PennEast Pipeline Company, LLC

PENNEAST PIPELINE PROJECT

Site Restoration Plan

Narrative

Application for:

PA Chapter 102 Erosion and Sediment Control General Permit – 3

December 2018

Contents

Appendices

SITE RESTORATION DRAWINGS PROVIDED SEPARATELY IN ESCGP-3 SECTION 3-2

1.0 INTRODUCTION

The Site Restoration Plan (SR Plan) for the PennEast Pipeline Project (Project) includes this narrative, appended supporting information and the Erosion and Sediment Control General Permit (ESCGP-3) Permit Drawings (Drawings). The SR Plan narrative was developed in compliance with the requirements of Chapter 102, Title 25 of the Pennsylvania Administrative Code created under the Clean Streams Law, specifically Chapter 102, Section 102.8(n):

> "*Regulated activities that require site restoration or reclamation, and small earth disturbance activities.* The portion of a site reclamation or restoration plan that identifies Post Construction Stormwater Management (PCSM) Best Management Practices (BMPs) to manage stormwater from oil and gas activities or mining activities permitted in accordance with Chapters 78 and 86—90; timber harvesting activities; pipelines; other similar utility infrastructure; Department permitted activities involving less than 1 acre of earth disturbance; or abandoned mine land reclamation activities, that require compliance with this chapter, may be used to satisfy the requirements of this section if the PCSM, reclamation or restoration plan meets the requirements of subsections (b), (c), (e), (f), (h), (i) and (l) and, when applicable, subsection (m)."

PennEast Pipeline Company, LLC (PennEast) has prepared this SR Plan to address the planned stormwater management measures that would be installed and maintained following the construction of the Project located in Luzerne, Carbon, Northampton, Monroe and Bucks Counties, Pennsylvania. This SR Plan is intended for pipeline construction activities in Pennsylvania which are not proposed to result in an increase in impervious surfaces, including temporary access roads, staging areas, and wareyards associated with the Project. The aboveground facilities listed below will also be constructed, and the resulting increase in stormwater rates and volumes will be mitigated with PCSM BMPs. Separate PCSM reports and drawings are provided in Section 3-3 of PennEast's ESCGP-3 Application.

- Wyoming Interconnect
- Springville Interconnect
- Auburn & Leidy Interconnects
- Kidder Compressor Station
- TCO & UGI-LEH Interconnects
- Hellertown Launcher & Mainline Launcher/Receiver
- Blue Mountain Interconnect
- Blue Mountain Side Valve
- Mainline Block Valve 1
- Mainline Block Valve 2
- Mainline Block Valve 3
- Mainline Block Valve 4*
- Mainline Block Valve 6*
- Mainline Block Valve 7

** Mainline Block Valve 5 has been removed from the Project scope; however, the subsequent Mainline Block Valve numbers were not revised to reflect the removal.*

This SR Plan has been prepared in conjunction with an ESCGP-3 application for earth disturbance associated with oil and gas activities in Pennsylvania. Measures to address the potential for erosion and sediment control during construction and related earth disturbance are described in a separate Erosion & Sediment Control Plan (E&SCP) prepared for the Project in Pennsylvania.

2.0 PROJECT DESCRIPTION

PennEast designed its Project to provide a direct and flexible path for transporting natural gas produced in the Marcellus Shale production area in northeastern Pennsylvania to growing natural gas markets in New Jersey, eastern Pennsylvania, southeastern Pennsylvania and surrounding states with the capability of providing approximately 1.1 MMDth/day of year-round natural gas transportation service.

The Project consists of the following primary components in Pennsylvania:

- 77.3 miles of new 36-inch diameter mainline transmission pipeline extending from Dallas Township in Luzerne County to Durham Township in Bucks County (PennEast Mainline Pipeline Route);
- 2.1 miles of new 24-inch diameter lateral near Hellertown, Northampton County, Pennsylvania to transport gas to an interconnection with Columbia Gas Transmission (TCO) and UGI Utilities, Inc. (UGI-LEH) known as the Hellertown Lateral;
- 0.5 mile of new 4-inch diameter lateral in Carbon County, Pennsylvania to transport gas to an interconnection with UGI Central Penn Gas, Inc. (Blue Mountain Interconnect) known as the Blue Mountain Lateral;
- One new compressor station in Kidder Township, Carbon County, Pennsylvania; and
- Various associated aboveground facilities including interconnects, launchers, receivers, and mainline block valves (MLVs) to support the pipeline system.

