



PennEast Pipeline Company, LLC

PENNEAST PIPELINE PROJECT

*Multi-Permit Application
for
Freshwater Wetlands Individual Permit
Special Activity Transition Area Waiver
Letter of Interpretation
Water Quality Certificate
Flood Hazard Area Individual Permit
Flood Hazard Hardship Exception Request
Flood Hazard Area Verification*

ATTACHMENT G-2 – N.J.A.C. 7:7A Compliance Statement



*Submitted to:
New Jersey Department of Environmental Protection
Division of Land Use Regulation*

August 2019

**NEW JERSEY FRESHWATER WETLANDS PROTECTION ACT
COMPLIANCE STATEMENT**

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ACRONYM LIST

AIMP	Agricultural Impact Minimization Plan
Algonquin	Algonquin Gas Transmission, LLC
APE	area of potential effects
Bcf/d	Billion cubic feet per day
BMPs	Best Management Practices
CAA	Clean Air Act
Certificate	Certificate of Public Convenience and Necessity
CWA	Clean Water Act
DEIS	Draft Environmental Impact Statement
DRBC	Delaware River Basin Commission
EIA	Energy Information Administration
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FERC	Federal Energy Regulatory Commission
FERC Application	Federal Energy Regulatory Commission Application for Certificate of Public Convenience and Necessity and Related Authorizations
FERC <i>Plan</i>	Federal Energy Regulatory Commission <i>Upland Erosion Control, Revegetation, and Maintenance Plan</i>
FERC <i>Procedures</i>	Federal Energy Regulatory Commission <i>Wetland and Waterbody Construction and Mitigation Procedures</i>
FHACA	Flood Hazard Area Control Act
HDD	horizontal directional drill
Highlands Council	Highlands Water Protection and Planning Council
HWPPA	Highlands Water Protection and Planning Act
HPP	Habitat Protection Plan
IP	Individual Permit
LOI	Letter of Interpretation
LSRP	Licensed Site Remediation Professional
MP	milepost
NEPA	National Environmental Policy Act
NGA	Natural Gas Act
NHPA	National Historic Preservation Act
NJDEP	New Jersey Department of Environmental Protection
NJHPO	New Jersey Historic Preservation Office
OPRA	Open Public Records Act
PA	Programmatic Agreement
PA4	Rural Planning Area
PA4B	Rural/Environmentally Sensitive Planning Area
PA5	Environmentally Sensitive Planning Area
PEM	palustrine emergent
PennEast	PennEast Pipeline Company, LLC
PFO	palustrine forested
Project	PennEast Pipeline Project
PSE&G	Public Service Electric and Gas
PSS	palustrine scrub/shrub
ROW(s)	Right(s)-of-Way
SESC	Soil Erosion and Sediment Control
SOP	Standard Operating Procedures

SPCC	Spill Prevention, Control, and Countermeasure
SR/NRHP	New Jersey or National Register of Historic Places
State Plan <i>Strategies</i>	New Jersey State Development and Redevelopment Plan <i>Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights of Way in NJ</i>
Tcf	Trillion cubic feet
Texas Eastern	Texas Eastern Transmission, LP
Transco	Transcontinental Gas Pipe Line Company, LLC
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

1.0 COMPLIANCE STATEMENTS

1.1 N.J.A.C. 7:7A-8.3 Special Activity Transition Area Waiver

Requirement: (e) The Department shall issue a special activity transition area waiver for linear development if there is no feasible alternative location for the linear development. In considering alternative locations, the Department shall consider the factors at (c) above and the following:

- 1. An alternative location shall be considered feasible when the proposed linear development can be located outside of the transition area by:***
 - i. Modifying the route of the linear development to avoid or reduce impacts to freshwater wetlands and transition areas; or***
 - ii. Reducing the width of the linear development; and***
- 2. An alternative shall not be excluded from consideration merely because it includes or requires an area not owned by the applicant which could reasonably have been or be obtained or used to fulfill the basic purpose of the proposed activity.***

Compliance: The Project is a linear development that includes disturbance of both freshwater wetlands and transition areas. As provided for at 7:7A-8.1(a)5, each general permit authorization, individual freshwater wetlands permit, and mitigation proposal shall include a limited transition area waiver to allow access to the authorized activity. Therefore, a special activity transition area waiver for linear development is requested for disturbance of transition areas not associated with wetlands that will be disturbed under the individual permit requested by PennEast.

Because PennEast has limited or no access to areas outside of Project workspace, wetlands that will not be disturbed under the individual permit have generally not been field delineated. Moreover, NJDEP does not have explicit authorization to access off-site properties to verify the delineation of any wetland not located within the workspace.

