



PennEast Pipeline Company, LLC

**PENNEAST PIPELINE PROJECT**

**L-3E – ANTIDEGRADATION ANALYSIS  
BUCKS COUNTY**

**December 2018**

**Submitted by:**  
PennEast Pipeline Company, LLC





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## **Acronym List**

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|          |   |
|----------|---|
| BMPs     | Best Management Practices                           |
| CIA      | Cumulative Impacts Analysis                         |
| CIAA     | cumulative impacts assessment area                  |
| CWA      | Clean Water Act                                     |
| DCNR     | Department of Conservation and Natural Resources    |
| EA       | Environmental Assessment                            |
| E&S      | Erosion and Sediment                                |
| E&SCP    | Erosion and Sediment Control Plan                   |
| ESCGP    | Erosion and Sediment Control General Permit         |
| EV       | Exceptional Value                                   |
| HDD      | Horizontal Directional Drilling                     |
| HQ       | High-Quality  |
| JPA      | Joint Permit Application                            |
| LOD      | Limits of Disturbance                               |
| MP       | Mile Post   |
| NMFS     | National Marine Fisheries Service                   |
| NPDES    | National Pollutant Discharge Elimination System     |
| PA       | Pennsylvania  |
| PADEP    | Pennsylvania Department of Environmental Protection |
| PCC      | Preparedness, Prevention and Contingency            |
| PennEast | PennEast Pipeline Company, LLC                      |
| PEM      | Palustrine Emergent                                 |
| PFBC     | Pennsylvania Fish and Boat Commission               |
| PGC      | Pennsylvania Game Commission                        |
| PFO      | Palustrine Forested                                 |
| PPC      | Preparedness, Prevention and Contingency            |
| Project  | PennEast Pipeline Project                           |
| PSS      | Palustrine Scrub-Shrub                              |
| ROW      | Right-of-Way  |
| RQBTS    | Recognized Qualified Bog Turtle Surveyor            |
| T&E      | Threatened and Endangered                           |



|       |                                |
|-------|--------------------------------|
| TGD   | Technical Guidance Document    |
| USACE | U.S. Army Corps of Engineers   |
| USFWS | U.S. Fish and Wildlife Service |
| WQS   | Water Quality Standards        |

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## **1.0 Introduction**

In accordance with the requirements contained within the Pennsylvania Department of Environmental Protection's (PADEP) Comprehensive Environmental Assessment of Proposed Project Impacts for Chapter 105 Water Obstruction and Encroachment Permit Applications Technical Guidance Document (TGD) (Document No. 310-2137-006, 12/16/2017) and the assessment criteria detailed in Module 3 of the Environmental Assessment (EA) Form (EA Form) Instructions (Document No. 3150-PM-BWEW0017, Revised 6/2017), PennEast Pipeline Company, LLC (PennEast) has prepared this Antidegradation Analysis to support its Joint Permit Application (JPA) for the PennEast Pipeline Project (Project). Impacts were assessed for consistency with state antidegradation requirements contained in Chapters 93, 95, and 102 (relating to water quality standards (WQS); wastewater treatment requirements; and erosion and sediment control) and the Clean Water Act (CWA) (33 U.S.C.A § 1251—1376). PennEast has provided a complete analysis and discussion of the antidegradation analysis of the proposed Project for the portion in Bucks County, Pennsylvania.

Antidegradation requirements promote the maintenance and protection of existing water quality for high-quality (HQ) and exceptional value (EV) waters, and protection of existing water quality and uses (PADEP 2003).

The sections of this document provide an overview of the water resources impacted by the Project and a summary of the avoidance and minimization measures proposed to reduce impacts. A comprehensive review of the regulations of antidegradation requirements of Chapters 93, 95, 102 and 105, as well as the CWA, are provided in their respective sections herein for Bucks County, Pennsylvania for this Project.

## **2.0 Summary of Water Resource Impacts**

PennEast completed a wetland and watercourse investigation of the Project area. The boundary of this site investigation and all environmental resources identified during this investigation are shown in the Erosion and Sediment Control Plan (E&SCP) drawings (JPA Section H). A Wetland and Watercourse Delineation Report is included in the Section 404/Chapter 105 JPA submittal under separate cover for wetlands' work completed in Pennsylvania (JPA Section L-2B).