Within Pennsylvania, the Project would result in an estimated earth disturbance of approximately 1,289.4 acres. PennEast has co-located the construction ROW adjacent to or in proximity to existing ROWs (e.g., gas pipeline, transmission line, or product pipeline) to the greatest extent practicable.

3.0 SITE RESTORATION GENERAL REQUIREMENTS

General restoration of the construction work area will begin in accordance with PennEast's E&SCP. Restoration measures will include the re-establishment of original grade and drainage patterns to the extent practicable, as well as the installation of permanent erosion and sedimentation control devices to minimize the likelihood of post-construction erosion.

3.1 Preserve the Integrity of Stream Channels; Maintain and Protect the Receiving Streams

PCSM will be achieved through the use of waterbars to reduce runoff velocity and divert water off the permanent ROW. Permanent waterbars would be installed across the entire ROW, including at waterbody crossings and upslope of wetland boundaries. Waterbody banks will be restored to pre-construction contours or to a stable angle of repose as approved by an Environmental Inspector (EI). Erosion control blanket or matting will be installed on disturbed areas within 50 feet of streams and within 100 feet of streams in high quality (HQ) and exceptional value (EV) watersheds. The site will be revegetated after earth-disturbing activities or any stage or phase of an activity is completed in accordance with the seed mixes presented on Drawing 000-01-01-003B (ESCGP-3 Section 3-2).

3.2 Prevent an Increase in the Rate of Stormwater Runoff

Existing drainage patterns will be maintained as feasible by utilizing the existing contours or restoring any disturbed area to the existing condition or meadow, in good condition or better. Restoration measures will include the re-establishment of original grade and drainage patterns to the extent practicable, as well as the

installation of permanent erosion and sedimentation control devices to minimize the likelihood of post-construction erosion. The rate of stormwater runoff from the Project area in the post-construction condition is not expected to exceed that of the pre-construction condition.

3.3 Minimize Any Increase in Stormwater Runoff Volume

Existing drainage patterns will be maintained by utilizing the existing contours or restoring any disturbed area to the existing condition or meadow in good condition or better. The volume of stormwater runoff from the Project area in the post-construction condition is not expected to exceed that of the pre-construction condition.

3.4 Minimize Impervious Areas

To the maximum extent possible, disturbed areas will be revegetated or restored with pervious material to their original condition, or meadow in good condition or better following construction.

3.5 Maximize Protection of Existing Drainage Features and Vegetation

The approximate original contours of the workspace will be maintained and/or restored to their original condition following construction, and disturbed areas will be re-vegetated or restored with pervious material. Existing drainage patterns will be maintained, and the volume of stormwater runoff from the Project area in the post-construction condition is not expected to exceed that of the existing condition.

3.6 Minimize Land Clearing and Grading

Land clearing and grading will be limited to only what is required to conduct the work activities in each stage of work as outlined in the E&SCP.

3.7 Minimize Soil Compaction

Construction activities will be limited to the approved workspace. Following construction, temporarily disturbed areas will be restored to their existing condition. Severely compacted agricultural areas would be plowed with a paraplow or other deep tillage implement. In agricultural areas where topsoil has been segregated, the subsoil would be plowed before replacing the segregated topsoil. If subsequent construction and cleanup activities result in further compaction, additional tilling would be conducted.

3.8 Utilize Other Measures or Controls that Prevent or Minimize Generation of Increased Stormwater Runoff

Existing drainage patterns will be maintained, and the volume of stormwater runoff from the Project area in the post-construction condition is not expected to exceed that of the existing condition. Post construction stormwater management will be achieved through the use of waterbars that will be placed across the width of the PennEast's ROW.

4.0 EXISTING CONDITIONS

4.1 Existing Topography

The PennEast Mainline Pipeline Route measures a total length of 77.3 miles in Pennsylvania. In addition, the Hellertown Lateral and Blue Mountain Lateral are approximately 2.1 miles and 0.5 miles respectively. The

existing terrain varies throughout the length of the Project from flat to hilly to steep valley slopes. The terrain also ranges throughout the Project as described below.