PennEast conducted Open Public Records Act (OPRA) file reviews to obtain information regarding Letters of Interpretation (LOI) for properties along the proposed route. Some of these LOIs are no longer valid and neither PennEast nor NJDEP can rely on NJDEP guidance regarding determining the location of any additional off-site wetlands. NJDEP guidance has been to use the best available data to determine the extent of transition areas associated with off-site wetlands. In response to that guidance, PennEast has supplemented the OPRA LOI data with NJDEP's Wetlands GIS data from Land Use/Land Cover 2012 Update, Edition 20150217 (Land_lu_2012_wetland) to indicate the approximate location of potential off-site wetlands. Transition areas assigned to these potential off-site wetlands have been assigned based on the criteria provided at N.J.A.C. 7:7A-3.2, Classification of freshwater wetlands by resource value.

As the location of potential off-site wetlands cannot be definitively determined, it is impossible to determine the limits of transition areas associated with off-site wetlands, so it is not possible to simply reduce workspace or define alternatives so as to avoid these transition area disturbances.

A special activity transition area waiver for linear development is requested because there is no feasible alternative location for the linear development that would avoid these transition areas.

A comprehensive Alternatives Analysis, provided as Attachment K, was developed that considered the proposed Project's design requirements while recognizing the relative physical location of the pipeline delivery and connection points including:

- The Gilbert Lateral to the Gilbert Electric Generating Station where it will interconnect with Gilbert Power, LLC (f/k/a NRG Rema, LLC), and Elizabethtown Gas in Holland Township, Hunterdon County;
- The Lambertville Lateral to interconnect with the Algonquin Gas Transmission, LLC (Algonquin) and Texas Eastern Transmission, LP (Texas Eastern) pipelines in West Amwell Township, Hunterdon County; and
- A terminal delivery point with Transcontinental Gas Pipe Line Company, LLC (Transco) pipeline in Hopewell Township, Mercer County.

The Project purpose requires the pipeline to meet these delivery points, which in turn dictates a Project corridor with a defined northwest-southeast orientation connecting the delivery point in Holland Township (Gilbert Electric Generating Station) to the delivery point in West Amwell Township (Algonquin and Texas Eastern pipelines) to the delivery point in Hopewell Township (Transco pipeline). Within this defined pipeline corridor, the Project is collocated to the maximum possible extent with existing electric transmission rights-of-way (ROWS) that run in the same northwest to southeast direction as the Project requires. Collocation with existing utilities is consistent with NJDEP's long-standing policy articulated in NJDEP's December 2011 Large Linear Infrastructure Project Guidance Document as well as specific requests from Mercer County and Hopewell Township to reroute the preferred pipeline route to maximize opportunities for collocation with other utilities in order to minimize impacts to environmental resources. Both natural resources and human environmental impacts were considered in examining alternative routes, including various features associated with the built environment.

In compliance with the NJDEP Freshwater Wetlands Protection Act rules, the proposed route avoids or minimizes impacts to freshwater wetlands and transition areas, as well as flood hazard areas and associated riparian zones, to the maximum extent practicable. Given its proximity to the Delaware River and its tributaries in Hunterdon and Mercer Counties, the Project corridor contains a fairly dense network of streams and associated wetlands and riparian zones. Shifting the Project to the west or to the east within the defined corridor would not have less adverse impact on the aquatic ecosystem or avoid freshwater wetlands or State open waters and would merely substitute similar environmental consequences for those associated with the proposed route. Additionally, within wetland areas and wetland transition areas, threatened and endangered species, and cultural and historic resources were considered as part of the avoidance and minimization process.

1.2 N.J.A.C. 7:7A-10.1 General Provisions for Individual Permits

Requirement: (a) A regulated activity or project subject to an individual permit shall meet the applicable requirements below:

- 1. Requirements for all individual permits at N.J.A.C. 7:7A-10.2;***
- 2. For a non-water dependent activity, the requirements at N.J.A.C. 7:7A-10.3, except if the activity disturbs only State open waters that are not special aquatic sites; and***
- 3. For a non-water dependent activity in an exceptional resource value wetland or trout production water, the requirements at N.J.A.C. 7:7A-10.4.***

Compliance: Compliance with N.J.A.C. 7:7A-10.2, N.J.A.C. 7:7A-10.3, and N.J.A.C. 7:7A-10.4 is addressed in the appropriate sections of this Compliance Statement.

