-of-way topsoil segregation and to ensure safe construction where topographic conditions (e.g., side-slopes) or soil limitations require it. Twenty-five feet of extra construction right-of-way width may also be used in limited, non-wetland or non-forested areas for truck turn-arounds where no reasonable alternative access exists. Project use of these additional limited areas is subject to landowner or land management agency approval and compliance with all applicable survey and permit requirements. When additional areas are used, each one shall be identified and the need explained in	no	NA	NA	4.1, 4.0 Appendix A	NA		x

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FERC Regulatory Document	Regulation	Description	Are there more stringent requirements		Description of more stringent requirements/practices	Reference in Westmoreland County ESCGP-2	Reference in Greene County ESCGP-2	Where Requirement/Practice																			
			yes/no	If yes, list requirements/practices				Steep Slopes	Non-specific Area																		
FERC Plan	IV.B.1: Topsoil Segregation	Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in: a. cultivated or rotated croplands, and managed pastures; b. residential areas; c. hayfields; and d. other areas at the landowner's or land managing agency's request.	Yes	PA E&S Manual Chapter 11 - Stabilization Methods and Standards - Topsoil Application	PA E&S Manual Chapter 11 - Stabilization Methods and Standards - Topsoil Application - Graded areas should be scarified or otherwise loosened to a depth of 3 to 5 inches to permit bonding of the topsoil to the surface areas and to provide a roughened surface to prevent topsoil from sliding down slope. Topsoil should be uniformly distributed across the disturbed area to a depth of 4 to 8 inches minimum — 2 inches on fill out slopes. Spreading should be done in such a manner that sodding or seeding can proceed with a minimum of additional preparation or tillage. Irregularities in the surface resulting from topsoil placement should be corrected in order to prevent formation of depressions unless such depressions are part of the PCSM plan.	4.10.10.1	4.7.9.1		x																		
FERC Plan	IV.B.2: Topsoil Segregation	In residential areas, importation of topsoil is an acceptable alternative to topsoil segregation.	no	NA	NA	4.10.10.1	NA		x																		
FERC Plan	IV.B.3: Topsoil Segregation	Where topsoil segregation is required, the project sponsor must: a. segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil); and b. make every effort to segregate the entire topsoil layer in soils with less than 12 inches of topsoil.	no	NA	NA	4.10.10.1	4.7.9.1		x																		
FERC Plan	IV.B.4: Topsoil Segregation	Maintain separation of salvaged topsoil and subsoil throughout all construction activities.	no	NA	NA	4.10.10.1	4.7.9.1		x																		
FERC Plan	IV.B.5: Topsoil Segregation	Segregated topsoil may not be used for padding the pipe, constructing temporary slope breakers or trench plugs, improving or maintaining roads, or as a fill material.	no	NA	NA	4.10.10.1	4.7.9.1		x																		
FERC Plan	IV.B.6: Topsoil Segregation	Stabilize topsoil piles and minimize loss due to wind and water erosion with use of sediment barriers, mulch, temporary seeding, tackifiers, or functional equivalents, where necessary.	no	NA	NA	4.10.10.1	4.7.9.1		x																		
FERC Plan	IV.C: Drain Tiles	1. Mark locations of drain tiles damaged during construction. 2. Probe all drainage tile systems within the area of disturbance to check for damage. 3. Repair damaged drain tiles to their original or better condition. Do not use filter-covered drain tiles unless the local soil conservation authorities and the landowner agree. Use qualified specialists for testing and repairs. 4. For new pipelines in areas where drain tiles exist or are planned, ensure that the depth of cover over the pipeline is sufficient to	no	NA	NA	4.11.1	N/A		x																		
FERC Plan	IV.D: Irrigation	Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.	no	NA	NA	NA	N/A		x																		
FERC Plan	IV.E: Road Crossings and Access Points	1. Maintain safe and accessible conditions at all road crossings and access points during construction. 2. If crushed stone access pads are used in residential or agricultural areas, place the stone on synthetic fabric to facilitate removal. 3. Minimize the use of tracked equipment on public roadways. Remove any soil or gravel spilled or tracked onto roadways daily or more frequent as necessary to maintain safe road conditions. Repair any damages to roadway surfaces, shoulders, and bar ditches.	yes	PA E&S Manual - Chapter 3 - Site Access - Rock Construction Entrance	In addition to the FERC requirements, the PADEP requires Rock Construction Entrances in non-high quality watersheds and Rock Construction Entrances with Wash Racks in high quality watersheds.	4.10.3, Section 4.0 Appendix A	4.7.3, Section 4.0 Appendix A		x																		
FERC Plan	IV.F: Temporary Erosion Control	Install temporary erosion controls immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration is complete.	yes	PA E&S Manual - Chapter 11 - Stabilization Methods and Standards - General	PA E&S Manual - Chapter 11 - Stabilization Methods and Standards - General -Cessation of activity for at least 4 days or more requires temporary stabilization. Immediate stabilization is required as soon as any graded area reaches final grade.	4.10.11.2	4.7.10.2		x																		
FERC Plan	IV.F.1: Temporary Erosion Control	Temporary Slope Breakers a. Temporary slope breakers are intended to reduce runoff velocity and divert water off the construction right-of-way. Temporary slope breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, or sand bags. b. Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion. Temporary slope breakers must be installed on slopes greater than 5 percent where the base of the slope is less than 50 feet from waterbody, wetland, and road crossings at the following spacing (closer spacing shall be used if necessary) <table border="1"> <thead> <tr> <th>Slope (%)</th> <th>Spacing (feet)</th> </tr> </thead> <tbody> <tr> <td>5-15</td> <td>300</td> </tr> <tr> <td>>15-30</td> <td>200</td> </tr> <tr> <td>>30</td> <td>100</td> </tr> </tbody> </table> c. Direct the outfall of each temporary slope breaker to a stable, well vegetated area or construct an energy-dissipating device at the	Slope (%)	Spacing (feet)	5-15	300	>15-30	200	>30	100	yes	PA E&S Manual - Chapter 3 - Site Access - Waterbar and Table 3.1	In addition to the FERC requirements, the PA E&S Manual outlines specific spacing requirements. TABLE 3.1 – Maximum Waterbar Spacing <table border="1"> <thead> <tr> <th>PERCENT SLOPE</th> <th>SPACING (FT)</th> </tr> </thead> <tbody> <tr> <td><5</td> <td>250</td> </tr> <tr> <td>5 - 15</td> <td>150</td> </tr> <tr> <td>15 - 30</td> <td>100</td> </tr> <tr> <td>> 30</td> <td>50</td> </tr> </tbody> </table>	PERCENT SLOPE	SPACING (FT)	<5	250	5 - 15	150	15 - 30	100	> 30	50	4.10.10.5, 4.0 Appendix A	NA		x
Slope (%)	Spacing (feet)																										
5-15	300																										
>15-30	200																										
>30	100																										
PERCENT SLOPE	SPACING (FT)																										
<5	250																										
5 - 15	150																										
15 - 30	100																										
> 30	50																										
FERC Plan	IV.F.2: Temporary Erosion Control	Temporary Trench Plugs: Temporary trench plugs are intended to segment a continuous open trench prior to backfill. a. Temporary trench plugs may consist of unexcavated portions of the trench, compacted subsoil, sandbags, or some functional equivalent. b. Position temporary trench plugs, as necessary, to reduce trenchline erosion and minimize the volume and velocity of trench water	yes	PA E&S Manual - Chapter 13 Utility Line Crossings	In addition to the FERC requirements, the PA E&S Manual outlines additional trench plug requirements. PA E&S Manual - Chapter 13 Utility Line Crossings - Trench plugs should be installed on both sides of all crossings to prevent draining streams or wetlands, and to prevent changes to their hydrology.	4.10.10.1, 4.0 Appendix A	NA		x																		
FERC Plan	IV.F.3: Temporary Erosion Control	Sediment Barriers: Sediment barriers are intended to stop the flow of sediments and to prevent the deposition of sediments beyond approved workspaces or into sensitive resources. a. Sediment barriers may be constructed of materials such as silt fence, staked hay or straw bales, compacted earth (e.g., drivable berms across travelways), sand bags, or other appropriate materials. b. At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes	Yes	PA Code § 102.22 & § 102.7	In addition to the FERC requirements, the PA Code also has additional requirements for sediment barriers. E&S BMPs shall be implemented and maintained until the permanent stabilization is completed (70 percent permanent vegetation and inspected by the conservation district).	4.10.8	4.7.7		x																		
FERC Plan	IV.F.4: Temporary Erosion Control	Mulch: a. Apply mulch on all slopes (except in cultivated cropland) concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing. b. Mulch can consist of weed-free straw or hay, wood fiber hydromulch, erosion control fabric, or some functional equivalent. c. Mulch all disturbed upland areas (except cultivated cropland) before seeding if: (1) final grading and installation of permanent erosion control measures will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas), as required in section V.A.1; or (2) construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions. d. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent. e. If wood chips are used as mulch, do not use more than 1 ton/acre and add the equivalent of 11 lbs/acre available nitrogen (at	Yes	Chapter 11 - Stabilization Methods and Standards - Mulching	Chapter 11 - Stabilization Methods and Standards - Mulching - Straw and hay mulch should be anchored or tackified immediately after application to prevent being windblown. A tractor-drawn implement may be used to "crimp" the straw or hay into the soil — about 3 inches. This method should be limited to slopes no steeper than 3H:1V. The machinery should be operated on the contour. Note: Crimping of hay or straw by running over it with tracked machinery is not recommended. Polymeric and gum tackifiers mixed and applied according to manufacturer's recommendations may be used to tack mulch. Avoid application during rain and on windy days. A 24-hour curing period and a soil temperature higher than 45 degrees F are typically required. Application should generally be heaviest at edges of seeded areas and at crests of ridges and banks to prevent loss by wind. The remainder of the area should have binder applied uniformly. Binders may be applied after mulch is spread or sprayed into the mulch as it is being blown onto the soil. Applying straw and binder together is generally more effective. Mulch on slopes of 8% or steeper should be held in place with netting. Lightweight plastic, fiber, or paper nets may be stapled over the mulch according to manufacturer's recommendations. Shredded paper hydromulch should not be used on slopes steeper than 5%. Wood fiber hydromulch may be applied on steeper slopes provided a tackifier is used. The application rate for any hydromulch should be 2,000 lb/acre at a minimum.	4.10.11.3, 4.0 Appendix A	4.7.10.3, 4.0 Appendix A		x																		
FERC Plan	V.A.1: Restoration Cleanup	Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (i.e., temporary slope breakers, sediment barriers, and mulch) until conditions allow completion of cleanup.	no	NA	NA	4.10.11, 4.10.11.5	4.7.10, 4.7.10.4		x																		
FERC Plan	V.A.2: Restoration Cleanup	A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed as specified in section IV.F. and inspected and maintained as specified in sections II.B.12 through 14. When access is no	no	NA	NA	4.10.11	4.7.10		x																		
FERC Plan	V.A.3: Restoration Cleanup	Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench shall be considered construction debris, unless approved for use as mulch or for some other use on the	no	NA	NA	4.10.11	4.7.10		x																		
FERC Plan	V.A.4: Restoration Cleanup	Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction	no	NA	NA	4.10.11	4.7.10		x																		
FERC Plan	V.A.5: Restoration Cleanup	Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting.	no	NA	NA	4.10.11	4.7.10		x																		