4.2 Past and Present Land Uses

Construction and operation of the Project's facilities may result in both temporary and permanent alterations to land use and land cover. This section identifies land requirements for the Project and describes existing and past land use within the proposed Project areas. The locations of mapped soil types are shown on the SR drawings (ESCGP-3 Section 3-2). Information provided in this section includes land that will be affected by the temporary construction and permanent ROW, extra work or staging areas, and wareyards. Land use data was calculated based on information obtained through field surveys, review of aerial photography, and USDA National Agricultural Statistics Service (NASS) Cropland Data Layer (USDA-NASS, 2014). The land use characteristics are classified by primary vegetation cover type and/or predominant land use. Land use types within the Project area are classified into the following ten categories:

- Agricultural - Active cropland, pasture, orchards, vineyards, and/or hay fields;
- Commercial/Industrial - Electric power or gas utility stations, manufacturing or industrial plants, landfills, mines, quarries, and commercial or retail facilities;
- Upland Forest - Tracts of upland or wetland forest or woodland that would be removed for the construction ROW or extra work or staging areas;
- Institutional - Land occupied by public buildings such as schools, universities, government office buildings, art galleries, and museums;
- Urban - Land characterized by high human population density and built features in comparison to the areas surrounding it;
- Open Land - Non-forested lands, herbaceous and scrub-shrub wetlands, and maintained utility ROW;
- Residential - Residential yards and residential subdivisions;
- Roadways/Railroads - roadway and railroad ROWs;
- Special Land Use – Characterized by religious and recreational use such as churches, parks, baseball fields, etc.;
- Open Water - Water crossings.

In order to minimize impacts to existing land use, PennEast has proposed to co-locate much of the construction ROW adjacent to or in proximity to existing ROWs wherever possible (e.g., gas pipeline, transmission line, or product pipeline).

PennEast compared aerial photography from September 2010 available through Google Earth Pro and compared it to aerial photography that PennEast captured in 2015. There have been no significant changes to land use along the proposed pipeline alignment in the past five years.

4.3 Proposed Alteration and Land Use

During the initial construction stage of the Project, much of the area will consist of exposed soils. Upon installation of the pipeline, the ROW is to be stabilized with vegetative cover as indicated on the SR drawings. With the exception of long-term maintenance to trim woody vegetation and occasional mowing, no permanent topographic or land cover changes are proposed along the pipeline alignment aside from areas within the tree clearing limits.

5.0 SOILS AND GEOLOGY

5.1 Soil Limitations

Important attributes of the soils map units crossed by the pipeline are presented on the SR Legends sheet (Drawing 000-01-01-002). The Legends sheet includes the soil use limitations from the Pennsylvania Department of Environmental Protection (PADEP) E&S Manual Appendix E for all soils impacted by the Project in Pennsylvania. For all applicable soil use limitations, a resolution has been proposed. The locations of mapped soil types are shown on the SR drawings in plan-view as well as in a crossing band on the alignment sheets (ESCGP-3 Section 3-2). These soil boundaries and associated information were obtained from the USDA SSURGO database. Refer to Appendix 1 for additional soil information.

PennEast will reestablish vegetation following final grading to minimize impacts on soils during site restoration.

5.2 Naturally Occurring Geologic Formations

PennEast evaluated potential geologic hazards in the Project area including effects from mining activities, landslide susceptibility, earthquake probabilities, subsidence, and faults. To further understand the risk of subsidence in areas where karst terrain occurs, PennEast conducted a geophysical survey using electrical resistivity imagery (ERI). Where ERI identified potential air-filled and clay-filled voids, PennEast installed borings to confirm their presence. Voids encountered near the surface will be mitigated in accordance with Chapter 17 (Areas of Special Concern) in the PADEP Erosion and Sediment Pollution Control Manual. In addition, a Geologic Hazard Mitigation Plan has been developed as part of the E&SCP narrative.

6.0 RECEIVING WATERCOURSES

Surface water resources identified in the general Project area include rivers, streams, associated tributaries, ponds, lakes, and catchment basins. Pennsylvania water quality standards are set forth in Chapter 93 of the Pennsylvania Code (Commonwealth of PA, 2009a), and amended under the Clean Streams Law (35 P.S. § § 691.5(b) (1) and 691.402). Definitions for Chapter 93 designated use and existing use classifications are based on a variety of criteria, including chemistry, biology, and outstanding resources. Designated uses are specified in Chapter 93 for each waterbody or segment whether or not they are being attained. Existing uses are uses actually being attained in the waterbody on or after November 28, 1975, whether or not they are included in the water quality standards (Commonwealth of PA, 2009a).