1.3 N.J.A.C. 7:7A-10.2 Standard Requirements for all Individual Permits

Requirement: *(b) The Department shall issue an individual freshwater wetlands or open water fill permit only if the regulated activity:*

1. *Has no practicable alternative which would meet the requirements at (b)1i and ii below:*
 - i. *The alternative would have a less adverse impact on the aquatic ecosystem or would not involve a freshwater wetland or State open water; and*
 - ii. *The alternative would not have other significant adverse environmental consequences, that is, it shall not merely substitute other significant environmental consequences for those attendant on the original proposal;*

Compliance: A comprehensive Alternatives Analysis, provided as Attachment K, was developed that considered the proposed Project's design requirements while recognizing the relative physical location of the pipeline delivery and connection points including:

- The Gilbert Lateral to the Gilbert Electric Generating Station where it will interconnect with Gilbert Power, LLC (f/k/a NRG Rema, LLC), and Elizabethtown Gas in Holland Township, Hunterdon County;
- The Lambertville Lateral to interconnect with the Algonquin Gas Transmission, LLC (Algonquin) and Texas Eastern Transmission, LP (Texas Eastern) pipelines in West Amwell Township, Hunterdon County; and
- A terminal delivery point with Transcontinental Gas Pipe Line Company, LLC (Transco) pipeline in Hopewell Township, Mercer County.

The Project purpose requires the pipeline to meet these delivery points, which in turn dictates a Project corridor with a defined northwest-southeast orientation connecting the delivery point in Holland Township (Gilbert Electric Generating Station) to the delivery point in West Amwell Township (Algonquin and Texas Eastern pipelines) to the delivery point in Hopewell Township (Transco pipeline). Within this defined pipeline corridor, the Project is collocated to the maximum possible extent with existing electric transmission ROWs that run in the same northwest to southeast direction as the Project requires. Both natural resources and human environmental impacts were considered in examining alternative routes, including various features associated with the built environment.

In compliance with the NJDEP Freshwater Wetlands Protection Act Rules, the proposed route avoids or minimizes impacts to Freshwater Wetlands and transition areas, as well as flood hazard areas and associated riparian zones, to the maximum extent practicable. Given its proximity to the Delaware River and its tributaries in Hunterdon and Mercer Counties, the Project corridor contains a fairly dense network of streams and associated wetlands and riparian zones. Shifting the Project to the west or to the east within the defined corridor would not have less adverse impact on the aquatic ecosystem or avoid freshwater wetlands or State open waters and would merely substitute similar environmental consequences for those associated with the proposed route. Additionally, within wetland areas and wetland transition areas, threatened and endangered species, and cultural and historic resources were assessed as part of the avoidance and minimization process.

The conclusion substantiated in the Alternatives Analysis is that there is no practicable alternative to the proposed pipeline route that would have less adverse impact on the aquatic ecosystem or would not involve a freshwater wetland or State open water or a practicable alternative that would not have other adverse environmental impacts.

Requirement: 2. Will result in the minimum feasible alteration or impairment of the aquatic ecosystem including existing contour, vegetation, fish and wildlife resources, and aquatic circulation of the freshwater wetland and hydrologic patterns of the HUC 11 in which the activity is located;

Compliance: PennEast designed its Project to provide an environmentally sound, direct and flexible path for transporting natural gas produced in the Marcellus Shale production region in northern Pennsylvania to growing natural gas markets principally in New Jersey while resulting in the minimum feasible alteration or impairment of the aquatic ecosystem.

Compliance with N.J.A.C. 7:7A-10.2(b)2 is addressed in two parts as detailed below.

1. Minimization of impacts to aquatic ecosystems and hydrologic patterns:

- 1) Construction of the proposed Project route will result in the minimum feasible alteration or impairment of the affected aquatic ecosystems and the hydrologic patterns of the affected HUC 11s. The Project falls within four (4) HUC 11s: (1) Hakhokake Creek / Harihokake Creek / Nishisakawick Creek; (2) Lokatong Creek / Wickecheoke Creek; (3) Alexauken Creek / Moore Creek / Jacobs Creek; and (4) Stony Brook. As detailed below, this conclusion is based on a review of alternatives to the Project as proposed, utilization of trenchless technology construction methods, constraints on the extent and use of Project workspace in certain sensitive areas, adherence to applicable timing restrictions, consideration of the Best Management Practices (BMPs) utilized during construction to avoid or minimize adverse impacts associated with soil disturbance and proposed post-construction restoration.