The study area associated with the Project site in Bucks County is tributary to the Delaware River. The Aquatic Resources Impact Table in JPA Section A-1 lists the watercourses and their tributaries by mile post (MP) within the study area that have Pennsylvania (PA) Code, Title 25, Chapter 93 designated protected aquatic life.

There are no HQ and EV waters crossed by the Project in Bucks County.

PennEast selected the proposed pipeline route to avoid and minimize effects to watercourses to the greatest extent practicable while maintaining the economic and safety standards of the Project, as further discussed in the Alternatives Analysis (JPA Section S). Within Bucks County, the proposed construction work area has been reduced at the single, ephemeral watercourse crossing to minimize impacts. Two other watercourses and one wetland will be crossed under using the horizontal directional drill (HDD) method, thereby avoiding surface impacts. Construction of the proposed Project in Bucks County includes



temporary short-term impacts during construction to one surface water resource crossed by the pipeline. Temporary impacts to the surface water include disturbance of watercourse banks, removal of riparian vegetation, and if there is watercourse flow at the time of construction, the temporary diversion of watercourse flow during dry crossing construction. PennEast will implement the written E&SCP (JPA Section M) to reduce the amount and duration of surface water disturbance and enable the contractor to meet the timing restrictions for in-watercourse disturbance.

The Project has been co-located within, or parallel to, existing, previously disturbed and maintained right-of-ways (ROWs) to the extent practicable. Watercourse crossing methods were determined by individual watercourse conditions during final engineering design. The E&SCP (JPA Section M) will be followed for both standard and special construction, as well as, operation techniques at watercourse crossings. The procedures outlined in the E&SCP (JPA Section M) will minimize introduction of water pollutants into watercourses and minimize impacts on aquatic resources. Impacts from construction-related sedimentation and turbidity will be limited to short-term, temporary disturbance by following the time and duration limitation at the ephemeral watercourse crossing.

PennEast evaluated dry crossing methods for each watercourse crossing, including conventional open cut and trenchless techniques. Several criteria were considered in determining the most appropriate crossing method:

- Size of the watercourse and flow regime;
- Sensitivity of the natural resource, including seasonal constraints to minimize impacts to trout fisheries;
- Anticipated time required to construct and stabilize the construction workspace;
- Constructability constraints posed by topography and proximity to roads and other man-made structures; and
- Landowner concerns and requests.

By utilizing dry crossing techniques, watercourse flow can be temporarily diverted, effectively isolating the workspace from the watercourse, which greatly reduces sedimentation within watercourses. Using these methods, the pipeline crossing can be constructed in a matter of hours as opposed to trenchless techniques that can take several weeks, thereby reducing the duration of earth disturbance associated with the Project.

The Project facilities will be operated and maintained in a way to ensure that safe and environmentally-friendly conditions are maintained. No herbicides or pesticides will be used for the clearing or maintenance of the temporary or permanent ROW, or within 100 feet of a watercourse. A 30-foot cleared area in the 50-foot permanent ROW, in non-wetland resource areas, will be maintained over the centerline of the pipeline.

PennEast sited access roads to avoid and minimize impacts to wetlands and watercourses, utilizing existing access roads wherever possible. Within Bucks County, one of the two proposed access roads is



an existing road that requires no or only minor improvements. Neither of the proposed access roads would result in temporary impacts to wetlands or watercourses.

There are no aboveground facilities proposed within Bucks County, so there will be no associated direct impacts to surface water resources.

### 3.0 Chapter 93 Compliance

Chapter 93 sets the WQS for surface waters of the Commonwealth, including wetlands. WQS are based on water uses including designated and existing uses and are protected as such under the authority of the Clean Streams Law and other regulations protecting surface water quality. The sections of Chapter 93 related to antidegradation are discussed below.

PADEP regulations in §93.1 define a nonpoint source as “a pollution source which is not a point source discharge.” The same section of the regulation defines a point source discharge as “a pollutant source regulated under the National Pollutant Discharge Elimination System (NPDES).” The nature of the construction activities in Bucks County are associated with the PennEast Mainline Pipeline, which will not generate any point source discharges. Non-point discharges are related to precipitation induced sources such as rainfall and snow melt runoff that contact the earth disturbance areas of the Project during the construction stage.