Trout water classifications include Approved Trout Water, Stream Sections that Support Natural Reproduction of Trout, and Wilderness Trout Streams under Title 58 of the Pennsylvania Code. Both Class A Wild Trout Streams and Stream Sections that Support Natural Reproduction of Trout are defined as streams that support a population of naturally produced trout of sufficient size and abundance to support a long-term fishery.

6.1 Riparian Impacts

The feasibility of protecting, converting, or establishing a riparian forest buffer meeting the requirements of 25 PA Code §102.14 was analyzed for the proposed Project. Given the linear nature of the proposed Project, temporary impacts within riparian buffers is unavoidable. To mitigate for temporary disturbances within riparian buffers, PennEast has reduced workspace within riparian buffers to the extent practicable. PennEast will employ multiple measures to reduce the extent and duration of Project impacts to riparian communities which include, but are not limited to the following:

- PennEast will limit the removal of stumps in wetlands and along watercourses to the trench line and what is necessary to safely install the equipment crossings to promote natural revegetation and surface stabilization;

- PennEast will utilize a riparian conservation seed mix within 150 feet of HQ/EV watercourses and within 100 feet of other watercourses. This seed mix will be used to revegetate the entire LOD in riparian areas where slopes are less than 10%. Tree and shrub plantings will also occur in forested riparian buffers, where all workspace outside of the 30-foot maintained ROW will be planted.

PennEast will implement BMPs to minimize riparian impacts and protect existing forested riparian buffers to the extent practicable. However, to manage the pipeline's integrity during operation of the Project, PennEast must maintain a 30-foot wide corridor free of trees over the pipeline; therefore, the entire forested riparian buffer cannot be replanted. Furthermore, because PennEast does not own the property on which the proposed earth disturbance will occur, PennEast cannot, without landowner permission, place deed restrictions or conservation easements to protect, convert, or establish a riparian buffer or riparian forest buffer to satisfy the antidegradation requirements of §102.4(b)(6) for the proposed earth disturbances.

As detailed in the Riparian Buffer Waiver Request (ESCGP-3 Section 1-7), PennEast requests riparian buffer waivers in accordance with 25 PA Code §102.14(d)(2)(ii) for linear project impacts, waivers in accordance with 25 PA Code §102.14(d)(2)(vi) for minor impacts at aboveground facilities due to site characteristics, and approval of one riparian buffer impact as an allowable activity under 25 PA Code 102(f)(2)(i).

7.0 PCSM

Existing drainage patterns will be maintained by utilizing the existing contours and restoring any disturbed area to the existing condition or meadow in good condition or better to the maximum extent possible. The volume and rate of stormwater runoff from the Project area in the post-construction condition are not expected to exceed that of the existing condition.

8.0 PCSM BEST MANAGEMENT PRACTICES

PCSM will be achieved through the use of waterbars to reduce runoff velocity and divert water off the permanent ROW. Permanent waterbars would be installed across the entire ROW, including at waterbody crossings and upslope of wetland boundaries. The site will be revegetated after earth-disturbing activities or any stage or phase of an activity is completed using seed mixes in accordance with SR Drawing 000-01-01-003B (ESCGP-3 Section 3-2).

8.1 Permanent Waterbars

Permanent waterbars are intended to reduce runoff velocity, divert water off the construction work area (CWA), and prevent sediment deposition into sensitive resources. Permanent waterbars will be constructed of compacted soil. Stone or some functional equivalent may be used when directed by the EI.

1. Install permanent waterbars across the entire width of the permanent ROW in all areas, except cultivated areas and lawns, at the locations shown on the construction drawings or as directed by the EI. Installation shall be in conformance with SR Drawing 000-03-09-001, Figure 9 (ESCGP-3 Section 3-2).
2. Install permanent waterbars across the entire width of the permanent ROW at all watercourse and wetland crossings, and at the base of slopes adjacent to roads. When the permanent ROW parallels an existing utility ROW, permanent waterbars may be installed to match existing waterbars on the adjacent undisturbed pipeline ROW.
3. Construct waterbars with a 2 to 4 percent outslope to divert surface flow to a stable vegetated area without causing water to pool or erode behind the interceptor dike. In the absence of a stable vegetated area, install an energy-dissipating device at the end of the interceptor dike.

4. Install a rock-lined drainage swale along the ROW with restricted drainage features when directed by the EI.
5. On slopes greater than 30 percent, install waterbars with erosion control blanket on the swale side.