Alternatives

PennEast has completed an Alternatives Analysis that examined each wetland crossing to determine if there were practicable alternatives that would avoid or reduce adverse impact on these aquatic ecosystems. That Alternatives Analysis is provided herewith as Attachment K.

In addition, PennEast applied to the Federal Energy Regulatory Commission (FERC) for a Certificate and Related Authorizations on September 24, 2015 (FERC Application) for the Project. FERC conducted an environmental review of the Project pursuant to the National Environmental Policy Act (NEPA), including the preparation of a Final Environmental Impact Statement (FEIS) which FERC issued on April 7, 2017. Section 3 of the FEIS provides a summary of FERC's evaluation of alternatives to the Project, including the no-action alternative, system alternatives, major route alternatives, and minor route variations. The FEIS discusses FERC's evaluation of four major route alternatives to the proposed pipeline route and 83 route variations (39 of which were integrated into the proposed route).

Attachment K demonstrates that the basic purpose of the Project cannot reasonably be accomplished using one or more other routes in the general region and Project corridor, as defined by the Project delivery points, that would avoid or reduce the adverse impact on the aquatic ecosystems in New Jersey that are affected by the Project; and no practicable alternatives have been identified that will result in less alteration or impairment of the affected aquatic ecosystems and the hydrologic patterns of the affected HUC 11s.

Workspace Design

For a linear Project, the examination of alternatives enables the identification of a route that will minimize impacts. Once that route is identified, the careful design of the Project along that route further minimizes adverse impacts. The workspace has been minimized to the maximum extent practicable while protecting worker safety during construction and while limiting the duration of construction related disturbance.

The FERC has published standards for workspace associated with natural gas pipelines. These standards are provided in the FERC's *Plan* and *Procedures* published by the FERC's Office of Energy Projects in May 2013 and identify baseline requirements for wetland crossings. These requirements include:

- Route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing ROW, route the new pipeline in a manner that minimizes disturbance to wetlands;
- Limit the width of the construction ROW to 75 feet or less; and
- Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit compliance with USDOT regulations.

The design of the Project meets or exceeds all the requirements documented in the FERC's *Procedures*.

To further identify opportunities to avoid and minimize impacts to regulated resources, PennEast engaged in a robust pre-application process with the New Jersey Department of Environmental Protection (NJDEP), specifically the Office of Permit Coordination and Environmental Review. This process included 31 in-person meetings, 30 conference calls, and 65 pieces of correspondence over a period of 5 years. These numerous interactions provided NJDEP with the opportunity to examine the route and provide feedback and guidance based upon their expertise. Consistent with NJDEP's long-standing policy, articulated in NJDEP's December 2011 Large Linear Infrastructure Project Guidance Document, NJDEP's primary suggestion for pipeline routing focused on collocation with overhead electric ROW and collocation within roadways to avoid and minimize impacts to regulated resources.

PennEast incorporated additional design requirements to minimize the extent and duration of Project-related disturbance on wetlands and waterbodies. These additional measures include:

- Incorporation of trenchless wetland crossings to the maximum extent feasible when site conditions are suitable, safe working conditions can be met, and the pipeline ROW alignment permits. Trenchless technologies include:
 - Conventional Boring methods for pipeline installations that are generally limited to less than 300 feet in length.
 - Guided Boring techniques which allow pipeline installations spanning up to about 500 feet in length.
 - Horizontal Directional Drill (HDD) which enable subsurface crossings under multiple wetlands/waterbodies and existing underground and surface infrastructure such as roads, rail roads and utility lines, resulting in little to no

surface disturbance. Such pipeline installations generally range from 2,500 to 4,500 feet in length.

- Direct Pipe trenchless methods. In most instances, direct pipe trenchless construction, like HDD, allows subsurface crossings under multiple wetlands/waterbodies, resulting in little to no surface disturbance. The direct pipe trenchless method generally is used for lengths up to 1,500 feet.
- Access roads and vehicle crossings are configured to utilize existing driveways, farm roads or disturbed areas and to avoid entering undisturbed wetlands to the maximum extent practicable. Construction vehicles typically follow the pipeline alignment including crossing wetlands as shown in the typical crossings depicted on the Project plans. Attachment E-1 of this application provides details regarding the equipment crossing method proposed at each wetland crossing.
- Minimizing proposed workspace within wetlands. When trenchless construction cannot be implemented because site conditions are not suitable or because providing sufficient workspace for a trenchless approach would result in more resource impacts than would result from open-cut construction, then the proposed open-cut workspace is configured to minimize impacts to wetlands and State open waters. PennEast’s proposed Project incorporates 60- to 75-foot wide workspace within the limits of the wetlands and streams and 75-foot through wetland buffers and riparian zones to the maximum extent practicable. In comparison to the standard 100-foot wide construction area, a 60-foot wide construction workspace represents a 40% reduction in construction impacts and a 75-foot wide construction workspace represents up to a 25% reduction in construction impacts. The guiding principles for the workspace and operational easement that will be applied to NJDEP regulated resources are provided in Table 1.2-1.