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FERC Regulatory Document	Regulation	Description	Are there more stringent requirements		Description of more stringent requirements/practices	Reference in Westmoreland County ESCGP-2	Reference in Greene County ESCGP-2	Where Requirement/Practice	
			yes/no	If yes, list requirements/practices				Steep Slopes	Non-specific Area
FERC Plan	V.A.6: Restoration Cleanup	Remove construction debris from all construction work areas unless the landowner or land managing agency approves leaving materials onsite for beneficial reuse, stabilization, or habitat restoration.	no	NA	NA	4.10.11	4.7.10		x
FERC Plan	V.A.7: Restoration Cleanup	Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.	yes	PA Code § 102.22 & § 102.7	In addition to the FERC requirements, the PA Code also has additional requirements for sediment barriers. E&S BMPs shall be implemented and maintained until the permanent stabilization is completed (70 percent permanent vegetation and inspected by the conservation district).	4.10.8	4.7.7		x
FERC Plan	V.B.1: Permanent Erosion Control Devices	1. Trench Breakers a. Trench breakers are intended to slow the flow of subsurface water along the trench. Trench breakers may be constructed of materials such as sand bags or polyurethane foam. Do not use topsoil in trench breakers. b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers. Otherwise, trench breakers shall be installed at the same spacing as and upslope of permanent slope breakers. c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same	yes	PA E&S Manual - Chapter 13 - Utility Line Projects	Table 13.1 Maximum Spacing and Materials for Trench Plugs Trench plugs should be installed on both sides of all crossings to prevent draining streams or wetlands, and to prevent changes to their hydrology.	4.6.4, 4.10.10.10.1, 4.0 Appendix A	NA		x
FERC Plan	V.B.2: Permanent Erosion Control Devices	Permanent Slope Breakers a. Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction right-of-way, and prevent sediment deposition into sensitive resources. Permanent slope breakers may be constructed of materials such as soil, stone, or some functional equivalent. b. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, unless requested by the landowner, using spacing recommendations obtained from the local soil conservation authority or land managing agency. In the absence of written recommendations, use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction right-of-way: Slope (%) Spacing (feet) 5 - 15 300 >15 - 30 200 >30 100 c. Construct slope breakers to divert surface flow to a stable area without causing water to pool or erode behind the breaker. In the	yes	PA E&S Manual - Chapter 13 - Utility Line Projects - Waterbars	PA E&S Manual - Chapter 13 - Utility Line Projects - Waterbars - Waterbars should be constructed at a slope of 2% and discharge to a well-vegetated area on the downslope side of the right-of-way. This may include wooded areas if the recommended spacing provided in Table 13.2 is followed. Waterbars should not discharge into an open trench. Obstructions, such as straw bales, silt fence, rock filters, compost socks etc. should not be placed in any waterbars. Where needed, they may be located below the discharge end of the waterbar. Waterbars need not be installed on residential lawns or in agricultural fields.	4.10.11.1.1, 4.0 Appendix A	NA		x
FERC Plan	V.C.1: Soil Compaction Mitigation	Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests.	no	NA	NA	Chapter 105 Permit Application (R&R Plan)	NA		x
FERC Plan	V.C.2: Soil Compaction Mitigation	Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil.	yes	Agency Correspondence	In response to RR07 Question 60, wind erosion management was developed and tillage should be used only in an emergency situation before wind erosion begins, plowing on the windward side of the site with chisel-type plows spaced approximately 12 inches apart, as committed to in the ESCGP-2.	4.10.9	4.7.8		x
FERC Plan	V.C.3: Soil Compaction Mitigation	Perform appropriate soil compaction mitigation in severely compacted residential areas.	no	NA	NA	4.11.3.1.2	NA		x
FERC Plan	V.D.1: Revegetation	General: a. The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b. b. Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the	yes	PA E&S Manual - Chapter 11 Stabilization Methods and Standards - Vegetative Stabilization	Revegetation requirements derived from Chapter 11 Stabilization Methods and Standards - Vegetative Stabilization Seed mixtures were selected based on appropriate site conditions and recommendations in the PA ESC Manual and recommended by the Westmoreland County Conservation District for the Westmoreland County portion of the project.	4.10.11.2, 4.11.3, 4.0 Appendix	4.7.10.2		x
FERC Plan	V.D.2: Revegetation	Soil Additives: Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as practicable after application.	yes	PA E&S Manual - Chapter 11 Stabilization Methods and Standards - Vegetative Stabilization - Seeding Request from WCD	TABLE 11.2 Soil Amendment Application Rate Equivalents (modified by the WCD)	4.10.11.2, 4.0 Appendix A	4.7.10.2, 4.0 Appendix A		x
FERC Plan	V.D.3: Revegetation	Seeding Requirements: a. Prepare a seedbed in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed. b. Seed disturbed areas in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or the request of the landowner or land management agency. Seeding is not required in cultivated croplands unless requested by the landowner. c. Perform seeding of permanent vegetation within the recommended seeding dates. If seeding cannot be done within those dates, use appropriate temporary erosion control measures discussed in section IV.F and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Dormant seeding or temporary seeding of annual species may also be used, if necessary, to establish cover, as approved by the Environmental Inspector. Lawns may be seeded on a schedule established with the landowner. d. In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a through V.D.3.c. e. Base seeding rates on Pure Live Seed. Use seed within 12 months of seed testing.	yes	PA E&S Manual - Chapter 11 Stabilization Methods and Standards - Vegetative Stabilization Requested by the WCD	Revegetation requirements derived from Chapter 11 Stabilization Methods and Standards - Vegetative Stabilization Seed mixtures were selected based on appropriate site conditions and recommendations in the PA ESC Manual and recommended by the Westmoreland County Conservation District for the Westmoreland County portion of the project.	4.10.11.2, 4.11.3, 4.0 Appendix A	4.7.10.2, 4.0 Appendix A		x
FERC Plan	VI.Off-Road Vehicle Control	To each owner or manager of forested lands, offer to install and maintain measures to control unauthorized vehicle access to the right-of-way. These measures may include: A. signs; B. fences with locking gates; C. slash and timber barriers, pipe barriers, or a line of boulders across the right-of-way; and	no	NA	NA	4.10.11.6	NA		x

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FERC Regulatory Document	Regulation	Description	Are there more stringent requirements		Description of more stringent requirements/practices	Reference in Westmoreland County ESCGP-2	Reference in Greene County ESCGP-2	Where Requirement/Practice	
			yes/no	If yes, list requirements/practices				Steep Slopes	Non-specific Area
FERC Plan	VII.A.1: Post-Construction Activities and Reporting	MONITORING AND MAINTENANCE: Conduct follow-up inspections of all disturbed areas, as necessary, to determine the success of revegetation and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.	yes	PADEP Visual Inspection Form: Form 3150-FM-BWEW0083 PA Code § 102.4 (b)(8-9), § 102.5 (e), § 102.22, § 102.7	PADEP Visual Inspection Form: Form 3150-FM-BWEW0083 - Inspections will be documented on the PADEP Visual Site Inspection Report. PA Code § 102.4 (b)(8) - inspection reports, and monitoring records shall be available for review and inspection by the Department or the conservation district at the project site during all stages of the earth disturbance activity. PA Code § 102.5 4(b)(9) - Upon complaint or site inspection, the Department or conservation district may require that the E&S Plan be submitted for review and approval to ensure compliance with [PA Code Chapter 102]. PA Code § 102.5 (e) For earth disturbance activities authorized by a permit under this chapter, a preconstruction meeting is required unless the permittee has been notified otherwise in writing by the Department or conservation district. The permittee shall invite the Department or conservation district to attend the preconstruction meeting and provide at least 7 days notice of the preconstruction meeting to all invited attendees. Permittees, co-permittees, operators, and licensed professionals or designees responsible for the earth disturbance activity, including implementation of E&S and PCSM Plans and critical stages of implementation of the approved PCSM Plan, shall attend a preconstruction meeting. PA Code § 102.22, § 102.7 E&S - BMPs shall be implemented and maintained until the permanent stabilization is completed (70	4.16.2, 4.16.3, 4.0 Appendix A	4.12.2, 4.12.3, 4.0 Appendix A		x
FERC Plan	VII.A.2: Post-Construction Activities and Reporting	2. Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful when upon visual survey, crop growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise. Continue revegetation efforts until revegetation is successful.	yes	PA Code § 102.22	§ 102.22. Site stabilization. (a) Permanent stabilization. Upon final completion of an earth disturbance activity or any stage or phase of an activity, the site shall immediately have topsoil restored, replaced, or amended, seeded, mulched or otherwise permanently stabilized and protected from accelerated erosion and sedimentation. For an earth disturbance activity or any stage or phase of an activity to be considered permanently stabilized, the disturbed areas shall be covered with one of the following: (i) A minimum uniform 70% perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation.	4.12.2	NA		x
FERC Plan	VII.A.3: Post-Construction Activities and Reporting	Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in agricultural areas until restoration is successful.	no	NA	NA	4.11.1	NA		x
FERC Plan	VII.A.4: Post-Construction Activities and Reporting	Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful, and proper drainage has been restored.	yes	PA Code § 102.22	§ 102.22. Site stabilization. (a) Permanent stabilization. Upon final completion of an earth disturbance activity or any stage or phase of an activity, the site shall immediately have topsoil restored, replaced, or amended, seeded, mulched or otherwise permanently stabilized and protected from accelerated erosion and sedimentation. For an earth disturbance activity or any stage or phase of an activity to be considered permanently stabilized, the disturbed areas shall be covered with one of the following: (i) A minimum uniform 70% perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation.	4.12.2	4.8.2		x
FERC Plan	VII.A.5: Post-Construction Activities and Reporting	Routine vegetation mowing or clearing over the full width of the permanent right-of-way in uplands shall not be done more frequently than every 3 years. However, to facilitate periodic corrosion/leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any	no	NA	NA	Chapter 105 Permit Application (R&R Plan)	Chapter 105 Permit Application (R&R Plan)		x
FERC Plan	VII.A.6: Post-Construction Activities and Reporting	Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the project. Maintain signs, gates, and permanent access roads as necessary.	no	NA	NA	4.11.6	NA		x
FERC Plan	VII.B.1: Reporting	1. The project sponsor shall maintain records that identify by milepost: a. method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used; b. acreage treated; c. dates of backfilling and seeding; d. names of landowners requesting special seeding treatment and a description of the follow-up actions; e. the location of any subsurface drainage repairs or improvements made during restoration; and f. any problem areas and how they were addressed.	no	NA	NA	4.16.1.1; Chapter 105 Permit Application (R&R Plan)	4.12.1.1; Chapter 105 Permit Application (R&R Plan)		x
FERC Plan	VII.B.2: Reporting	The project sponsor shall file with the Secretary quarterly activity reports documenting the results of follow-up inspections required by section VII.A.1; any problem areas, including those identified by the landowner; and corrective actions taken for at least 2 years following construction. The requirement to file quarterly activity reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advanced notice provisions in the FERC's regulations.	yes	PADEP Visual Inspection Form: Form 3150-FM-BWEW0083 PA Code § 102.4 (b)(8), § 102.5 €	PADEP Visual Inspection Form: Form 3150-FM-BWEW0083 - Inspections will be documented on the PADEP Visual Site Inspection Report. PA Code § 102.4 (b)(8-9) - The E&S Plan, inspection reports, and monitoring records shall be available for review and inspection by the Department or the conservation district at the project site during all stages of the earth disturbance activity. Upon complaint or site inspection, the Department or conservation district may require that the E&S Plan be submitted for review and approval to ensure compliance with [PA Code Chapter 102]. PA Code § 102.5 (e) -For earth disturbance activities authorized by a permit under this chapter, a preconstruction meeting is required unless the permittee has been notified otherwise in writing by the Department or conservation district. The permittee shall invite the Department or conservation district to attend the preconstruction meeting and provide at least 7 days notice of the preconstruction meeting to all invited attendees. Permittees, co-permittees, operators, and licensed professionals or designees responsible for the earth disturbance activity, including implementation of E&S and PCSM Plans and critical stages of	4.16.1.1	4.12.1.1		x
FERC Wetland and Waterbody Construction and Mitigation Procedures									
FERC Procedures	III.A: Environmental Inspectors	At least one Environmental Inspector having knowledge of the wetland and waterbody conditions in the project area is required for each construction spread. The number and experience of Environmental Inspectors assigned to each construction spread shall be	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Procedures	III.B: Environmental Inspectors	The Environmental Inspector's responsibilities are outlined in the Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).	no	NA	NA	4.16.1.1	4.12.1.1		x
FERC Procedures	IV.A.1: Preconstruction Planning	The project sponsor shall develop project-specific Spill Prevention and Response Procedures that meet applicable requirements of state and federal agencies. A copy must be filed with the Secretary prior to construction and made available in the field on each	yes	PA Code § 102.5	PA Code § 102.5 A person shall prepare and implement a PPC Plan when storing, using or transporting materials including: fuels, chemicals, solvents, pesticides, fertilizers, lime, petrochemicals, wastewater, wash water, core drilling wastewater, cement, sanitary	4.23, 4.10.10.11, 4.10.12.1, Chapter	4.19 Chapter 105/		x