#### 3.1 Section 93.4a – Antidegradation Requirements

Per this requirement, any activity conducted within a surface water of the Commonwealth shall do the following:

**Section 93.4a(b): *Existing use protection for surface waters. Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.***

This level of protection is applicable to all surface waters where water quality may not be degraded below levels that protect the existing uses. For activities that may affect surface water and which requires a PADEP permit or approval, the existing uses of the water must be protected. These protections extend to the projection of federal and Pennsylvania-listed threatened and endangered (T&E) species.

Chapter 93 water uses designation and Pennsylvania state-wide existing use classifications have been determined for each watercourse impacted by the Project and is provided in the Aquatic Resources Impact Table in JPA Section A-1. In instances where a watercourse has both a designated use and an existing use, the existing use designation is listed.

PADEP’s comprehensive stormwater management policy goals are to improve and sustain ground and surface water quality and quantity through the use of planning practices and best management practices (BMPs) that minimize the generation of stormwater runoff, provide groundwater recharge and minimize the adverse effects of stormwater discharge on ground and surface water resources.





Through the development and implementation of the selected alternatives presented in the Alternative Analysis (JPA Section S), the erosion and sediment control measures provided in the Chapter 102 Erosion and Sediment Control General Permit (ESCGP) Application and the Project's Mitigation Plan (JPA Section L-4), BMPs will be applied that will minimize the generation of stormwater runoff, minimize the adverse effects of stormwater discharge on ground and surface water resources therefore, protecting the water quality and quantities. Primarily, this is accomplished through minimization of workspace, following the requirements of the written E&SCP (JPA Section M) for earth disturbance activities in accordance with PADEP's Erosion and Sediment Pollution Control Program Manual (PADEP 2012), and execution of dry crossing techniques for all watercourse crossings. Within Bucks County, the limits of disturbance (LOD) have been reduced at the ephemeral watercourse crossing that will be crossed using conventional trenching technique, the crossing time and duration of in-watercourse activities will be limited to 24 hours, a dry crossing method will be utilized, a minimum of 5 feet of cover will be maintained under the watercourse crossing, and erosion and sediment control BMPs will be implemented.

PennEast has prepared a Preparedness, Prevention and Contingency (PPC) Plan (JPA Section L-3B) for the Project. The purpose of this plan is to reduce the probability and risk of a potential spill or release of oil or hazardous materials by PennEast and/or contractor(s) during construction-related activities by providing instruction and expediting spill response and clean-up. An Unanticipated Discovery of Contamination Plan that provides work, investigation and reporting procedures for responding to the unanticipated discovery of contamination in soil, groundwater or sediment during excavation, construction or maintenance activity associated with construction has also been prepared for the Project. PennEast has developed an HDD Inadvertent Returns and Contingency Plan (JPA Section L-3C) for the Project to address preconstruction preparation and establish operational procedures and responsibilities for the prevention, containment and clean-up of inadvertent returns associated with any direction drilling. The development and integration of these plans further protect and maintain water quality through preventative protection and proactive containment and control of any potential releases.

**Section 93.4a(c): *Protection for HQ Waters* - The water quality of HQ Waters shall be maintained and protected, except as provided in §93.4c(b)(1)(iii) (relating to implementation of antidegradation requirements).**

The Project will not impact any HQ Waters in Bucks County.

**Section 93.4a(d): *Protection for Exceptional Value Waters* - The water quality of Exceptional Value Waters shall be maintained and protected.**

The Project will not impact any EV Waters in Bucks County.

### **3.2 Section 93.4c – Implementation of Antidegradation Requirements**

Per this requirement, any activity associated with the waters of the Commonwealth shall do the following:

**Section 93.4c(a)(2): *Existing Use Protection. Endangered or threatened species. If the Department has confirmed the presence, critical habitat, or critical dependence of***



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**endangered or threatened Federal or Pennsylvania species in or on a surface water, the Department will ensure protection of the species and critical habitat.**

PennEast has coordinated with U.S. Fish and Wildlife Service (USFWS) PA Field Office, National Marine Fisheries Service (NMFS), Pennsylvania Fish and Boat Commission (PFBC), Pennsylvania Game Commission (PGC), and Department of Conservation and Natural Resources (DCNR) to identify the potential presence of federal and state listed T&E species within the Project area. Each agency evaluated the potential for the Project to affect T&E species under their jurisdiction. Species-specific and habitat related surveys for threatened and endangered species have been completed where survey access was available. These surveys were completed by qualified biologists in accordance with applicable state or federal survey guidelines between 2015 and 2018.