The Alternatives Analysis provided herewith as Attachment K identifies the result of these workspace minimization efforts at each wetland crossing.

Table 1.3-1 Construction Workspace and Operational Easement Widths in Wetlands and Transition Areas		
Regulated Resource	Construction Workspace	Operational Easement
Open Cut		
PFO Wetland	60 feet	30 feet
PFO Transition Area	75 feet ¹	30 feet
PEM/PSS Wetland	75 feet	10 feet
PEM/PSS Transition Area	75 feet ¹	30 feet
AgMod Wetlands	75 feet	10 feet
AgMod Transition Area	FERC certificated corridor/land acquisition	10 feet
Bore		
Forested Wetland/Transition Area	30 feet ²	30 feet
Unforested Wetland/Transition Area	30 feet ²	10 feet
HDD		
Any Wetland/Transition Area	No disturbance	No disturbance
Notes:		
1. If the transition area or riparian zone is actively disturbed, the workspace will be at the width that the FERC certificated corridor or land acquisition allows.		
2. May be greater than 30 feet to support HDD pullback areas.		

Best Management Practices

All construction activities that disturb soils have the potential to adversely affect those soils. Potential soil impacts can result from wind erosion, soil compaction, reduction of soil fertility by mixing of soils layers, and disruption of drainage patterns.

Specialized construction methods are used to avoid or mitigate soil impacts. Temporary soil impacts are limited to the pipeline construction areas and will be mitigated through implementation of BMPs. BMPs emphasize the use of time-tested erosion control techniques to reduce the potential of erosion and the use of particular control measures as needed. Anticipated erosion control measures include slope breakers, trench breakers, sediment barriers, and stabilizing vegetation.

Movement of heavy equipment is a well-known potential cause of soil compaction and erosion. Accordingly, heavy equipment will be kept to public roadways, laydown areas, access roads and areas within delineated Project boundaries.

The methods used to minimize impacts on soils during construction include, but are not limited to:

- Minimization of areas of disturbance;
- Minimization of the duration that soils remain un-vegetated and exposed to erosive forces;
- Limit pulling of tree stumps and grading activities to a width of 10 feet in wetlands and waterbodies. Do not grade or remove stumps or root systems from the balance of the construction workspace in wetlands unless Chief Inspector and Environmental Inspector determine that such removal is required to address a safety-related condition;
- Installation and maintenance of erosion and sediment control measures to reduce the velocity of runoff and divert runoff away from critical areas;
- Implementation of final grading and reestablish vegetation promptly; and
- Maintenance of erosion and sediment controls, as necessary, and inspection revegetation of post construction areas until final stabilization is achieved.

Project BMPs have been planned and will be implemented to minimize the extent and duration of soil disturbance, to protect existing drainage features and vegetation, minimize soil compaction, and minimize increases in runoff. Additional information regarding Project-related BMPs has been submitted herewith in PennEast's Project-specific Soil Erosion and Sediment Control (SESC) Plan (Attachment E). This SESC Plan will be reviewed and approved by the Mercer and Hunterdon County Soil Conservation Districts prior to the commencement of Project construction.

The following BMPs for soils protection will be implemented:

- Prior to commencing work, field personnel will be trained to assure the proper implementation of BMPs, compliance with permit conditions, safety standards, and proper emergency notifications.
- The extent and duration of earth disturbance will be limited to that which is absolutely necessary to construct the proposed facility.

- Excavated topsoil and sub-soils will be segregated, where appropriate, and returned as nearly as possible to their original soil horizon.
- Earthen waterbars (slope breakers) will be used on hillside locations to divert runoff to vegetated areas to slow flows and help minimize erosion and sedimentation.
- Trench plugs to inhibit channelized flow, which may occur in the trench when open during construction. Trench plugs also prevent the trench from draining wetlands and or changing the hydrology.
- Rock construction entrances to control sediment tracking from the construction site at egress points.
- Erosion control blankets will be placed on disturbed areas within 50 feet of streams and wetlands and on slopes steeper than 3:1.
- Sediment barriers, silt fences, and J-hooks will be deployed at the limits of construction, as specified on the Project's SESC Plan view drawings. Rock filter outlets are to be installed at low points of silt fence where overtopping damage is apparent.
- While PennEast does not anticipate encountering acid producing soils during Project implementation, if acid producing soils are encountered during construction, BMPs will be implemented as recommended in the New Jersey FHACA Technical Manual.
- Disturbed areas are to be temporarily stabilized in accordance with regulatory agency requirements. Upon completion of construction activity, disturbed areas are to be permanently stabilized.
- Liquids shall be transferred and refueling shall only occur in locations that are at least 100 feet from all waterbodies and wetlands.