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FERC Regulatory Document	Regulation	Description	Are there more stringent requirements		Description of more stringent requirements/practices	Reference in Westmoreland County ESCGP-2	Reference in Greene County ESCGP-2	Where Requirement/Practice	
			yes/no	If yes, list requirements/practices				Steep Slopes	Non-specific Area
FERC Procedures	IV.A.2: Preconstruction Planning	The project sponsor and its contractors must structure their operations in a manner that provides for the prompt and effective cleanup of spills of fuel and other hazardous materials. At a minimum, the project sponsor and its contractors must: a. ensure that each construction crew (including cleanup crews) has on hand sufficient supplies of absorbent and barrier materials to allow the rapid containment and recovery of spilled materials and knows the procedure for reporting spills and unanticipated discoveries of contamination; b. ensure that each construction crew has on hand sufficient tools and material to stop leaks; c. know the contact names and telephone numbers for all local, state, and federal agencies (including, if necessary, the U. S. Coast Guard and the National Response Center) that must be notified of a spill; and d. follow the requirements of those agencies in cleaning up the spill, in excavating and disposing of soils or other materials contaminated by a spill, and in collecting and disposing of waste generated during spill cleanup.	yes	PA Code § 102.11(a)(4), Guidelines for the Development and Implementation of Environmental Emergency Response Plans 400-2200-001	PA Code § 102.11(a)(4)- (4) If required to develop a PPC Plan, the person shall design, implement, and maintain the PPC Plan to protect waters of this Commonwealth from discharges of pollutants from accidental spills, releases or other activities and meet the requirements identified in Chapter 91 (relating to general provisions). Guidance for PPC Plans is included in the Guidelines for the Development and Implementation of Environmental Emergency Response Plans, Commonwealth of Pennsylvania, Department of Environmental Protection, No. 400-2200-001, as amended and updated. Guidelines for the Development and Implementation of Environmental Emergency Response Plans 400-2200-001 - 5. Emergency Equipment Available for Response z Provide an up-to-date list of available emergency equipment. The list must include the location, a physical description, and a brief description of the intended use and capabilities of each item on the list. z Describe the procedures for maintenance and decontamination of emergency equipment. All installations should have equipment available to allow personnel to respond safely and quickly to emergency situations. Some examples of emergency equipment are portable fire extinguishers, fire control equipment (including special extinguishing equipment such as that using foam, inert gas, or dry chemicals), spill control equipment, decontamination equipment, self contained breathing apparatus, gas masks, and emergency tool and patching kits. See Appendix III for more examples. All equipment must be tested and maintained as necessary to assure its proper operation in time of emergency. After an emergency, all equipment must be decontaminated, cleaned, and fit for its intended use before normal operations resume. E. Emergency Spill Control Network 1. Arrangements with Local Emergency Response Agencies and Hospitals	4.23; Chapter 105/401WQC/ PAG-10 (PPC Plan)	4.19 Chapter 105/401WQC/ PAG-10 (PPC Plan)		x
FERC Procedures	IV.B: Agency Coordination	The project sponsor must coordinate with the appropriate local, state, and federal agencies as outlined in these Procedures and in the FERC's Orders.	no	NA	NA	4.1, 4.5, 4.6, 4.10	4.1, 4.7		x
FERC Procedures	V.A:Waterbody Crossings	NOTIFICATION PROCEDURES AND PERMITS: 1. Apply to the U.S. Army Corps of Engineers (COE), or its delegated agency, for the appropriate wetland and waterbody crossing permits. 2. Provide written notification to authorities responsible for potable surface water supply intakes located within 3 miles downstream of the crossing at least 1 week before beginning work in the waterbody, or as otherwise specified by that authority. 3. Apply for state-issued waterbody crossing permits and obtain individual or generic section 401 water quality certification or waiver. 4. Notify appropriate federal and state authorities at least 48 hours before beginning trenching or blasting within the waterbody, or as specified in applicable permits.	yes	PA E&S Manual - Chapter 2 - Best Management Practice (BMP) Sequencing	Language stating the DTI is in the process of coordinating with the PADEP/COE and Permitting under sections 401 and 404 of the Clean Water Act is ongoing through the PADEP and COE for waterbody crossings. PA E&S Manual - Chapter 2 - Best Management Practice (BMP) Sequencing 1. At least 7 days prior to starting any earth disturbance activities (including clearing and grubbing), the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E&S plan preparer, the PCSM plan preparer, and a representative from the (insert appropriate County) conservation district to an on-site preconstruction meeting. 2. Upon installation or stabilization of all perimeter sediment control BMPs and at least 3 days prior to proceeding with the bulk earth disturbance activities, the permittee or co-permittee shall provide notification to the Department or authorized conservation district. 3. At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.	4.5.1, 4.5.3, 4.6.1, 4.2.1.1, 401 WQC Submitted to PADEP	NA		x
FERC Procedures	V.B.1:Installation	Time Window for Construction: Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows: a. coldwater fisheries - June 1 through September 30; and b. coolwater and warmwater fisheries - June 1 through November 30.	yes	§ 105.43, Chapter 105 General Permit Conditions	§ 105.43. Time limits. (a) The Department will set time limits for the commencement and completion of work under a permit and may set time limits for the commencement and completion of work under a Letter of Amendment or Letter of Authorization issued under this chapter that it deems reasonable and appropriate to carry out the purposes of this chapter. (b) For water obstruction and encroachments, if the construction is not completed on or before the dates established in the permit, unless extended by the Department in writing, the permit shall become void without further notification by the Department. Chapter 105 General Permit Conditions - 5. SPECIFIC AREAS WHERE GENERAL PERMIT DOES NOT APPLY - This general permit is not authorized in the following areas : Stocked trout streams from March 1 through June 15, wild trout streams from October 1 through December 31 and Lake Erie tributaries from September 1 through December 1 unless approval is obtained from the Fish and Boat Commission's Division of Environmental Services.	4.5.2	NA		x
FERC Procedures	V.B.2:Installation	Extra Work Areas a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from the water's edge, except where the adjacent upland consists of	no	NA	NA	4.6.1	NA		x
FERC Procedures	V.B.3:Installation	General Crossing Procedures a. Comply with the COE, or its delegated agency, permit terms and conditions. b. Construct crossings as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit. c. Where pipelines parallel a waterbody, maintain at least 15 feet of undisturbed vegetation between the waterbody (and any adjacent wetland) and the construction right-of-way, except where maintaining this offset will result in greater environmental impact. d. Where waterbodies meander or have multiple channels, route the pipeline to minimize the number of waterbody crossings. e. Maintain adequate waterbody flow rates to protect aquatic life, and prevent the interruption of existing downstream uses. f. Waterbody buffers (e.g., extra work area setbacks, refueling restrictions) must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete. g. Crossing of waterbodies when they are dry or frozen and not flowing may proceed using standard upland construction techniques in accordance with the Plan, provided that the Environmental Inspector verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature. In the event of perceptible flow, the project sponsor must comply with all applicable Procedure requirements for "waterbodies" as defined in section I.B.1.	yes	PA E&S Manual Chapter 13 - Utility Line Project GP-5, 3150-PM-BWEW0505, General Permit Requirements	PA E&S Manual Chapter 13 - Utility Line Project - A utility line crossing of a stream channel 10 feet in bottom width or less should be completed within 24 hours from start to finish, including the trench backfilling, stabilization of stream banks and stabilization of the area 50 feet back from the top of each stream bank. Stream channels between 10 and 100 feet in width should be completed within 48 hours or as approved in writing from the Department. GP-5, 3150-PM-BWEW0505, General Permit Requirements - Stream Crossings - Minimize the number of stream crossings. Cross at a 90 degree angle and approach the stream at as gentle a slope as possible. Consider all stream crossings temporary. REGULATED WATERS OF THE COMMONWEALTH - All watercourses, streams or bodies of water and their floodways wholly or partly within or forming part of the boundary of this Commonwealth. Watercourse—A channel or conveyance of surface water having defined bed and banks, whether natural or artificial, with perennial or intermittent flow. General description and authority of the PADEP General Permit 5 states, "The Department of Environmental Protection hereby	4.5.1, 4.5.3.1, 4.6.1,	NA		x

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FERC Regulatory Document	Regulation	Description	Are there more stringent requirements		Description of more stringent requirements/practices	Reference in Westmoreland County ESCGP-2	Reference in Greene County ESCGP-2	Where Requirement/Practice	
			yes/no	If yes, list requirements/practices				Steep Slopes	Non-specific Area
FERC Procedures	V.B.4:Installation	Spoil Pile Placement and Control a. All spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings, must be placed in the construction right-of-way at least 10 feet from the water's edge or in additional extra work areas as described in section V.B.2. b. Use sediment barriers to prevent the flow of spoil or silt-laden water into any waterbody.	yes	PA E&S Manual Chapter 16 - Grading Standards	PA E&S Manual Chapter 16 - Grading Standards - Stockpiles, borrow areas and spoil areas should be shown on the plan maps and should be subject to the provisions of these standards as well as those of the approved E&S plan. All appropriate permits/authorization should be obtained prior to earth disturbance activities within these areas.	4.5.1, 4.5.2, 4.6.3, 4.10.4, 4.10.10.6, 4.0 Appendix A	4.7.4, 4.9.1, 4.9.3		x
FERC Procedures	V.B.5:Installation	Equipment Bridges a. Only clearing equipment and equipment necessary for installation of equipment bridges may cross waterbodies prior to bridge	yes	PA E&S Manual - Chapter 13 Utility Line Crossings -	In addition to the FERC requirements, the equipment bridges will be designed to meet PADEP Standards and are required to follow the permit conditions upon receipt of the Chapter 105 GP-8.	4.5.3, 4.5.3.1, 4.5.3.2, 4.10.8	NA		x
FERC Procedures	V.B.6:Installation	a. Dry-Ditch Crossing Methods a. Unless approved otherwise by the appropriate federal or state agency, install the pipeline using one of the dry-ditch methods	yes	PA E&S Manual - Chapter 3 - Site Access - Earthwork	§ 105.11. Permit requirements.	4.5.4.2	NA		x
FERC Procedures	V.B.7:Installation	Crossings of Minor Waterbodies Where a dry-ditch crossing is not required, minor waterbodies may be crossed using the open-cut crossing method, with the following restrictions: a. except for blasting and other rock breaking measures, complete instream construction activities (including trenching, pipe installation, backfill, and restoration of the streambed contours) within 24 hours. Streambanks and unconsolidated streambeds may require additional restoration after this period; b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and	yes	Chapter 105 GP-8 Condition	Chapter 105 GP-8 Condition - Whenever possible, in accordance with best construction methods utility line crossings are to be made "in the dry" by installing sandbag and plastic dams and piping stream flow through the affected area.	4.5.0	NA		x
FERC Procedures	V.B.8:Installation	Crossings of Intermediate Waterbodies Where a dry-ditch crossing is not required, intermediate waterbodies may be crossed using the open-cut crossing method, with the following restrictions: a. complete instream construction activities (not including blasting and other rock breaking measures) within 48 hours, unless site specific conditions make completion within 48 hours infeasible;	yes	Chapter 105 GP-8 Condition	Chapter 105 GP-8 Condition - Whenever possible, in accordance with best construction methods utility line crossings are to be made "in the dry" by installing sandbag and plastic dams and piping stream flow through the affected area.	4.5.0	NA		x
FERC Procedures	V.B.9:Installation	Crossings of Major Waterbodies Before construction, the project sponsor shall file with the Secretary for the review and written approval by the Director a detailed, site-specific construction plan and scaled drawings identifying all areas to be disturbed by construction for each major waterbody crossing (the scaled drawings are not required for any offshore portions of pipeline projects). This plan must be developed in consultation with the appropriate state and federal agencies and shall include extra work areas, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues. The requirement to file major waterbody crossing plans does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.	no	NA	NA	NA	NA		x
FERC Procedures	V.B.10:Installation	Temporary Erosion and Sediment Control Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the waterbody or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan; however, the following specific measures must be implemented at stream crossings: a. install sediment barriers across the entire construction right-of-way at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. Removable sediment barriers (or driveable berms) must be installed across the travel lane.	no	NA	NA	4.5.3.2	NA		x
FERC Procedures	V.B.11:Installation	Trench Dewatering Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in 1. Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain coldwater fisheries. 2. For open-cut crossings, stabilize waterbody banks and install temporary sediment barriers within 24 hours of completing instream construction activities. For dry-ditch crossings, complete streambed and bank stabilization before returning flow to the waterbody channel. 3. Return all waterbody banks to preconstruction contours or to a stable angle of repose as approved by the Environmental Inspector. 4. Install erosion control fabric or a functional equivalent on waterbody banks at the time of final bank recontouring. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices. 5. Application of riprap for bank stabilization must comply with COE, or its delegated agency, permit terms and conditions. 6. Unless otherwise specified by state permit, limit the use of riprap to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric.	Yes	PA E&S Manual - Chapter 3 - Site Access -	PA E&S Manual - Chapter 3 - Site Access - Dewatering Work Area - Wherever water is pumped from a disturbed area, it must be treated for sediment removal prior to discharging to a surface water unless it can be shown that the quality of the water being	4.10.10.8, 4.0 Appendix A	NA		x
FERC Procedures	V.C:Restoration	1. Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in riparian areas that are between HDD entry and exit points.	yes	PA E&S Manual - Chapter 13 - Utility Line Projects	PA E&S Manual - Chapter 13 - Utility Line Projects - A utility line crossing of a stream channel 10 feet in bottom width or less should be completed within 24 hours from start to finish, including the trench backfilling, stabilization of stream banks and stabilization of the area 50 feet back from the top of each stream bank. Stream channels between 10 and 100 feet in width should be completed within 48 hours or as approved in writing from the Department.	4.5.3.2, 4.5.5			x
FERC Procedures	V.D:Post-Construction Maintenance	1. Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in riparian areas that are between HDD entry and exit points.	no	NA	NA	5.1.4, Chapter 105 Permit Application (R&R Plan)	Chapter 105 Permit Application (R&R Plan)		x
FERC Procedures	VI: Wetland Crossings	The project sponsor shall conduct a wetland delineation using the current federal methodology and file a wetland delineation report with the Secretary before construction. The requirement to file a wetland delineation report does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.							
FERC Procedures	VI.A.1: General	This report shall identify: a. by milepost all wetlands that would be affected; b. the National Wetlands Inventory (NWI) classification for each wetland; c. the crossing length of each wetland in feet; and d. the area of permanent and temporary disturbance that would occur in each wetland by NWI classification type.	no	NA	NA	4.6.0, 4.8.0, 4.0, Appendix C	4.6.0		x
FERC Procedures	VI.A.2: General	Route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands. Where looping an existing pipeline, overlap the existing pipeline right-of-way with the new construction right-of-way. In addition, locate the loop line no more	no	NA	NA	4.6.1	NA		x
FERC Procedures	VI.A.3: General	Limit the width of the construction right-of-way to 75 feet or less. Prior written approval of the Director is required where topographic conditions or soil limitations require that the construction right-of-way width within the boundaries of a federally delineated wetland be expanded beyond 75 feet. Early in the planning process the project sponsor is encouraged to identify site-	no	NA	NA	4.6.1	NA		x
FERC Procedures	VI.A.4: General	Wetland boundaries and buffers must be clearly marked in the field with signs and/or highly visible flagging until construction-	no	NA	NA	4.6.2	NA		x