Waterbars and vegetation will be inspected during regular ROW maintenance. Permanent waterbar maintenance and inspection will include checking and disposing of sediment or debris blocking the normal flow of water. Any eroded areas disturbed by erosion or slope movement will be repaired and reseeded.

8.2 Revegetate Disturbed Areas with Native Species

After earth-disturbing activities or any stage or phase of an activity is completed, the site will immediately have topsoil restored, replaced, amended, seeded, and mulched or otherwise permanently stabilized and protected from accelerated erosion and sedimentation. A recommended soil pH modifier and fertilizer will be incorporated into the top 2 inches of soil as soon as practicable. A permanent seed mix will be used for permanent vegetative stabilization, and soil amendments, including lime and fertilizer, would be applied. Seed mixes specified on SR Drawing 000-01-01-003B (ESCGP-3 Section 3-2) will be used in accordance with recommendations for seed rates and dates. Mulch will also be used to stabilize the soil surface and would consist of weed-free straw or hay, erosion control fabric, or some functional equivalent, as approved by the Environmental Inspector and Chief Inspector. Revegetation of areas disturbed by Project-related activities will be monitored after seeding/planting to ensure success.

8.3 Sequence of Implementation or Installation

PennEast will be responsible for the following earth disturbance activities for BMP installation:

1. Following initial grading operations, temporary waterbars shall be installed on disturbed areas, as necessary, to prevent excessive erosion.
2. Permanent waterbars shall be installed at the spacing shown in the table on SR Drawing 000-03-09-001, Figure 9 (ESCGP-3 Section 3-2).
3. Waterbars are required at all waterbody crossings and upslope from all wetland boundaries.
4. The waterbar outlet shall be located where runoff will be released onto an existing well-vegetated area.

8.4 Operation and Maintenance

PennEast will be responsible for the proper construction, stabilization, and maintenance of all erosion and sediment controls and post-construction stormwater management facilities which include the vegetated areas. PennEast will inspect the vegetated areas for erosion, distressed vegetation, and bare ground.

General maintenance will include the regular removal of debris and litter to help prevent possible damage to vegetated areas. PennEast will control the growth of woody vegetation by mowing and clearing as appropriate. Routine inspection and maintenance will allow proper function and operation of the BMPs.

PennEast will perform the following monitoring and maintenance activities following construction:

1. Establish and implement a program to monitor the success of restoration upon completion of construction and restoration activities;
2. 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;

3. Revegetation in nonagricultural areas shall be considered successful if the vegetative cover is sufficient to prevent the erosion of soils on the disturbed ROW and density and cover are similar to that in adjacent undisturbed area. Sufficient coverage in upland areas is defined when vegetation has a uniform 70 percent vegetative coverage. 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. Revegetation efforts (such as fertilizing or reseeding) will continue until revegetation is successful;
4. Restoration shall be considered successful if the ROW surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the land owner or land managing agency), revegetation is successful, and proper drainage has been restored;
5. Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in active agricultural areas until restoration is successful;
6. Make efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, throughout the life of the Project. Maintain signs, gates, and permanent access roads as necessary;
7. Monitor and record the success of wetland revegetation annually until wetland revegetation is successful. Wetland revegetation will be considered successful if all of the following criteria are satisfied: the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation); 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; 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 invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction.
8. For any wetland where vegetation is not successful at the end of 3 years after construction, PennEast shall develop and implement (in consultation with a professional wetland ecologist) a plan to actively revegetate the wetland with native wetland herbaceous and woody plant species;
9. Inspect all temporary remaining erosion and sedimentation controls during routine patrols to ensure proper functioning. Any deficiencies found will be reported and corrected as needed. Once the area has revegetated and stabilized, the erosion controls will be removed.
10. Maintain written inspection reports documenting site inspections and BMP repair and maintenance activities.

8.4.1 Routine Right-of-Way Maintenance

The following requirements restrict the amount of routine vegetation mowing or clearing that can occur on new pipeline facilities. Where the newly established pipeline ROW is located on other existing ROWs not affiliated with PennEast, the easement holder or owner will continue to maintain their ROWs using procedures specified in their vegetative management programs.

Uplands

Routine maintenance of the ROW is required to allow continued access for routine pipeline patrols, maintaining access in the event of emergency repairs, and visibility during aerial patrols. In upland areas, maintenance of the ROW will involve clearing the entire ROW of woody vegetation.