Based on the foregoing, no significant adverse impacts to soils are anticipated to result from the proposed Project.

Post-Construction Restoration

Restoration will commence as soon as practicable following completion of backfilling and testing.

All Project related wetland and riparian zone disturbance will be conducted in accordance with FWPA and FHACA rules and all specific requirements contained in permits to be issued by NJDEP. Forested wetland and riparian zones will be harvested using standard forestry techniques and equipment. In addition, as detailed below, clearing and restoration activities within areas of temporary disturbance will be conducted in a manner that will accelerate the successful reestablishment of wetland functions and values.

The Contractor will preserve the root mat of existing vegetation within the temporary workspace. All stumps will be cut flush or close to the ground surface. The Contractor will grind or chip slash from within the workspace and use the wood chips as a soil amendment within these areas. Wood chips will not be spread more than 3 inches thick over the existing ground surface. Immediately following completion of the workspace clearing and tree harvesting within the ROW Wetland and Riparian Zone Restoration Area, the Contractor will prepare areas with disturbed soils, apply the appropriate seed mixtures, and mulch the disturbed areas in accordance with Attachment E-3, Wetland and Riparian Restoration Plans. The seeding and restoration of herbaceous wetland and riparian zones will effectively restore the affected wetland and riparian zones while allowing PennEast to

maintain compliance with Federal and State regulations pertaining to vegetation within the ROW. It is anticipated that most of the pre-disturbance to ecological functions of on-site wetlands and riparian zones will be restored. While the characteristic plant community structure on-site will be altered (i.e., forested to herbaceous), the offsite wetland and riparian zone mitigation will result in the replacement of an equivalent area of forested wetland and forested riparian zones and an overall increase in wetland and riparian zone functions and values.

Following restoration and clean up, PennEast will monitor the disturbed areas to maintain erosion control measures as required pursuant to applicable regulation.

2. Minimization of impacts to fish and wildlife resources:

Construction of the proposed Project is also anticipated to result in the minimum feasible alteration or impairment of fish and wildlife resources. PennEast has taken specific steps to protect fish and wildlife resources.

Extensive field investigations have identified habitat for particular species along the Project route. That information was then used in the design phase to minimize or avoid rare, threatened and endangered species habitats as documented in the Alternatives Analysis provided in Attachment K. Additional protective measures will be implemented as identified in PennEast's Habitat Protection Plan (HPP) submitted as Attachment J-1.

Additional fish and wildlife resources protections are proposed in the form of timing restrictions associated with various construction activities. Timing restrictions, detailed in the compliance statement for N.J.A.C. 7:7A-10.2(b)3, minimize impacts during critical lifecycle activities.

Requirement: 3. Will not destroy, jeopardize or adversely modify a present or documented habitat for threatened or endangered species; and shall not jeopardize the continued existence of a local population of a threatened or endangered species;

Compliance: The proposed Project will disturb wetlands and State open waters, which provide suitable and documented habitat for NJ State-listed threatened and endangered wildlife species; however, through the implementation of timing restrictions, avoidance and minimization efforts, restoration of temporarily disturbed areas, and offsite mitigation efforts as appropriate, the resultant Project will not destroy, jeopardize or adversely modify a present or documented habitat for potential threatened or endangered species, and shall not jeopardize the continued existence of a local population of a potential threatened or endangered species.

Wetland locations mapped as suitable habitat for, or with documented species occurrences of NJ State-listed endangered and threatened species, as well as State Open Waters with documented occurrences of wood turtle and/or long-tailed salamander, are identified in the Environmental Report in Attachment G-1 and further described in the HPP in Attachment J-1. Federally-listed species are discussed separately in this Compliance Statement.