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			yes/no	If yes, list requirements/practices				Steep Slopes	Non-specific Area
FERC Procedures	VI.A.5: General	Implement the measures of sections V and VI in the event a waterbody crossing is located within or adjacent to a wetland crossing. If all measures of sections V and VI cannot be met, the project sponsor must file with the Secretary a site-specific crossing plan for review and written approval by the Director before construction. This crossing plan shall address at a minimum: a. spoil control; b. equipment bridges; c. restoration of waterbody banks and wetland hydrology; d. timing of the waterbody crossing; e. method of crossing; and	no	NA	NA	4.5.0, 4.6.0	NA		x
FERC Procedures	VI.A.6: General	Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit	no	NA	NA	4.6.1	NA		x
FERC Procedures	VI.B.1: Installation	Extra Work Areas and Access Roads a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from wetland boundaries, except where adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the site-specific conditions that will not permit a 50-foot setback and measures to ensure the wetland is adequately protected. c. The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction	no	NA	NA	4.6.1	NA		x
FERC Procedures	VI.B.2: Installation	Crossing Procedures a. Comply with COE, or its delegated agency, permit terms and conditions.	no	NA	NA	4.6.2, 4.6.4, 4.6.5, , 4.0 Appendix A	NA		x
FERC Procedures	VI.B.3: Installation	Temporary Sediment Control Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the wetland or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench). Except as noted below in section VI.B.3.c, maintain sediment barriers until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan. a. Install sediment barriers across the entire construction right-of-way immediately upslope of the wetland boundary at all wetland crossings where necessary to prevent sediment flow into the wetland.	no	NA	NA	4.6.3, 4.6.4, 4.0 Appendix A	NA		x
FERC Procedures	VI.B.4: Installation	Trench Dewatering Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any wetland. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.	yes	PA E&S Manual - Chapter 3 - Site Access - Dewatering Work Area	PA E&S Manual - Chapter 3 - Site Access - Dewatering Work Area - Wherever water is pumped from a disturbed area, it must be treated for sediment removal prior to discharging to a surface water unless it can be shown that the quality of the water being pumped already meets discharge standards. If a properly functioning sediment basin or sediment trap is available, the pump discharge may be routed through the trap or basin. While pumping, the maximum water level in the trap or basin should not exceed the cleanout elevation. Water pumped from disturbed areas may not be discharged directly to detention ponds, since they are not designed to be efficient sediment removal structures. Straw bale structures and filter fabric structures are not acceptable for filtering pumped water due to their history of ineffectiveness. Filter bags, as shown in Standard Construction Detail #3-16, and Sump Pits, as shown in Standard Construction Detail #3-17, may be used to filter pumped water as described in the following section. Other devices for filtering water pumped from excavations will be reviewed on a case-by-case basis.	4.6.4, 4.10.10.7, 4.0 Appendix A	NA		x
FERC Procedures	VI.C: Restoration	1. Where the pipeline trench may drain a wetland, construct trench breakers at the wetland boundaries and/or seal the trench bottom as necessary to maintain the original wetland hydrology. 2. Restore pre-construction wetland contours to maintain the original wetland hydrology. 3. For each wetland crossed, install a trench breaker at the base of slopes near the boundary between the wetland and adjacent upland areas. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the wetland. 4. Do not use fertilizer, lime, or mulch unless required in writing by the appropriate federal or state agency. 5. Consult with the appropriate federal or state agencies to develop a project-specific wetland restoration plan. The restoration plan shall include measures for re-establishing herbaceous and/or woody species, controlling the invasion and spread of invasive species and noxious weeds (e.g., purple loosestrife and phragmites), and monitoring the success of the revegetation and weed control	yes	PA E&S Manual - Chapter 13 - Utility Line Projects	STANDARD CONSTRUCTION DETAIL # 13-4 - Typical Trench Plug Installation Table 13.1 Maximum Spacing and Materials for Trench Plugs Impervious trench plugs are required for all stream, river, wetland, or other water body crossings. Trench plugs should be installed on both sides of all crossings to prevent draining streams or wetlands, and to prevent changes to their hydrology.	4.6.1, 4.10.7, 4.0 Appendix A	NA		x
FERC Procedures	VI.D: Post-Construction Maintenance And Reporting	1. Do not conduct routine vegetation mowing or clearing over the full width of the permanent right-of-way in wetlands. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in wetlands that are between HDD entry and exit points. 2. Do not use herbicides or pesticides in or within 100 feet of a wetland, except as allowed by the appropriate federal or state agency. 3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of wetland areas. 4. Monitor and record the success of wetland revegetation annually until wetland revegetation is successful. 5. Wetland revegetation shall be considered successful if all of the following criteria are satisfied: a. the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation); b. vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction; c. if natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and	yes	PA E&S Manual - Chapter 11 - Stabilization Methods and Standards - Seeding PA Code § 102.22 & § 102.7	PA E&S Manual - Chapter 11 - Stabilization Methods and Standards - Seeding - When wetland areas are temporarily disturbed, isolate and stockpile topsoil for replacement after grading is completed. In most cases, no seeding of the disturbed area is necessary after the topsoil is replaced. The soil contains sufficient seed and root material to reestablish vegetation. If temporary vegetative stabilization is necessary, apply annual ryegrass at the rate not exceeding 48 lb PLS/acre. Apply clean straw as a mulch at the rate of 3T /acre. No soil amendments should be used on wetland areas. PA Code § 102.22 & § 102.7 - E&S BMPs shall be implemented and maintained until the permanent stabilization is completed (70 percent permanent vegetation and inspected by the conservation district).	4.6.5, 4.0 Appendix A, R&R Plan filed with PADEP in Chapter 105, PAG-10	NA		
FERC Procedures	VII: Hydrostatic Testing								
FERC Procedures	VII.A: Notification Procedures and Permits	1. Apply for state-issued water withdrawal permits, as required. 2. Apply for National Pollutant Discharge Elimination System (NPDES) or state-issued discharge permits, as required. 3. Notify appropriate state agencies of intent to use specific sources at least 48 hours before testing activities unless they waive this	no	NA	NA	4.10.10.11,	NA		x
FERC Procedures	VII.B: General	1. Perform 100 percent radiographic inspection of all pipeline section welds or hydrotest the pipeline sections, before installation under waterbodies or wetlands. 2. If pumps used for hydrostatic testing are within 100 feet of any waterbody or wetland, address secondary containment and refueling of these pumps in the project's Spill Prevention and Response Procedures.	yes	PAG-10 Permit Requirements	Applicants discharging to High Quality (HQ) or Exceptional Value (EV) waters are not eligible for coverage under the PAG-10 General Permit. PPC Plan required with PAG-10 submittal.	4.10.10.9.2, 4.10.10.11, PAG-10 submitted to PADEP	NA		x
FERC Procedures	VII.C: Intake Source and Rate	1. Screen the intake hose to minimize the potential for entrainment of fish. 2. Do not use state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and/or local permitting agencies grant written permission. 3. Maintain adequate flow rates to protect aquatic life, provide for all waterbody uses, and provide for downstream withdrawals of	no	NA	NA	4.10.10.11, PAG-10 submitted to PADEP	NA		x

Supply Header Project - Pennsylvania

FERC Regulatory Document	Regulation	Description	Are there more stringent requirements		Description of more stringent requirements/practices	Reference in Westmoreland County ESCGP-2	Reference in Greene County ESCGP-2	Where Requirement/Practice	
			yes/no	If yes, list requirements/practices				Steep Slopes	Non-specific Area
FERC Procedures	VII.D: Discharge Location, Method, and Rate	1. Regulate discharge rate, use energy dissipation device(s), and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow. 2. Do not discharge into state-designated exceptional value waters, waterbodies which provide habitat for federally listed	no	NA	NA	4.10.10.11, PAG-10 submitted to PADEP	NA		x