PennEast has completed surveys for threatened and endangered species in Bucks County. The species that may be impacted by the Project in Bucks County include the northern long-eared bat (*Myotis septentrionalis*; federal threatened), bog turtle, and eastern redbelly turtle. The bog turtle and eastern redbelly turtle are aquatic species that have habitat within or critical dependence on a surface water.

The wetland that was delineated in Bucks County was assessed by a Recognized Qualified Bog Turtle Surveyor (RQBTS). During the Phase 1 assessment, the RQBTS determined that the wetland did not meet minimum criteria for suitable bog turtle habitat. Based on this assessment, no impacts to bog turtles are expected within Bucks County.

Because the Project will be crossing the Delaware River via HDD technologies, no impact to the eastern redbelly turtle is expected for that crossing. PennEast biologists conducted nesting habitat assessments on all workspace within 1,000 feet of the Delaware River, which included one access road and portions of the HDD drilling site. Based on survey results, the PFBC concluded that the Project was not likely to adversely affect the eastern redbelly turtle.

**Section 93.4c(b)(1): Protection of HQ and EV Waters. Point Source Control.**

The Project will not impact any HQ or EV Waters in Bucks County.

**Section 93.4c(b)(2): Protection of HQ and EV Waters. Nonpoint source control. The department will ensure that cost-effective and reasonable best management practices for nonpoint source control are achieved.**

The Project will not impact any HQ or EV Waters in Bucks County.

**3.3 Section 93.6 – General Water Quality Criteria**

**Section 93.6(a): Water may not contain substances attributable to point or nonpoint source discharges in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life. (b)In addition to other**



**substance listed within or addressed by this chapter, specific substances to be controlled include, but are not limited to, floating materials, oil, grease, scum and substances that produce color, tastes, odors, turbidity or settle from deposits.**

Construction of the Project includes temporary short-term impacts during construction to one ephemeral watercourse crossed by the pipeline using conventional construction techniques. Two other watercourses and one wetland will be crossed under using the HDD method, thereby avoiding surface impacts. Temporary impacts on surface waters include disturbance of watercourse banks, removal of riparian vegetation and if watercourse flow is present at the time of construction, the temporary diversion of watercourse flow during dry crossing construction resulting in a temporary increase in turbidity during construction activities. Through the development and implementation of the selected alternatives presented in the Alternative Analysis (JPA Section S), the erosion and sediment control measures provided in the Chapter 102 ESCGP Application and the Project's Mitigation Plan (JPA Section L-4), BMPs will be applied that will minimize the generation of stormwater runoff, minimize the adverse effects of stormwater discharge on ground and surface water resources therefore, protecting the water quality and quantities. Primarily this is accomplished through minimization of workspace, following the requirements of the written E&SCP (JPA Section M) for earth disturbance activities in accordance with PADEP's Erosion and Sediment Pollution Control Program Manual (PADEP 2012), and execution of dry crossing techniques for all watercourse crossings. Within Bucks County, the LOD have been reduced at the ephemeral watercourse crossing that will be crossed using conventional trenching technique, the crossing time and duration of in-watercourse activities will be limited to 24 hours, a dry crossing method will be utilized, a minimum of 5 feet of cover will be maintained under the watercourse crossing, and erosion and sediment control BMPs will be implemented. The Project does not include new point source discharges or include the discharge of substances that would alter the long-term chemical, biological or physical conditions of water resources within the Project area. Consequently, the potential does not exist for the construction of the Project to modify the water use of aquatic life of the resources impacted.

PennEast has prepared a PPC Plan (JPA Section L-3B) for the Project. The purpose of this plan is to reduce the probability and risk of a potential spill or release of oil or hazardous materials by PennEast and/or contractor(s) during construction-related activities by providing instruction and expediting spill response and clean-up. An Unanticipated Discovery of Contamination Plan that provides work, investigation and reporting procedures for responding to the unanticipated discovery of contamination in soil, groundwater or sediment during excavation, construction or maintenance activity associated with construction has also been prepared for the Project. PennEast has developed an HDD Inadvertent Returns and Contingency Plan (JPA Section L-3C) for the Project to address preconstruction preparation and establish operational procedures and responsibilities for the prevention, containment and clean-up of inadvertent returns associated with any direction drilling. The development and integration of these plans further protect and maintain water quality through preventative protection and proactive containment and control of any potential releases.