The HPP has been prepared to provide documentation regarding New Jersey State-listed species of concern (including those listed as special concern, threatened, and endangered) that have the potential to be affected by the proposed Project's crossing of environmentally sensitive areas regulated by the State of New Jersey. The HPP provides both general and species-specific

recommendations to avoid, minimize, and mitigate potential adverse impacts to New Jersey State-listed species of concern. Specifically, the objectives of the HPP are as follows:

1. Provide the results of the habitat assessments for New Jersey State-listed species of concern through a combination of desktop analysis and field investigation (as access permits).
2. Identify species/species groups requiring further targeted surveys. These would include species designated by the State of New Jersey as special concern, threatened, or endangered, and for which suitable habitat has been identified within areas regulated by the NJ Division of Land Use Regulation, Green Acres Program, Office of Natural Lands Management, and/or the Highlands regional master plan (as determined by the NJ Landscape Project v.3.3, field observations, field observations, or direct correspondence with the NJDEP).
3. Provide a summary of results of targeted species/species group surveys conducted to date on accessible parcels, and a plan for the submittal of full survey results when surveys have been completed along a fully accessible project alignment.
4. Identify and describe potential adverse project impacts to each species/species group and/or suitable habitat for those species.
5. Describe the recommended measures for avoidance, minimization, and mitigation of potential adverse impacts to New Jersey State-listed species of concern.

PennEast will undertake measures to avoid potential impacts to threatened/endangered species within wetlands crossed by the proposed Project. This includes the colocation with existing ROW areas where possible and minimization of forest and vegetation clearing to a maintained corridor width of ten (10) to 30 feet as identified in Table 1.2-1. In some proposed locations, the use of HDD will be implemented to avoid habitat disturbance. The Environmental Report in Attachment G-1 identifies wetlands and waterbodies with potential threatened and endangered species habitat impacts and measures taken to minimize impacts to the habitat. Detailed descriptions of avoidance, minimization, and mitigating Measures for each species habitat are provided in the HPP in Attachment J-1 to this application.

In order to avoid potential impacts, timing restrictions on certain construction activities will be implemented within wetlands identified as providing suitable and or documented habitat for NJ State-listed threatened or endangered wildlife species. These restrictions are in addition to those set forth by the federal Migratory Bird Treaty Act of 1918 (which restricts tree-clearing from March 15 to July 31), which apply to all birds defined as migratory by the United States Fish and Wildlife Service (USFWS) (Migratory Bird Treaty Act, 10.13 List). Timing restrictions associated with each wetland and/or State Open Water crossing are identified in the HPP's (Attachment J-1) Appendix I, Anticipated Construction Timing Restrictions by Milepost for New Jersey State-Listed Species & Fisheries Resources of this application.

Additionally, temporarily cleared workspaces in wetlands and transition areas will be cut flush to the ground; grubbing and tree stump removal will be limited to the 10-foot wide operational ROW. This will aid in preservation of existing soil structure, seed banks, and allow re-generation of vegetation post-construction. Workspaces outside of the operational ROW will also be restored in accordance with approved Restoration Plans (Attachment E-3) following construction. Post-construction maintenance standards will follow NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights of Way in NJ* (NJDEP 2011).

Requirement: 4. Will not be likely to result in the destruction or adverse modification of a habitat which is determined by the Secretary of the United States Department of the Interior or the Secretary of the U.S. Department of Commerce, as appropriate, to be a critical habitat under the Endangered Species Act of 1973, 16 U.S.C. § 1531 et seq.;

Compliance: Four federally-listed species have been identified as of concern to the PennEast Pipeline Project in New Jersey:

- Dwarf wedgemussel (*Alasmidonta heterodon*)
- Indiana bat (*Myotis sodalis*)
- Northern long-eared bat (*Myotis septentrionalis*)
- Bog Turtle (*Glyptemys muhlenbergii*)

According to the USFWS, critical habitat has not been designated under the Endangered Species Act (ESA) for dwarf wedgemussel, Northern long-eared bat, or for the bog turtle. Some caves and mines have been designated as critical habitat for the Indiana bat because of their importance for hibernation. No documented Indiana bat caves or hibernacula are located within a 5-mile radius of the Project. Therefore, no ESA-designated critical habitat for federally-listed species will be impacted by the Project.

Requirement: 5. Will not cause or contribute to a violation of any applicable State water quality standard;

Compliance: The proposed Project has been designed and will be constructed in a manner to comply with N.J.A.C. 7:9B (State Water Quality Standards) and adheres to the Statements of policy codified at N.J.A.C. 7:9B-1.5. Pursuant to N.J.A.C. 7:7A-2.1(d), a permit issued under the Freshwater Wetlands Protection Rules shall constitute the water quality certificate required under the Federal Act at 33 U.S.C. § 1341.