Supply Header Project - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Upland Erosion Control, Revegetation, and Maintenance Plan								
FERC Plan	II.A.1: Environmental Inspection	At least one Environmental Inspector is required for each construction spread during construction and restoration (as defined by section V). The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.	No	NA	NA	Section 18.1		x
FERC Plan	II.A.2: Environmental Inspection	Environmental Inspectors shall have peer status with all other activity inspectors.	No	NA	NA	Section 18.1		x
FERC Plan	II.A.3: Environmental Inspection	Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the FERC's Orders, stipulations of other environmental permits or approvals, or landowner easement agreements; and to order appropriate corrective action.	No	NA	NA	Section 18.1		x
FERC Plan	II.B.1: Responsibilities of Environmental Inspectors	Inspecting construction activities for compliance with the requirements of this Plan, the Procedures, the environmental conditions of the FERC's Orders, the mitigation measures proposed by the project sponsor (as approved and/or modified by the Order), other environmental permits and approvals, and environmental requirements in landowner easement agreements.	No	NA	NA	Section 18.1		x
FERC Plan	II.B.2: Responsibilities of Environmental Inspectors	Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.3: Responsibilities of Environmental Inspectors	Verifying that the limits of authorized construction work areas and locations of access roads are visibly marked before clearing, and maintained throughout construction;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.4: Responsibilities of Environmental Inspectors	Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.5: Responsibilities of Environmental Inspectors	Identifying erosion/sediment control and soil stabilization needs in all areas	No	NA	NA	Section 18.1		x
FERC Plan	II.B.6: Responsibilities of Environmental Inspectors	Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.7: Responsibilities of Environmental Inspectors	Verifying that dewatering activities are properly monitored and do not result in the deposition of sand, silt, and/or sediment into sensitive environmental resource areas, including wetlands, waterbodies, cultural resource sites, and sensitive species habitats; stopping dewatering activities if such deposition is occurring and ensuring the design of the discharge is changed to prevent reoccurrence; and verifying that dewatering structures are removed after completion of dewatering activities;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.8: Responsibilities of Environmental Inspectors	Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action	No	NA	NA	Section 18.1		x
FERC Plan	II.B.9: Responsibilities of Environmental Inspectors	Advising the Chief Construction Inspector when environmental conditions (such as wet weather or frozen soils) make it advisable to restrict or delay construction activities to avoid topsoil mixing or excessive compaction;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.10: Responsibilities of Environmental Inspectors	Ensuring restoration of contours and topsoil;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.11: Responsibilities of Environmental Inspectors	Verifying that the soils imported for agricultural or residential use are certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.12: Responsibilities of Environmental Inspectors	Ensuring that erosion control devices are properly installed to prevent sediment flow into sensitive environmental resource areas (e.g., wetlands, waterbodies, cultural resource sites, and sensitive species habitats) and onto roads, and determining the need for additional erosion control devices;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.13: Responsibilities of Environmental Inspectors	Inspecting and ensuring the maintenance of temporary erosion control measures at least: a. on a daily basis in areas of active construction or equipment operation; b. on a weekly basis in areas with no construction or equipment operation; and c. within 24 hours of each 0.5 inch of rainfall;	No	NA	NA	Section 18.1		x

Supply Header Project - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Plan	II.B.14: Responsibilities of Environmental Inspectors	Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.15: Responsibilities of Environmental Inspectors	Keeping records of compliance with the environmental conditions of the FERC's Orders, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other federal or state environmental permits during active construction and restoration;	No	NA	NA	Section 18.1		x
FERC Plan	II.B.16: Responsibilities of Environmental Inspectors	Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase; and	No	NA	NA	Section 18.1		x
FERC Plan	II.B.17: Responsibilities of Environmental Inspectors	Verifying that locations for any disposal of excess construction materials for beneficial reuse comply with section III.E.	No	NA	NA	Section 18.1		x
FERC Plan	III.A.1: Construction Work Areas	Identify all construction work areas (e.g., construction right-of-way, extra work space areas, pipe storage and contractor yards, borrow and disposal areas, access roads) that would be needed for safe construction. The project sponsor must ensure that appropriate cultural resources and biological surveys are conducted, as determined necessary by the appropriate federal and state agencies.	No	NA	NA	Sections 9.4, 9.6, 11.0, & 18.1 Construction Alignment Sheets		x
FERC Plan	III.A.2: Construction Work Areas	Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of authorized work areas.	No	NA	NA	Sections 9.4, 9.6, 11.0, & 18.1 Construction Alignment Sheets		x
FERC Plan	III.A.3: Construction Work Areas	Plan construction sequencing to limit the amount and duration of open trench sections, as necessary, to prevent excessive erosion or sediment flow into sensitive environmental resource areas.	No	NA	NA	Section 13.2 Construction Alignment Sheets		x
FERC Plan	III.B.1: Drain Tile and Irrigation Systems	Attempt to locate existing drain tiles and irrigation systems.	No	NA	NA	Sections 9.4.9, 13.1.1, 13.1.4, 18.1 Construction Alignment Sheets		x
FERC Plan	III.B.2: Drain Tile and Irrigation Systems	Contact landowners and local soil conservation authorities to determine the locations of future drain tiles that are likely to be installed within 3 years of the authorized construction.	No	NA	NA	Section 9.4.9 Construction Alignment Sheets		x
FERC Plan	III.B.3: Drain Tile and Irrigation Systems	Develop procedures for constructing through drain-tiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.	No	NA	NA	Section 9.4.9 Construction Alignment Sheets		x
FERC Plan	III.B.4: Drain Tile and Irrigation Systems	Engage qualified drain tile specialists, as needed to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialists from the project area, if available.	No	NA	NA	Section 9.4.9 Construction Alignment Sheets		x
FERC Plan	III.C: Grazing Deferment	Develop grazing deferment plans with willing landowners, grazing permittees, and land management agencies to minimize grazing disturbance of revegetation efforts.	No	NA	NA	Section 9.4.9		x
FERC Plan	III.D: Road Crossings and Access Points	Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.	No	NA	NA	Section 9.6		x
FERC Plan	III.E: Disposal Planning	Determine methods and locations for the regular collection, containment, and disposal of excess construction materials and debris (e.g., timber, slash, mats, garbage, drill cuttings and fluids, excess rock) throughout the construction process. Disposal of materials for beneficial reuse must not result in adverse environmental impact and is subject to compliance with all applicable survey, landowner or land management agency approval, and permit requirements.	Yes	WV General Water Pollution Control Permit GP G.4.e.2.C.i	All solid waste and construction/demolition material must be disposed of in accordance with the Code of West Virginia and Legislative Rule Title 33 Series 1, (Solid Waste Management Rule).	Section 18.4.1		x
FERC Plan	III.F.1: Agency Coordination	Obtain written recommendations from the local soil conservation authorities or land management agencies regarding permanent erosion control and revegetation specifications.	No	NA	NA	Section 9.4.9 Appendix M Restoration and Rehabilitation Plan		x
FERC Plan	III.F.2: Agency Coordination	Develop specific procedures in coordination with the appropriate agencies to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities.	No	NA	NA	Sections 13.3, 15.1, & 18.1 Appendix M Restoration and Rehabilitation Plan		x

Supply Header Project - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Plan	III.F.3: Agency Coordination	Develop specific procedures in coordination with the appropriate agencies and landowners, as necessary, to allow for livestock and wildlife movement and protection during construction.	No	NA	NA	Sections 9.4.9 & 13.1		x
FERC Plan	III.F.4: Agency Coordination	Develop specific blasting procedures in coordination with the appropriate agencies that address pre- and post-blast inspections; advanced public notification; and mitigation measures for building foundations, groundwater wells, and springs. Use appropriate methods (e.g., blasting mats) to prevent damage to nearby structures and to prevent debris from entering sensitive environmental resource areas.	No	NA	NA	Section 15.11 Appendix P - Blasting Plan		x
FERC Plan	III.G: Spill Prevention and Response Procedures	The project sponsor shall develop project-specific Spill Prevention and Response Procedures, as specified in section IV of the staff's Procedures. A copy must be filed with the Secretary of the FERC (Secretary) prior to construction and made available in the field on each construction spread. The filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.	No	NA	NA	Section 19.0		x
FERC Plan	III.H: Residential Construction	For all properties with residences located within 50 feet of construction work areas, project sponsors shall: avoid removal of mature trees and landscaping within the construction work area unless necessary for safe operation of construction equipment, or as specified in landowner agreements; fence the edge of the construction work area for a distance of 100 feet on either side of the residence; and restore all lawn areas and landscaping immediately following clean up operations, or as specified in landowner agreements. If seasonal or other weather conditions prevent compliance with these time frames, maintain and monitor temporary erosion controls (sediment barriers and mulch) until conditions allow completion of restoration.	No	NA	NA	Section 9.4.7		x
FERC Plan	III.I: Winter Construction Plans	If construction is planned to occur during winter weather conditions, project sponsors shall develop and file a project-specific winter construction plan with the FERC application. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations. The plan shall address: 1. winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping); 2. stabilization and monitoring procedures if ground conditions will delay restoration until the following spring (e.g., mulching and erosion controls, inspection and reporting, stormwater control during spring thaw conditions); and 3. final restoration procedures (e.g., subsidence and compaction repair, topsoil replacement, seeding).	No	NA	NA	Section 9.4.8		x
FERC Plan	IV.A.1: Approved Areas of Disturbance	Project-related ground disturbance shall be limited to the construction right-of-way, extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the FERC's Orders. Any project-related ground disturbing activities outside these areas will require prior Director approval. This requirement does not apply to activities needed to comply with the Plan and Procedures (i.e., slope breakers, energy-dissipating devices, dewatering structures, drain tile system repairs) or minor field realignments and workspace shifts per landowner needs and requirements that do not affect other landowners or sensitive environmental resource areas. All construction or restoration activities outside of authorized areas are subject to all applicable survey and permit requirements, and landowner easement agreements.	No	NA	NA	Sections 11.0 & 13.0		x
FERC Plan	IV.A.2: Approved Areas of Disturbance	The construction right-of-way width for a project shall not exceed 75 feet or that described in the FERC application unless otherwise modified by a FERC Order. However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval to accommodate full construction right-of-way topsoil segregation and to ensure safe construction where topographic conditions (e.g., side-slopes) or soil limitations require it. Twenty-five feet of extra construction right-of-way width may also be used in limited, non-wetland or non-forested areas for truck turn-arounds where no reasonable alternative access exists. Project use of these additional limited areas is subject to landowner or land management agency approval and compliance with all applicable survey and permit requirements. When additional areas are used, each one shall be identified and the need explained in the weekly or biweekly construction reports to the FERC, if required. The following material shall be included in the reports: a. the location of each additional area by station number and reference to previously filed alignment sheets, or updated alignment sheets showing the additional areas; b. identification of the filing at FERC containing evidence that the additional areas were previously surveyed; and c. a statement that landowner approval has been obtained and is available in project files.	No	NA	NA	Section 11.0 Construction Alignment Sheets		x
FERC Plan	IV.B.1: Topsoil Segregation	Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in: a. cultivated or rotated croplands, and managed pastures; b. residential areas; c. hayfields; and d. other areas at the landowner's or land managing agency's request.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.B.2: Topsoil Segregation	In residential areas, importation of topsoil is an acceptable alternative to topsoil segregation.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.B.3: Topsoil Segregation	Where topsoil segregation is required, the project sponsor must: a. segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil); and b. make every effort to segregate the entire topsoil layer in soils with less than 12 inches of topsoil.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.B.4: Topsoil Segregation	Maintain separation of salvaged topsoil and subsoil throughout all construction activities.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.B.5: Topsoil Segregation	Segregated topsoil may not be used for padding the pipe, constructing temporary slope breakers or trench plugs, improving or maintaining roads, or as a fill material.	No	NA	NA	Section 13.3.3		x
FERC Plan	IV.B.6: Topsoil Segregation	Stabilize topsoil piles and minimize loss due to wind and water erosion with use of sediment barriers, mulch, temporary seeding, tackifiers, or functional equivalents, where necessary.	No	NA	NA	Section 13.3.3		x