#### **4.0 Chapter 95 Compliance**

Chapter 95 applies to wastewater treatment requirements. As this Project does not involve the treatment or discharge of wastewater, this chapter is not applicable to the Project.



## **5.0 Chapter 102 Compliance**

According to Chapter 102, “persons proposing or conducting earth disturbance activities to develop, implement and maintain BMPs to minimize the potential of accelerated erosion and sedimentation and to manage post construction stormwater. The BMPs shall be undertaken to protect, maintain, reclaim and restore water quality and the existing and designated use of waters of this Commonwealth” (25 PA Code § 102). PennEast has developed a full E&SCP for the PA Chapter 102 ESCGP Application (JPA Section M). The E&SCP consists of a written narrative and its attached appendices including plan drawings. It was developed to be in accordance with the requirements of 25 PA Administrative Code Chapters 78 and 102, as well as the Clean Streams Law (35 P. S. §§ 691.1001), as amended, utilizing guidelines and BMP information provided in the Erosion and Sediment Control BMP Manual.

The components of Chapter 102 associated with antidegradation requirement have been identified, and Project compliance with these regulatory requirements are discussed in detail below. This document, in combination with the ESCGP Application, provides additional information related to the Chapter 102 antidegradation requirements that the Project proposes for earth disturbance activities.

### **5.1 Section 102.4(b) – Erosion and Sediment Control Requirements**

Section 102.4(b) applies to earth disturbance activities other than agricultural plowing and tilling or animal heavy use areas and requires the implementation and maintenance of E&S BMPs. The development of a written E&SCP is required if one or more of the criteria apply to the earth disturbance activities: total earth disturbance is 5,000 square feet or more, E&SCP is a requirement under other department regulations, and/or earth disturbance activities have the potential to discharge to a water classified as a HQ or EV water under Chapter 93. The Project fulfills all three of the criteria for the development of a written E&SCP as earth disturbance activities are over 5,000 square feet, the development of a written E&SCP is a requirement of the Chapter 105 Joint Permit and Chapter 102 ESCGP Application process, and it is located within HQ and EV watersheds in other counties affected by the Project. In accordance with these requirements, a written E&SCP (JPA Section M) has been prepared by a person trained and experienced in E&S controls, methods, and techniques for the size and scope of this Project.

The E&SCP (JPA Section M) describes the plan and implementation process for minimizing the extent and duration of the earth disturbance, maximizing protection of existing drainage features and vegetation, and minimizing and mitigating soil compaction. The LOD delineated on the E&SCP drawings has been established to restrict construction activities to the minimum area needed to effectively and efficiently construct the proposed facilities. In addition to limiting the extents of the proposed earth disturbance, construction activities have been planned to limit the duration of earth disturbance. Installation of the pipeline will typically proceed from one end of the construction spread to the other in an assembly line or "mainline" fashion. The spacing between the individual crews responsible for each interdependent activity is based on anticipated rate of progress. Construction is sequenced to limit, to the extent possible, the amount and duration of disturbed ROW and open trench sections, to prevent excessive erosion or sediment flow into environmental resource areas.



## **5.2 Section 102.4(b)(6) – Erosion and Sediment Control Requirements**

This requirement is specific to earth disturbance activities for which receiving surface waters are classified as HQ or EV. The Project in Bucks County does not affect HQ or EV waters or watersheds.

## **5.3 Section 102.8(h) – Post Construction Stormwater Management Requirements**

This requirement is specific to earth disturbance activities for which receiving surface waters are classified as HQ or EV. The Project in Bucks County does not affect HQ or EV waters or watersheds.

## **5.4 Section 102.14 – Riparian Buffer Requirements**

Riparian buffers are regulated under 25 Pennsylvania Code Chapter 102.14. Specifically, these regulated areas include 150 feet from perennial and intermittent waters located within EV and HQ watersheds. The Project in Bucks County does not affect HQ or EV waters or watersheds.

# **6.0 Chapter 105 Compliance**

## **6.1 Section 105.14 – Review of Applications**

Per this requirement, any activity associated with the waters of the Commonwealth shall do the following:

**Section 105.14(b)(11): Consistency with state antidegradation requirements contained in Chapters 93, 95 and 102 (relating to WQS; wastewater treatment requirements; and E&S control) and the CWA (33 U.S.C.A. § §1251-1376).**

Section 3.0 of this analysis details the compliance of the Project with the Chapter 93 antidegradation requirements to maintain and protect the existing and designated water use for surface waters impacted by the Project. Chapter 95 applies to wastewater treatment requirements, as this Project does not involve the treatment or discharge of wastewater, this chapter is not applicable to the Project and is discussed in Section 4.0 of this document. Chapter 102 is related to E&S Control Requirements, and the Project compliance with these requirements is detailed above in Section 5.0. The CWA antidegradation requirements and the Project compliance with these requirements are discussed below in Section 7.0. These sections, in combination with specific Project plans, demonstrate that the Project will not cause or contribute to a violation of the state WQS.