1. Routine vegetation mowing or clearing over the full width of the permanent ROW in uplands shall be conducted no more frequently than once every 3 years. However, to facilitate periodic corrosion and leak surveys, a 10-foot wide corridor centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot wide corridor in an herbaceous state.
2. 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.

Waterbodies and Wetlands

1. Routine vegetation mowing or clearing practices on the construction ROW adjacent to waterbodies will consist of maintaining a riparian strip that measures 25 feet from the mean high-water mark. This riparian area will be allowed to permanently revegetate with native plant species across the entire ROW.
2. Routine vegetation mowing or clearing over the full width of the construction ROW in wetlands is prohibited.
3. To facilitate periodic corrosion and leak surveys at wetlands and waterbodies, a 10-foot wide corridor centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. Trees and shrubs 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 ROW. PennEast will not conduct any routine vegetation mowing or clearing in riparian areas that are between horizontal directional drill (HDD) entry and exit points.
4. Herbicides or pesticides shall not be used in or within 100 feet of a wetland or waterbody, except as specified by the appropriate federal or state agency.
5. Time of year restrictions (April 15 – August 1 of any year) apply to routine mowing and clearing of riparian areas.

8.5 Recycling and Disposal of Materials

PennEast shall be responsible for ensuring the proper measures for recycling or disposal of materials associated with or from the PCSM BMPs are in accordance with department laws, regulations and requirements.

Building materials and other construction site wastes must be properly managed and disposed of to reduce potential for pollution to surface and ground waters as per 25 PA Code § 102.4(b)(5)(xi). All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with PADEP's Solid Waste Management Regulations at 25 PA Code 260.1 et seq., 271.1 and 287.1 et. seq. No building materials, wastes, or unused building materials shall be burned, buried, dumped, or discharged at the site. No off-site disposal area has been identified as part of the SR Plan. Construction waste will be disposed of properly by the Contractor at a state-approved facility or recycled.

The Contractor will develop and implement procedures which will detail the proper measures for disposal and recycling of materials associated with or from the Project site in accordance with PADEP regulations. Construction wastes include, but are not limited to, excess soil materials, building materials, concrete wash water, and sanitary wastes that could adversely impact water quality. The Contractor will inspect the Project area weekly and properly dispose of all construction wastes. Measures will be planned and implemented for housekeeping materials management and litter control. Wherever possible, re-useable wastes will be segregated from other waste and stored separately for recycling.

The Contractor shall be responsible for submitting an E&SCP for any borrow or waste areas required completing the work. Disposal locations for excess soil/rock waste will have appropriate BMPs implemented at the waste site. The disposal locations must be verified with the applicable state department to show compliance with wetland and floodplain regulations. If an off-site location is used for borrow or disposal, the contractor is responsible for developing and implementing an adequate E&SCP(s) and submitting the E&SCP(s) to PADEP or the applicable County Conservation District for review and approval. The Contractor must immediately stabilize the waste site upon completion of any stage or phase of earth disturbance activity at the waste site.

9.0 PCSM IMPLEMENTATION FOR SPECIAL PROTECTION WATERS

9.1 Non-Discharge Alternatives

The approximate original contours of the workspace will be maintained and/or restored to their original condition following construction, and disturbed areas will be re-vegetated or restored with pervious material. Existing drainage patterns will be maintained, and the volume and rate of stormwater runoff from the Project area in the post-construction condition is not expected to exceed that of the existing condition.

9.2 Anti-degradation Best Available Combination of Technologies (ABACT)

No new, additional or increased discharge is proposed to High Quality or Exceptional Value Waters. The approximate original contours of the workspace will be maintained and/or restored to their original condition following construction, and all disturbed areas will be re-vegetated or restored with pervious material. ABACT measures (compost filter socks) are proposed for the Project.

9.3 Pennsylvania Stormwater Best Management Practices Manual

After the proposed pipeline construction activities are complete, the pipeline ROW and areas of temporary disturbance will be restored to pre-construction conditions or to a condition of meadow in good condition, or better. There will be no net change in volume and rate of stormwater from preconstruction to post construction for the Project.

10.0 THERMAL IMPACTS

There are no proposed increases in stormwater runoff associated with the pipeline ROW, and no change in land cover type is proposed. Earth disturbances will be stabilized with native meadow vegetation to promote infiltration to assist in mitigating temperature rises.

Appendix 1

Soil Map Units Crossed by the Construction and Operation of the Project Pipeline Facilities and Important Soil Attributes