Supply Header Project - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies									
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area								
FERC Plan	IV.C: Drain Tiles	1. Mark locations of drain tiles damaged during construction. 2. Probe all drainage tile systems within the area of disturbance to check for damage. 3. Repair damaged drain tiles to their original or better condition. Do not use filter-covered drain tiles unless the local soil conservation authorities and the landowner agree. Use qualified specialists for testing and repairs. 4. For new pipelines in areas where drain tiles exist or are planned, ensure that the depth of cover over the pipeline is sufficient to avoid interference with drain tile systems. For adjacent pipeline loops in agricultural areas, install the new pipeline with at least the same depth of cover as the existing pipeline(s).	No	NA	NA	Sections 9.4.9, 13.1.1, & 13.1.4 Construction Alignment Sheets		x								
FERC Plan	IV.D: Irrigation	Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.	No	NA	NA	Section 9.4.9 Construction Alignment Sheets		x								
FERC Plan	IV.E: Road Crossings and Access Points	1. Maintain safe and accessible conditions at all road crossings and access points during construction. 2. If crushed stone access pads are used in residential or agricultural areas, place the stone on synthetic fabric to facilitate removal. 3. Minimize the use of tracked equipment on public roadways. Remove any soil or gravel spilled or tracked onto roadways daily or more frequent as necessary to maintain safe road conditions. Repair any damages to roadway surfaces, shoulders, and bar ditches.	No	NA	NA	Section 13.1.2 & 15.2		x								
FERC Plan	IV.F: Temporary Erosion Control	Install temporary erosion controls immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration is complete.	No	NA	NA	Section 13.4.1		x								
FERC Plan	IV.F.1: Temporary Erosion Control	1. Temporary Slope Breakers a. Temporary slope breakers are intended to reduce runoff velocity and divert water off the construction right-of-way. Temporary slope breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, or sand bags. b. Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion. Temporary slope breakers must be installed on slopes greater than 5 percent where the base of the slope is less than 50 feet from waterbody, wetland, and road crossings at the following spacing (closer spacing shall be used if necessary) <table border="1"> <thead> <tr> <th>Slope (%)</th> <th>Spacing (feet)</th> </tr> </thead> <tbody> <tr> <td>5-15</td> <td>300</td> </tr> <tr> <td>>15-30</td> <td>200</td> </tr> <tr> <td>>30</td> <td>100</td> </tr> </tbody> </table> c. Direct the outfall of each temporary slope breaker to a stable, well vegetated area or construct an energy-dissipating device at the end of the slope breaker and off the construction right-of-way. d. Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive environmental resource areas.	Slope (%)	Spacing (feet)	5-15	300	>15-30	200	>30	100	Yes	WV BMP 3.18 Right-of-Way Diversion WV BMP 3.27 Silt fence WV General Water Pollution Control Permit G.4.e.2.A.ii.k	WV BMP Manual used for temporary and permanent slope breaker Slope (%) Spacing (feet) < 5 300 10 175 15 125 20 100 >25 75 Silt fence should never be installed in streams or swales or in any area where there is a reasonable chance of concentrated flow. Hay or straw bales are not acceptable BMPs.	Section 13.4.1.4		x
Slope (%)	Spacing (feet)															
5-15	300															
>15-30	200															
>30	100															
FERC Plan	IV.F.2: Temporary Erosion Control	Temporary Trench Plugs: Temporary trench plugs are intended to segment a continuous open trench prior to backfill. a. Temporary trench plugs may consist of unexcavated portions of the trench, compacted subsoil, sandbags, or some functional equivalent. b. Position temporary trench plugs, as necessary, to reduce trenchline erosion and minimize the volume and velocity of trench water flow at the base of slopes.	No	NA	NA	Section 13.4.2.1		x								
FERC Plan	IV.F.3: Temporary Erosion Control	Sediment Barriers: Sediment barriers are intended to stop the flow of sediments and to prevent the deposition of sediments beyond approved workspaces or into sensitive resources. a. Sediment barriers may be constructed of materials such as silt fence, staked hay or straw bales, compacted earth (e.g., driveable berms across travelways), sand bags, or other appropriate materials. b. At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until revegetation is successful as defined in this Plan. Leave adequate room between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition. c. Where wetlands or waterbodies are adjacent to and downslope of construction work areas, install sediment barriers along the edge of these areas, as necessary to prevent sediment flow into the wetland or waterbody.	Yes	WV General Water Pollution Control Permit G.4.e.2.A.ii.k WV BMP 3.27 Silt fence	Hay or straw bales are not acceptable BMPs. Silt fence should never be installed in streams or swales or in any area where there is a reasonable chance of concentrated flow.	Section 13.4.1.1		x								
FERC Plan	IV.F.4: Temporary Erosion Control	Mulch: a. Apply mulch on all slopes (except in cultivated cropland) concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing. b. Mulch can consist of weed-free straw or hay, wood fiber hydromulch, erosion control fabric, or some functional equivalent. c. Mulch all disturbed upland areas (except cultivated cropland) before seeding if: (1) final grading and installation of permanent erosion control measures will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas), as required in section V.A.1; or (2) construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions. d. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent. e. If wood chips are used as mulch, do not use more than 1 ton/acre and add the equivalent of 11 lbs/acre available nitrogen (at least 50 percent of which is slow release). f. Ensure that mulch is adequately anchored to minimize loss due to wind and water. g. When anchoring with liquid mulch binders, use rates recommended by the manufacturer. Do not use liquid mulch binders within 100 feet of wetlands or waterbodies, except where the product is certified environmentally non-toxic by the appropriate state or federal agency or independent standards-setting organization. h. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat, unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.	No	NA	NA	Section 13.3.4 Appendix M - Restoration and Rehabilitation Plan		x								
FERC Plan	V.A.1: Restoration Cleanup	Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (i.e., temporary slope breakers, sediment barriers, and mulch) until conditions allow completion of cleanup. If construction or restoration unexpectedly continues into the winter season when conditions could delay successful decompaction, topsoil replacement, or seeding until the following spring, file with the Secretary for the review and written approval of the Director, a winter construction plan (as specified in section III.I). This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.	No	NA	NA	Section 13.2		x								
FERC Plan	V.A.2: Restoration Cleanup	A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed as specified in section IV.F. and inspected and maintained as specified in sections II.B.12 through 14. When access is no longer required the travel lane must be removed and the right-of-way restored.	No	NA	NA	Section 13.2		x								

Supply Header Project - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Plan	V.A.3: Restoration Cleanup	Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench shall be considered construction debris, unless approved for use as mulch or for some other use on the construction work areas by the landowner or land managing agency.	No	NA	NA	Section 15.11		x
FERC Plan	V.A.4: Restoration Cleanup	Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction work area shall be similar to adjacent areas not disturbed by construction. The landowner or land management agency may approve other provisions in writing.	No	NA	NA	Section 13.2		x
FERC Plan	V.A.5: Restoration Cleanup	Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting.	No	NA	NA	Section 13.2		x
FERC Plan	V.A.6: Restoration Cleanup	Remove construction debris from all construction work areas unless the landowner or land managing agency approves leaving materials onsite for beneficial reuse, stabilization, or habitat restoration.	No	NA	NA	Section 13.2		x
FERC Plan	V.A.7: Restoration Cleanup	Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.	No	NA	NA	Section 13.4.1.1		x
FERC Plan	V.B.1: Permanent Erosion Control Devices	1. Trench Breakers a. Trench breakers are intended to slow the flow of subsurface water along the trench. Trench breakers may be constructed of materials such as sand bags or polyurethane foam. Do not use topsoil in trench breakers. b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers. Otherwise, trench breakers shall be installed at the same spacing as and upslope of permanent slope breakers. c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same spacing as if permanent slope breakers were required. d. At a minimum, install a trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland. Install trench breakers at wetland boundaries, as specified in the Procedures. Do not install trench breakers within a wetland.	No	NA	NA	Section 13.4.2.1		x
FERC Plan	V.B.2: Permanent Erosion Control Devices	Permanent Slope Breakers a. Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction right-of-way, and prevent sediment deposition into sensitive resources. Permanent slope breakers may be constructed of materials such as soil, stone, or some functional equivalent. b. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, unless requested by the landowner, using spacing recommendations obtained from the local soil conservation authority or land managing agency. In the absence of written recommendations, use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction right-of-way: Slope (%) Spacing (feet) 5 - 15 300 >15 - 30 200 >30 100 c. Construct slope breakers to divert surface flow to a stable area without causing water to pool or erode behind the breaker. In the absence of a stable area, construct appropriate energy-dissipating devices at the end of the breaker. d. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction right-of-way to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction right-of-way, they are subject to compliance with all applicable survey requirements.	Yes	WV BMP 3.18 Right-of-Way Diversion	WV BMP Manual used for temporary and permanent slope breaker Slope (%) Spacing (feet) < 5 300 10 175 15 125 20 100 >25 75	Sections 13.4.2.2		x
FERC Plan	V.C.1: Soil Compaction Mitigation	Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests.	No	NA	NA	Section 13.4.2.7		x
FERC Plan	V.C.2: Soil Compaction Mitigation	Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil. If subsequent construction and cleanup activities result in further compaction, conduct additional tilling.	No	NA	NA	Section 13.4.2.7		x
FERC Plan	V.C.3: Soil Compaction Mitigation	Perform appropriate soil compaction mitigation in severely compacted residential areas.	No	NA	NA	Section 13.4.2.7		x
FERC Plan	V.D.1: Revegetation	General: a. The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b. b. Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices.	No	NA	NA	Section 13.3.6 Appendix M - Restoration and Rehabilitation Plan		x
FERC Plan	V.D.2: Revegetation	Soil Additives: Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as practicable after application.	No	NA	NA	Sections 13.3 & 13.4 Appendix M - Restoration and Rehabilitation Plan		x

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Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Plan	V.D.3: Revegetation	Seeding Requirements: a. Prepare a seedbed in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed. b. Seed disturbed areas in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or the request of the landowner or land management agency. Seeding is not required in cultivated croplands unless requested by the landowner. c. Perform seeding of permanent vegetation within the recommended seeding dates. If seeding cannot be done within those dates, use appropriate temporary erosion control measures discussed in section IV.F and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Dormant seeding or temporary seeding of annual species may also be used, if necessary, to establish cover, as approved by the Environmental Inspector. Lawns may be seeded on a schedule established with the landowner. d. In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a through V.D.3.c. e. Base seeding rates on Pure Live Seed. Use seed within 12 months of seed testing. f. Treat legume seed with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydro). g. In the absence of written recommendations from the local soil conservation authorities, landowner, or land managing agency to the contrary, a seed drill equipped with a cultipacker is preferred for seed application. Broadcast or hydroseeding can be used in lieu of drilling at double the recommended seeding rates. Where seed is broadcast, firm the seedbed with a cultipacker or roller after seeding. In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by the Environmental Inspector.	No	NA	NA	Section 13.3.5 Appendix M - Restoration and Rehabilitation Plan		x
FERC Plan	VI. Off-Road Vehicle Control	To each owner or manager of forested lands, offer to install and maintain measures to control unauthorized vehicle access to the right-of-way. These measures may include: A. signs; B. fences with locking gates; C. slash and timber barriers, pipe barriers, or a line of boulders across the right-of-way; and D. conifers or other appropriate trees or shrubs across the right-of-way.	No	NA	NA	Section 15.3		x
FERC Plan	VII.A.1: Post-Construction Activities and Reporting	MONITORING AND MAINTENANCE: Conduct follow-up inspections of all disturbed areas, as necessary, to determine the success of revegetation and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.	No	NA	NA	Section 18.1 Appendix M - Restoration and Rehabilitation Plan		x
FERC Plan	VII.A.2: Post-Construction Activities and Reporting	Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non- nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful when upon visual survey, crop growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise. Continue revegetation efforts until revegetation is successful.	Yes	WV General Water Pollution Control Permit G.4.e.2.A.i.c for all areas and MNF LRMP SW05 for areas located in the MNF	The GP specifies that at least 70% of the disturbed areas in West Virginia must be germinated adequately within 30 days of seed planting. For disturbed areas in the MNF, 85% of the area must be planted.	Appendix M - Restoration and Rehabilitation Plan	x	
FERC Plan	VII.A.3: Post-Construction Activities and Reporting	Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in agricultural areas until restoration is successful.	No	NA	NA	Section 9.4.9		x
FERC Plan	VII.A.4: Post-Construction Activities and Reporting	Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful, and proper drainage has been restored.	No	NA	NA	Section 13.3.8 Appendix M - Restoration and Rehabilitation Plan		x
FERC Plan	VII.A.5: Post-Construction Activities and Reporting	Routine vegetation mowing or clearing over the full width of the permanent right-of-way in uplands shall not be done more frequently than every 3 years. However, to facilitate periodic corrosion/leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency or the U.S. Fish and Wildlife Service.	No	NA	NA	Section 14.1.5 Appendix M - Restoration and Rehabilitation Plan		x
FERC Plan	VII.A.6: Post-Construction Activities and Reporting	Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the project. Maintain signs, gates, and permanent access roads as necessary.	No	NA	NA	Section 15.3		x
FERC Plan	VII.B.1: Reporting	1. The project sponsor shall maintain records that identify by milepost: a. method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used; b. acreage treated; c. dates of backfilling and seeding; d. names of landowners requesting special seeding treatment and a description of the follow-up actions; e. the location of any subsurface drainage repairs or improvements made during restoration; and f. any problem areas and how they were addressed.	No	NA	NA	Appendix M - Restoration and Rehabilitation Plan		x
FERC Plan	VII.B.2: Reporting	The project sponsor shall file with the Secretary quarterly activity reports documenting the results of follow-up inspections required by section VII.A.1; any problem areas, including those identified by the landowner; and corrective actions taken for at least 2 years following construction. The requirement to file quarterly activity reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advanced notice provisions in the FERC's regulations.	No	NA	NA	Appendix M - Restoration and Rehabilitation Plan		x
FERC Wetland and Waterbody Construction and Mitigation Procedures								
FERC Procedures	III.A: Environmental Inspectors	At least one Environmental Inspector having knowledge of the wetland and waterbody conditions in the project area is required for each construction spread. The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.	No	NA	NA	Section 18.1		x
FERC Procedures	III.B: Environmental Inspectors	The Environmental Inspector's responsibilities are outlined in the Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).	No	NA	NA	NA		x