## **6.2 Section 105.16 – Environmental, Social and Economic Balancing**

Per this requirement, any activity associated with the waters of the Commonwealth shall do the following:

**Section 105.16c: An application for a permit will not be approved by the Department in the following areas unless the applicant demonstrates and the Department finds that the Project will not have an adverse impact upon the public natural resources:**



- (1) A project located in or within 100 feet of a watercourse or body of water that has been designated as a Natural or State wild or scenic river in accordance with the Wild and Scenic Rivers Act of 1968 (16 U.S.C.A § § 1271 – 1287) or the Pennsylvania Scenic Rivers Act ( 32 P.S. § § 820.21 – 820.29).
- (2) A project located in or within 100 feet of a Federal wilderness area designated in accordance with the Wilderness Act (16 U.S.C.A § § 1131 – 1136) or the Federal Eastern Wilderness Act of 1975 (16 U.S.C.A § § 1132.)
- (3) A project located within an area which serves as a habitat of a threatened or endangered species protected by the Endangered Species Act of 1973 (7 U.S.C.A. § 136; 16 U.S.C.A § § 4601-9, 460k, 668dd, 715a, 1362, 1371, 1372, 1402 and 1531 – 1543) or for a species which has been designated as a threatened or endangered species under the Wild Resource Conservation Act (32 P.S. § § 5301 – 5314), 30 Pa.C.S. (relating to the Fish and Boat Code) or 34 Pa.C.S. (relating to the Game and Wildlife Code).
- (4) A project located in waters designated as exceptional value in Chapter 93 (relating to water quality standards).

The proposed Project would be constructed in compliance with applicable specifications, federal regulations and guidelines, and Project-specific permit conditions. PennEast selected the proposed pipeline route to avoid and minimize effects to environmental features to the greatest extent practicable while maintaining the economic and safety standards of the Project. Details regarding the Project's potential impacts and applicable avoidance and minimization measures are provided in JPA Section L-3 and JPA Section S, respectively.

### **6.3 Section 105.18a – Permitting of structures and activities in wetlands.**

**Section 105.18(a)(4): The project will not cause or contribute to a violation of an applicable state WQS.**

Section 3.0 of this analysis details the compliance of the Project with the Chapter 93 antidegradation requirements to maintain and protect the existing and designated water use for surface waters impacted by the Project. Chapter 95 applies to wastewater treatment requirements, and as this Project does not involve the treatment or discharge of wastewater, this chapter is not applicable to the Project and is discussed in Section 4.0 of this document. Chapter 102 is related to E&S Control Requirements, and the Project compliance with these requirements is detailed above in Section 5.0. The CWA antidegradation requirements and the Project compliance with these requirements are discussed below in Section 7.0. These sections, in combination with specific Project plans, demonstrate that the Project will not cause or contribute to a violation of the state WQS.

**Section 105.18a(a)(6):The cumulative effect of this project and other projects will not result in the impairment of the Commonwealth's exceptional value wetland resources.**

PennEast has evaluated and routed the proposed pipeline facilities and work areas to avoid and minimize effects on wetlands to the greatest extent practicable while maintaining engineering standards and safety. As part of the overall pipeline route evaluation process, PennEast conducted a thorough routing study and CIA of possible routes. Then pipeline locations were field evaluated for constructability and initial





aquatic resource identification. Watercourses and wetlands were identified and surveyed to allow PennEast to shift the pipeline ROW around resources where possible. Due to the linear nature of the Project and the linear nature of aquatic resources, coupled with physical constraints such as roadways and steep terrain, not all impacts to aquatic resources could be avoided. Impacts were minimized by shifting to cross wetlands and watercourses at their narrowest practicable point, co-locating with other ROWs and previously-disturbed areas, and reducing workspace within wetlands, floodways, and riparian areas to the extent practicable. Through the final design engineering process and environmental avoidance activities, the Revised PA Route, was developed as the best (most cost effective and least environmental impact) version of the combined alternatives evaluated.