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Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Procedures	IV.A.1: Preconstruction Planning	The project sponsor shall develop project-specific Spill Prevention and Response Procedures that meet applicable requirements of state and federal agencies. A copy must be filed with the Secretary prior to construction and made available in the field on each construction spread. This filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations. It shall be the responsibility of the project sponsor and its contractors to structure their operations in a manner that reduces the risk of spills or the accidental exposure of fuels or hazardous materials to waterbodies or wetlands. The project sponsor and its contractors must, at a minimum, ensure that: a. all employees handling fuels and other hazardous materials are properly trained; b. all equipment is in good operating order and inspected on a regular basis; c. fuel trucks transporting fuel to on-site equipment travel only on approved access roads; d. all equipment is parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill; e. hazardous materials, including chemicals, fuels, and lubricating oils, are not stored within 100 feet of a wetland, waterbody, or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas; f. concrete coating activities are not performed within 100 feet of a wetland or waterbody boundary, unless the location is an existing industrial site designated for such use. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill; g. pumps operating within 100 feet of a waterbody or wetland boundary utilize appropriate secondary containment systems to prevent spills; and h. bulk storage of hazardous materials, including chemicals, fuels, and lubricating oils have appropriate secondary containment systems to prevent spills.	No	NA	NA	Section 19.0		x
FERC Procedures	IV.A.2: Preconstruction Planning	The project sponsor and its contractors must structure their operations in a manner that provides for the prompt and effective cleanup of spills of fuel and other hazardous materials. At a minimum, the project sponsor and its contractors must: a. ensure that each construction crew (including cleanup crews) has on hand sufficient supplies of absorbent and barrier materials to allow the rapid containment and recovery of spilled materials and knows the procedure for reporting spills and unanticipated discoveries of contamination; b. ensure that each construction crew has on hand sufficient tools and material to stop leaks; c. know the contact names and telephone numbers for all local, state, and federal agencies (including, if necessary, the U. S. Coast Guard and the National Response Center) that must be notified of a spill; and d. follow the requirements of those agencies in cleaning up the spill, in excavating and disposing of soils or other materials contaminated by a spill, and in collecting and disposing of waste generated during spill cleanup.	No	NA	NA	Section 19.0		x
FERC Procedures	IV.B: Agency Coordination	The project sponsor must coordinate with the appropriate local, state, and federal agencies as outlined in these Procedures and in the FERC's Orders.	No	NA	NA	Sections 10.0, 11.0, & 19.0		x
FERC Procedures	V.A: Waterbody Crossings	NOTIFICATION PROCEDURES AND PERMITS: 1. Apply to the U.S. Army Corps of Engineers (COE), or its delegated agency, for the appropriate wetland and waterbody crossing permits. 2. Provide written notification to authorities responsible for potable surface water supply intakes located within 3 miles downstream of the crossing at least 1 week before beginning work in the waterbody, or as otherwise specified by that authority. 3. Apply for state-issued waterbody crossing permits and obtain individual or generic section 401 water quality certification or waiver. 4. Notify appropriate federal and state authorities at least 48 hours before beginning trenching or blasting within the waterbody, or as specified in applicable permits.	No	NA	NA	Section 10.1		x
FERC Procedures	V.B.1: Installation	Time Window for Construction: Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows: a. coldwater fisheries - June 1 through September 30; and b. coolwater and warmwater fisheries - June 1 through November 30.	No	NA	NA	Section 14.1.1		x
FERC Procedures	V.B.2: Installation	Extra Work Areas a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from the water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the conditions that will not permit a 50-foot setback and measures to ensure the waterbody is adequately protected. c. Limit the size of extra work areas to the minimum needed to construct the waterbody crossing.	No	NA	NA	Sections 13.2 & 14.1		x
FERC Procedures	V.B.3: Installation	General Crossing Procedures a. Comply with the COE, or its delegated agency, permit terms and conditions. b. Construct crossings as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit. c. Where pipelines parallel a waterbody, maintain at least 15 feet of undisturbed vegetation between the waterbody (and any adjacent wetland) and the construction right-of-way, except where maintaining this offset will result in greater environmental impact. d. Where waterbodies meander or have multiple channels, route the pipeline to minimize the number of waterbody crossings. e. Maintain adequate waterbody flow rates to protect aquatic life, and prevent the interruption of existing downstream uses. f. Waterbody buffers (e.g., extra work area setbacks, refueling restrictions) must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete. g. Crossing of waterbodies when they are dry or frozen and not flowing may proceed using standard upland construction techniques in accordance with the Plan, provided that the Environmental Inspector verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature. In the event of perceptible flow, the project sponsor must comply with all applicable Procedure requirements for "waterbodies" as defined in section 1.B.1.	No	NA	NA	Sections 13.2, 14.0, 14.1, & 14.3		x
FERC Procedures	V.B.4: Installation	Spoil Pile Placement and Control a. All spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings, must be placed in the construction right-of-way at least 10 feet from the water's edge or in additional extra work areas as described in section V.B.2. b. Use sediment barriers to prevent the flow of spoil or silt-laden water into any waterbody.	No	NA	NA	Section 14.1		x

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Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Procedures	V.B.5:Installation	<p>Equipment Bridges</p> <p>a. Only clearing equipment and equipment necessary for installation of equipment bridges may cross waterbodies prior to bridge installation. Limit the number of such crossings of each waterbody to one per piece of clearing equipment.</p> <p>b. Construct and maintain equipment bridges to allow unrestricted flow and to prevent soil from entering the waterbody. Examples of such bridges include:</p> <p>(1) equipment pads and culvert(s);</p> <p>(2) equipment pads or railroad car bridges without culverts;</p> <p>(3) clean rock fill and culvert(s); and</p> <p>(4) flexi-float or portable bridges.</p> <p>Additional options for equipment bridges may be utilized that achieve the performance objectives noted above. Do not use soil to construct or stabilize equipment bridges.</p> <p>c. Design and maintain each equipment bridge to withstand and pass the highest flow expected to occur while the bridge is in place. Align culverts to prevent bank erosion or streambed scour. If necessary, install energy dissipating devices downstream of the culverts.</p> <p>d. Design and maintain equipment bridges to prevent soil from entering the waterbody.</p> <p>e. Remove temporary equipment bridges as soon as practicable after permanent seeding.</p> <p>f. If there will be more than 1 month between final cleanup and the beginning of permanent seeding and reasonable alternative access to the right-of-way is available, remove temporary equipment bridges as soon as practicable after final cleanup.</p> <p>g. Obtain any necessary approval from the COE, or the appropriate state agency for permanent bridges.</p>	No	NA	NA	Section 14.1.2		x
FERC Procedures	V.B.6:Installation	<p>a. Dry-Ditch Crossing Methods</p> <p>a. Unless approved otherwise by the appropriate federal or state agency, install the pipeline using one of the dry-ditch methods outlined below for crossings of waterbodies up to 30 feet wide (at the water's edge at the time of construction) that are state-designated as either coldwater or significant coolwater or warmwater fisheries, or federally-designated as critical habitat.</p> <p>b. Dam and Pump</p> <p>(1) The dam-and-pump method may be used without prior approval for crossings of waterbodies where pumps can adequately transfer streamflow volumes around the work area, and there are no concerns about sensitive species passage.</p> <p>(2) Implementation of the dam-and-pump crossing method must meet the following performance criteria:</p> <p>(i) use sufficient pumps, including on-site backup pumps, to maintain downstream flows;</p> <p>(ii) construct dams with materials that prevent sediment and other pollutants from entering the waterbody (e.g., sandbags or clean gravel with plastic liner);</p> <p>(iii) screen pump intakes to minimize entrainment of fish;</p> <p>(iv) prevent streambed scour at pump discharge; and</p> <p>(v) continuously monitor the dam and pumps to ensure proper operation throughout the waterbody crossing.</p> <p>c. Flume Crossing: The flume crossing method requires implementation of the following steps:</p> <p>(1) install flume pipe after blasting (if necessary), but before any trenching;</p> <p>(2) use sand bag or sand bag and plastic sheeting diversion structure or equivalent to develop an effective seal and to divert stream flow through the flume pipe (some modifications to the stream bottom may be required to achieve an effective seal);</p> <p>(3) properly align flume pipe(s) to prevent bank erosion and streambed scour;</p> <p>(4) do not remove flume pipe during trenching, pipelaying, or backfilling activities, or initial streambed restoration efforts; and</p> <p>(5) remove all flume pipes and dams that are not also part of the equipment bridge as soon as final cleanup of the stream bed and bank is complete.</p> <p>d. Horizontal Directional Drill</p> <p>For each waterbody or wetland that would be crossed using the HDD method, file with the Secretary for the review and written approval by the Director, a plan that includes:</p> <p>(1) site-specific construction diagrams that show the location of mud pits, pipe assembly areas, and all areas to be disturbed or cleared for construction;</p> <p>(2) justification that disturbed areas are limited to the minimum needed to construct the crossing;</p> <p>(3) identification of any aboveground disturbance or clearing between the HDD entry and exit workspaces during construction;</p> <p>(4) a description of how an inadvertent release of drilling mud would be contained and cleaned up; and</p> <p>(5) a contingency plan for crossing the waterbody or wetland in the event the HDD is unsuccessful and how the abandoned drill hole would be sealed, if necessary.</p> <p>The requirement to file HDD plans does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.</p>	No	NA	NA	Sections 13.1, 14.1.3, & 15.4		x
FERC Procedures	V.B.7:Installation	<p>Crossings of Minor Waterbodies</p> <p>Where a dry-ditch crossing is not required, minor waterbodies may be crossed using the open-cut crossing method, with the following restrictions:</p> <p>a. except for blasting and other rock breaking measures, complete instream construction activities (including trenching, pipe installation, backfill, and restoration of the streambed contours) within 24 hours. Streambanks and unconsolidated streambeds may require additional restoration after this period;</p> <p>b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and</p> <p>c. equipment bridges are not required at minor waterbodies that do not have a state-designated fishery classification or protected status (e.g., agricultural or intermittent drainage ditches).</p> <p>However, if an equipment bridge is used it must be constructed as described in section V.B.5.</p>	No	NA	NA	Sections 13.1 & 14.1.4.1		x
FERC Procedures	V.B.8:Installation	<p>Crossings of Intermediate Waterbodies</p> <p>Where a dry-ditch crossing is not required, intermediate waterbodies may be crossed using the open-cut crossing method, with the following restrictions:</p> <p>a. complete instream construction activities (not including blasting and other rock breaking measures) within 48 hours, unless site-specific conditions make completion within 48 hours infeasible;</p> <p>b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and</p> <p>c. all other construction equipment must cross on an equipment bridge as specified in section V.B.5.</p>	No	NA	NA	Sections 13.1 & 14.1.4.2		x
FERC Procedures	V.B.9:Installation	<p>Crossings of Major Waterbodies</p> <p>Before construction, the project sponsor shall file with the Secretary for the review and written approval by the Director a detailed, site-specific construction plan and scaled drawings identifying all areas to be disturbed by construction for each major waterbody crossing (the scaled drawings are not required for any offshore portions of pipeline projects). This plan must be developed in consultation with the appropriate state and federal agencies and shall include extra work areas, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues. The requirement to file major waterbody crossing plans does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.</p> <p>The Environmental Inspector may adjust the final placement of the erosion and sediment control structures in the field to maximize effectiveness.</p>	No	NA	NA	Sections 13.1 & 14.1.4.3		x