PennEast prepared a Cumulative Impacts Analysis (CIA) for the Project, which is provided in JPA Section L-3F. The CIA evaluates the cumulative impact of the Project and other potential or existing projects, and if impacts may result in a major impairment of the wetland resources, in consideration of interrelated wetland areas (inclusive of adjacent watercourses), affected by the Project. The CIA also has been prepared to comply with the requirements of §105.18a(a)(6) and 105.18a(b)(6) to evaluate if the effect of the Project when considered in combination with the impacts of other potential or existing projects, including consideration of interrelated wetland areas (inclusive of adjacent watercourses), may result in the impairment of the Commonwealth's EV wetland resources or a major impairment of the Commonwealth's other wetland resources, respectively.

The CIA concludes that the implementation of the Project and other potential or existing projects evaluated within the cumulative impacts assessment area (CIAA) will result in the aggregate cumulative areal extent of permanent wetland impact of approximately 7.01 acres, and the cumulative permanent watercourse impact of approximately 193 linear feet. These impacts will result in only a minor loss of wetlands or waters including 0.01 acres of palustrine emergent (PEM) wetland and 31 linear feet of watercourses that would be affected by the installation or in-kind replacement of permanent culverts. Additionally, within the CIAA, these permanent impacts will include approximately 7.00 acres of permanent conversion of palustrine forested (PFO) and palustrine scrub shrub (PSS) wetland cover types to PEM cover type within a 30-foot wide maintained ROW; however, there will be no loss of wetland acreage within the maintained ROW. With the implementation of each potential or existing project in compliance with BMPs and permit conditions, the disturbances to wetlands and watercourses are or are anticipated to be minor and temporary, and will result in no more than minimal individual and cumulative adverse environmental effects.

Based on these aggregate (i.e., cumulative) impacts of the Project and other potential or existing projects evaluated within the CIA, the wetland impacts associated with all the Chapter 105 applications related to this Project, in consideration of interrelated wetland areas (inclusive of adjacent watercourses), will not result in the impairment of the Commonwealth's EV wetland resources.

**Section 105.18a(b)(6): The cumulative effect of the project and other projects will not result in the major impairment of this Commonwealth's wetland resources.**

There will be no permanent wetland loss from construction of the Project in Bucks County. Using the HDD crossing method, PennEast will avoid surface impacts to the single wetland that is crossed by the Project in Bucks County.



As stated above, PennEast prepared a CIA for the Project, which is provided in JPA Section L-3F. Based on the aggregate (i.e., cumulative) impacts of the Project and other potential or existing projects evaluated within the CIA, the wetland impacts associated with all the Chapter 105 JPAs related to this Project, in consideration of interrelated wetland areas (inclusive of adjacent watercourses), will not result in the major impairment of the Commonwealth's wetland resources.

## **7.0 Clean Water Act Compliance**

The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) was reorganized and expanded in 1972. With this revision, the Act is referred to as the CWA. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical and biological integrity of the nation's waters so that they can support the protection and propagation of fish, shellfish and wildlife, as well as recreation in and on the water (33 U.S.C. § 1251 et seq.).

### **7.1 Section 301 – Effluent Limitations**

Section 301 of the CWA sets standards and enforcement for effluent limitations related to point source discharges and outlines state involvement in setting state standards and requirements for effluent of pollutants in point source discharges. As stated above, the construction activities in Bucks County are associated with the PennEast Mainline Pipeline which will not generate any point source discharges. Non-point discharges are related to precipitation induced sources such as rainfall and snow melt runoff that contact the earth disturbance areas of the Project during the construction stage.

PennEast will also discharge hydrostatic test water associated with the pressure testing of the pipelines prior to commissioning. The discharge locations will be located outside of HQ and EV watersheds per PADEP's PAG-10 General Permit requirements, and will be sited in well-vegetated upland locations away from floodways and wetlands in other watersheds. The hydrostatic test water will be discharged into a haybale structure as shown in the E&SCP (JPA Section M) and will be allowed to infiltrate into the ground. Therefore, the hydrostatic test discharges would also not be point source discharges. PennEast will monitor hydrostatic test discharges and will test for the parameters outlined in the PAG-10 General Permit.