Supply Header Project - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Procedures	V.B.10:Installation	Temporary Erosion and Sediment Control Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the waterbody or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan; however, the following specific measures must be implemented at stream crossings: a. install sediment barriers across the entire construction right-of-way at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. Removable sediment barriers (or driveable berms) must be installed across the travel lane. These removable sediment barriers can be removed during the construction day, but must be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent; b. where waterbodies are adjacent to the construction right-of-way and the right-of-way slopes toward the waterbody, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the waterbody; and c. use temporary trench plugs at all waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the waterbody.	No	NA	NA	Sections 13.1, 13.3, & 13.4		x
FERC Procedures	V.B.11:Installation	Trench Dewatering Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any waterbody. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.	Yes	WV General Water Pollution Control Permit G.4.e.2.A.ii.i	The GP G.4.e.2.A.ii.i has additional requirements for how and where to dewater. The requirement also requires a procedure to be implemented	Sections 13.1 & 13.4.1.5		x
FERC Procedures	V.C: Restoration	1. Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain coldwater fisheries. 2. For open-cut crossings, stabilize waterbody banks and install temporary sediment barriers within 24 hours of completing instream construction activities. For dry-ditch crossings, complete streambed and bank stabilization before returning flow to the waterbody channel. 3. Return all waterbody banks to preconstruction contours or to a stable angle of repose as approved by the Environmental Inspector. 4. Install erosion control fabric or a functional equivalent on waterbody banks at the time of final bank recontouring. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices. 5. Application of riprap for bank stabilization must comply with COE, or its delegated agency, permit terms and conditions. 6. Unless otherwise specified by state permit, limit the use of riprap to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric. 7. Revegetate disturbed riparian areas with native species of conservation grasses, legumes, and woody species, similar in density to adjacent undisturbed lands. 8. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent that are less than 50 feet from the waterbody, or as needed to prevent sediment transport into the waterbody. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the waterbody. 9. Sections V.C.3 through V.C.7 above also apply to those perennial or intermittent streams not flowing at the time of construction.	No	NA	NA	Sections 13.1, 13.4.2.2, 13.4.2.3, 13.4.2.5, & 14.1.5		x
FERC Procedures	V.D: Post-Construction Maintenance	1. Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in riparian areas that are between HDD entry and exit points. 2. Do not use herbicides or pesticides in or within 100 feet of a waterbody except as allowed by the appropriate land management or state agency. 3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of riparian areas.	No	NA	NA	Section 14.0		x
FERC Procedures	VI.A.1: General	The project sponsor shall conduct a wetland delineation using the current federal methodology and file a wetland delineation report with the Secretary before construction. The requirement to file a wetland delineation report does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations. This report shall identify: a. by milepost all wetlands that would be affected; b. the National Wetlands Inventory (NWI) classification for each wetland; c. the crossing length of each wetland in feet; and d. the area of permanent and temporary disturbance that would occur in each wetland by NWI classification type. The requirements outlined in this section do not apply to wetlands in actively cultivated or rotated cropland. Standard upland protective measures, including workspace and topsoiling requirements, apply to these agricultural wetlands.	No	NA	NA	Sections 9.4.6 & 14.2		x
FERC Procedures	VI.A.2: General	Route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands. Where looping an existing pipeline, overlap the existing pipeline right-of-way with the new construction right-of-way. In addition, locate the loop line no more than 25 feet away from the existing pipeline unless site-specific constraints would adversely affect the stability of the existing pipeline.	MNF LRMP MG33	Pipelines are not allowed in wetlands in the MNF	Pipelines are not allowed in wetlands in the MNF	Sections 9.4.6 & 14.2	x	
FERC Procedures	VI.A.3: General	Limit the width of the construction right-of-way to 75 feet or less. Prior written approval of the Director is required where topographic conditions or soil limitations require that the construction right-of-way width within the boundaries of a federally delineated wetland be expanded beyond 75 feet. Early in the planning process the project sponsor is encouraged to identify site-specific areas where excessively wide trenches could occur and/or where spoil piles could be difficult to maintain because existing soils lack adequate unconfined compressive strength.	No	NA	NA	Sections 9.4.6 & 14.2		x
FERC Procedures	VI.A.4: General	Wetland boundaries and buffers must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.	No	NA	NA	Sections 9.4.6 & 14.2		x

Supply Header Project - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Procedures	VI.A.5: General	Implement the measures of sections V and VI in the event a waterbody crossing is located within or adjacent to a wetland crossing. If all measures of sections V and VI cannot be met, the project sponsor must file with the Secretary a site-specific crossing plan for review and written approval by the Director before construction. This crossing plan shall address at a minimum: a. spoil control; b. equipment bridges; c. restoration of waterbody banks and wetland hydrology; d. timing of the waterbody crossing; e. method of crossing; and f. size and location of all extra work areas.	No	NA	NA	Sections 9.4.6 & 14.2		x
FERC Procedures	VI.A.6: General	Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit compliance with U.S. Department of Transportation regulations.	No	NA	NA	Sections 9.4.6 & 14.2		x
FERC Procedures	VI.B.1: Installation	Extra Work Areas and Access Roads a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from wetland boundaries, except where adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the site-specific conditions that will not permit a 50-foot setback and measures to ensure the wetland is adequately protected. c. The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction right-of-way has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats). In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall use access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way. d. The only access roads, other than the construction right-of-way, that can be used in wetlands are those existing roads that can be used with no modifications or improvements, other than routine repair, and no impact on the wetland.	No	NA	NA	Sections 9.4.6 & 14.2		x
FERC Procedures	VI.B.2: Installation	Crossing Procedures a. Comply with COE, or its delegated agency, permit terms and conditions. b. Assemble the pipeline in an upland area unless the wetland is dry enough to adequately support skids and pipe. c. Use "push-pull" or "float" techniques to place the pipe in the trench where water and other site conditions allow. d. Minimize the length of time that topsoil is segregated and the trench is open. Do not trench the wetland until the pipeline is assembled and ready for lowering in. e. Limit construction equipment operating in wetland areas to that needed to clear the construction right-of-way, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction right-of-way. f. Cut vegetation just above ground level, leaving existing root systems in place, and remove it from the wetland for disposal. The project sponsor can burn woody debris in wetlands, if approved by the COE and in accordance with state and local regulations, ensuring that all remaining woody debris is removed for disposal. g. Limit pulling of tree stumps and grading activities to directly over the trenchline. Do not grade or remove stumps or root systems from the rest of the construction right-of-way in wetlands unless the Chief Inspector and Environmental Inspector determine that safety-related construction constraints require grading or the removal of tree stumps from under the working side of the construction right-of-way. h. Segregate the top 1 foot of topsoil from the area disturbed by trenching, except in areas where standing water is present or soils are saturated. Immediately after backfilling is complete, restore the segregated topsoil to its original location. i. Do not use rock, soil imported from outside the wetland, tree stumps, or brush riprap to support equipment on the construction right-of-way. j. If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment, or operate normal equipment on timber riprap, prefabricated equipment mats, or terra mats. k. Remove all project-related material used to support equipment on the construction right-of-way upon completion of construction.	No	NA	NA	Section 14.2		x
FERC Procedures	VI.B.3: Installation	Temporary Sediment Control Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the wetland or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench). Except as noted below in section VI.B.3.c, maintain sediment barriers until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan. a. Install sediment barriers across the entire construction right-of-way immediately upslope of the wetland boundary at all wetland crossings where necessary to prevent sediment flow into the wetland. b. Where wetlands are adjacent to the construction right-of-way and the right-of-way slopes toward the wetland, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the wetland. c. Install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way through wetlands. Remove these sediment barriers during right-of-way cleanup.	No	NA	NA	Sections 13.1, 13.3, & 13.4, 14.2		x
FERC Procedures	VI.B.4: Installation	Trench Dewatering Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any wetland. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.	Yes	WV General Water Pollution Control Permit G.4.e.2.A.ii.i	Requirements for how and where to dewater and required to have procedure in place	Sections 13.1 & 13.4.1.5		x

Supply Header Project - West Virginia

Regulation Document	Regulation	Description	Are there more stringent requirements or practices?		Description of more stringent requirement/practices	Reference in SWPPP	Where Regulation Applies	
			Yes/No	If yes, list requirements/practices			National Forest	Non-specific Area
FERC Procedures	VI.C: Restoration	<p>1. Where the pipeline trench may drain a wetland, construct trench breakers at the wetland boundaries and/or seal the trench bottom as necessary to maintain the original wetland hydrology.</p> <p>2. Restore pre-construction wetland contours to maintain the original wetland hydrology.</p> <p>3. For each wetland crossed, install a trench breaker at the base of slopes near the boundary between the wetland and adjacent upland areas. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the wetland.</p> <p>4. Do not use fertilizer, lime, or mulch unless required in writing by the appropriate federal or state agency.</p> <p>5. Consult with the appropriate federal or state agencies to develop a project-specific wetland restoration plan. The restoration plan shall include measures for re-establishing herbaceous and/or woody species, controlling the invasion and spread of invasive species and noxious weeds (e.g., purple loosestrife and phragmites), and monitoring the success of the revegetation and weed control efforts. Provide this plan to the FERC staff upon request.</p> <p>6. Until a project-specific wetland restoration plan is developed and/or implemented, temporarily revegetate the construction right-of-way with annual ryegrass at a rate of 40 pounds/acre (unless standing water is present).</p> <p>7. Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species.</p> <p>8. Remove temporary sediment barriers located at the boundary between wetland and adjacent upland areas after revegetation and stabilization of adjacent upland areas are judged to be successful as specified in section VII.A.4 of the Plan.</p>	No	NA	NA	Sections 13.1 & 13.4.2.1		x
FERC Procedures	VI.D: Post-Construction Maintenance And Reporting	<p>1. Do not conduct routine vegetation mowing or clearing over the full width of the permanent right-of-way in wetlands. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in wetlands that are between HDD entry and exit points.</p> <p>2. Do not use herbicides or pesticides in or within 100 feet of a wetland, except as allowed by the appropriate federal or state agency.</p> <p>3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of wetland areas.</p> <p>4. Monitor and record the success of wetland revegetation annually until wetland revegetation is successful.</p> <p>5. Wetland revegetation shall be considered successful if all of the following criteria are satisfied:</p> <ul style="list-style-type: none"> a. the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation); b. vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction; c. if natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and d. invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction. <p>6. Within 3 years after construction, file a report with the Secretary identifying the status of the wetland revegetation efforts and documenting success as defined in section VI.D.5, above. The requirement to file wetland restoration reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advance notice provisions in the FERC's regulations.</p> <p>For any wetland where revegetation is not successful at the end of 3 years after construction, develop and implement (in consultation with a professional wetland ecologist) a remedial revegetation plan to actively revegetate wetlands. Continue revegetation efforts and file a report annually documenting progress in these wetlands until wetland revegetation is successful.</p>	No	NA	NA	Sections 13.3.8, 14.1.6, & 14.2 Appendix M - Restoration and Rehabilitation Plan		x
FERC Procedures	VII.A: Notification Procedures and Permits	<p>1. Apply for state-issued water withdrawal permits, as required.</p> <p>2. Apply for National Pollutant Discharge Elimination System (NPDES) or state-issued discharge permits, as required.</p> <p>3. Notify appropriate state agencies of intent to use specific sources at least 48 hours before testing activities unless they waive this requirement in writing.</p>	No	NA	NA	NA Separate NPDES Permit not included in SWPPP		x
FERC Procedures	VII.B: General	<p>1. Perform 100 percent radiographic inspection of all pipeline section welds or hydrotest the pipeline sections, before installation under waterbodies or wetlands.</p> <p>2. If pumps used for hydrostatic testing are within 100 feet of any waterbody or wetland, address secondary containment and refueling of these pumps in the project's Spill Prevention and Response Procedures.</p> <p>3. The project sponsor shall file with the Secretary before construction a list identifying the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.</p>	No	NA	NA	NA Separate NPDES Permit not included in SWPPP		x
FERC Procedures	VII.C: Intake Source and Rate	<p>1. Screen the intake hose to minimize the potential for entrainment of fish.</p> <p>2. Do not use state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and/or local permitting agencies grant written permission.</p> <p>3. Maintain adequate flow rates to protect aquatic life, provide for all waterbody uses, and provide for downstream withdrawals of water by existing users.</p> <p>4. Locate hydrostatic test manifolds outside wetlands and riparian areas to the maximum extent practicable.</p>	No	NA	NA	NA Separate NPDES Permit not included in SWPPP		x
FERC Procedures	VII.D: Discharge Location, Method, and Rate	<p>1. Regulate discharge rate, use energy dissipation device(s), and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow.</p> <p>2. Do not discharge into state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and local permitting agencies grant written permission.</p>	No	NA	NA	NA Separate NPDES Permit not included in SWPPP		x