### **7.2 Section 302 – Water Quality Related Effluent Limitations**

Section 302 of the CWA is related to discharges of pollutants from a point source or group of point sources where effluent limitations would still not attain the water quality for a specific portion of the navigable water and includes alternative effluent control strategies and outline permit requirements. The Project does not include any discharge of toxic pollutants or point source discharges, therefore this section is not applicable to this Project.

### **7.3 Section 311 – Oil and Hazardous Substance Liability**

This portion of the CWA is related to the policy against the discharge of oil or hazardous substances, implementation of a higher standard of care, and outlines penalties, including civil penalties. PennEast has prepared an PPC Plan (JPA Section L-3B) for the Project. The purpose of this plan is to reduce the





probability and risk of a potential spill or release of oil or hazardous materials by PennEast and/or contractor(s) during construction-related activities by providing instruction and expediting spill response and clean-up. An Unanticipated Discovery of Contamination Plan that provides work, investigation and reporting procedures for responding to the unanticipated discovery of contamination in soil, groundwater or sediment during excavation, construction or maintenance activity associated with construction has also been prepared for the Project. PennEast has developed an HDD Inadvertent Returns and Contingency Plan (JPA Section L-3C) for the Project to address preconstruction preparation and establish operational procedures and responsibilities for the prevention, containment and clean-up of inadvertent returns associated with any direction drilling. The development and integration of these plans further protect and maintain water quality through preventative protection and proactive containment and control of any potential releases to comply with the CWA requirements.

#### **7.4 Section 316 – Thermal Discharges**

Effluent limitation for the control of thermal components of any discharge for point sources is covered in Section 316 of the CWA which outlines that effluent limitations need to be *“more stringent than necessary to ensure the protection and propagation of the balance, indigenous population of shellfish, fish and wildlife in and on the body of water into which the discharge is to be made.”* There are no proposed increases in stormwater runoff associated with the pipeline ROW. All earth disturbances associated with the pipeline ROW will be stabilized with native meadow vegetation to promote infiltration to assist in mitigating temperature rises. Therefore, the Project’s post-construction impact on thermal components will not alter aquatic resources. There are no long-term point source discharges associated with the Project, thereby eliminating any possible discharge that would impact thermal components of watercourses.

#### **7.5 Section 401 – Permits and Licenses**

Section 401 of the CWA is related to certifications required for compliance with applicable requirements, application, and procedures, and license suspension for any applicant for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the state in which the discharge originates. This Project received a Section 401 Water Quality Certification from the PADEP on February 7, 2017 in compliance with this requirement.

#### **7.6 Section 402 – National Pollutant Discharge Elimination System**

NPDES requirements are contained in Section 402 of the CWA for obtaining permits to discharge any pollutants. This section provides provisions for each state to administer its own permit program for discharges into navigable waters. Pennsylvania has an approved state program regulated under PA Chapter 92a. PennEast will prepare the necessary Notice of Intent for the discharge of hydrostatic discharge water for coverage under PADEP PAG-10 NPDES General Permit for Discharge from Hydrostatic Testing of Tanks and Pipelines in compliance with this Section and Chapter 92a.



### **7.7 Section 404 – Permits for Dredged or Fill Material**

Section 404 of the CWA regulates the permits for dredged or fill material discharged into navigable waters. The US Army Corps of Engineers (USACE) and the PADEP administer the Section 404 Certification process in Pennsylvania through the JPA Process. The requirements of this section and related USACE and PADEP program have been included in Chapter 105 Dam Safety and Waterway Management JPA for the Project. The Project will obtain all necessary permits under this section from USACE and PADEP of area under the jurisdiction of the agencies prior to commencement of construction. Hence, the Project is in compliance with the requirements of this section of the CWA.



## **8.0 References**

PADEP 2003. Water Quality Antidegradation Implementation Guidance. Document Number 391-0300-002. PADEP, Bureau of Water Supply and Wastewater Management. Available online at: <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-47704/391-0300-002.pdf>

PADEP 2012. Erosion and Sediment Pollution Control Program Manual. Technical Guidance Number 363-2134-008. PADEP, Bureau of Water Supply and Wastewater Management. Available online at: <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-88925/363-2134-008.pdf>

25 Pa. Code § 93. Water Quality Standards.

25 Pa. Code § 95. Wastewater Treatment Requirements.

25 Pa. Code § 102. Erosion and Sediment Control.

33 U.S.C. § 1251 et seq. Federal Water Pollution Control Act.