Requirement: 6. Will not cause or contribute to a violation of any applicable toxic effluent standard or prohibition imposed pursuant to the Water Pollution Control Act;

Compliance: Construction of the Project is not anticipated to result in the discharge of any toxic pollutants into the environment. As a natural gas transmission pipeline project, operation of the Project is also not anticipated to result in the release of toxic pollutants into the environment. Impacts associated with construction activities will be minimized through implementation of BMPs and a Soil Conservation District-approved SESC Plan.

Proposed regulated activities are not anticipated to have significant impacts on groundwater quality or supply. Pipe installation typically occurs at depths that are shallower than the aquifers in the Project area, thus excavation is not expected to affect groundwater. As part of the overall Project, PennEast proposes to implement BMPs designed to avoid, reduce, and/or mitigate potential impacts on groundwater during construction and operation as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4). PennEast will adhere to practices related to groundwater protection, including specifications for trench breakers and dewatering, as well as restrictions on refueling and storage of hazardous substances.

PennEast obtained publicly available well data through the NJDEP Data Miner website for each block and lot within 0.25 mile of the Project workspace in New Jersey. Landowners within 150 feet of Project workspace (500 feet in karst areas and near proposed HDDs) have been contacted

to determine the location of wells near the Project. PennEast continues to collect well location data for newly constructed wells that are added to the public data set and continues to coordinate with landowners to collect the best-available information about water supply wells near the Project.

The proposed pipeline route traverses geologic areas in Hunterdon and Mercer Counties known to have elevated levels of arsenic, which is a naturally occurring element in rock and groundwater, particularly in the Lockatong and Passaic formations. There has been concern raised about mobilization of this naturally occurring element due to construction activities. Standard natural gas pipeline trenching activities have the same excavation procedures as the construction of roads, foundations, and other utilities such as water-supply, sewer lines, fiber-optic, and electrical; all of which require excavations into the same bedrock formations and normal construction practice is to reuse/return excavated materials as backfill. As a result of the concerns raised, PennEast completed studies of potential arsenic mobilization resulting from pipeline construction and operation. These studies included arsenic leach testing of bedrock samples using an EPA approved guidance procedure (Serfes, 2016). Dr. Michael Serfes, Ph.D., conducted and oversaw these studies.

Dr. Serfes is a former NJDEP Research Scientist who spent 23 years managing the Ambient Groundwater Quality Network and investigated the sources, mobilization and transport of arsenic, lead, and other trace elements and contaminants in groundwater. In addition to his doctorate dissertation on arsenic mobilization, he authored the NJDEP's original 2004 arsenic mobilization (release) study of representative red and black rock materials from the Lockatong and Passaic Formations from Hunterdon and Mercer Counties. Besides numerous rock leach testing conducted for his Ph.D. dissertation, Dr. Serfes conducted a first-of-its-kind laboratory intensive standardized leach test from 2015-2016 using USEPA Method 1627, which was finalized under the Obama USEPA, to evaluate the arsenic mobilization behavior of representative rock materials along the proposed pipeline transect. The purpose of Dr. Serfes's study was two-fold: to evaluate concerns of mobilizing arsenic from trench backfill consisting of enriched arsenic-bearing rock fragments generated during pipeline trenching activities, and to evaluate concerns of mobilizing arsenic from similar arsenic enriched rock during HDD activities, where HDDs are proposed under several sensitive resources along the alignment.

Dr. Serfes concluded that these leach test "results coupled with those from previous work discussed in the report, clearly show that there is no significant threat of significant arsenic contamination, if any, to groundwater resources in the geologic formations to be excavated and backfilled with native (non-imported) fill materials." (*Ibid.*) Dr. Serfes also concluded that "[c]onsidering the findings of this study and the assessment provided above, the rock-mud slurry produced during the HDD operation will not yield significant concentrations of mobile arsenic or result in a hazardous classification. Also, the drilling fluids are recovered, containerized and transported off site for proper reuse or disposal, as per the standard operating procedure." (*Ibid.*)

Nonetheless, PennEast is aware of the concerns of arsenic concerns and will implement a Well Monitoring Plan in accordance with NJDEP's Division of Water Supply and Geoscience's Private Well Testing Act Regulations, N.J.A.C. 7:9E et seq. In addition, PennEast has committed to use the NJ Private Well Test Reporting Form to report well test results in accordance with PWTA Regulations N.J.A.C 7:9E.

PennEast will implement its Well Monitoring Plan to monitor water quality and supply yields of public/private of existing wells before and after construction to determine whether water supplies have been affected by the Project construction activities. In accordance with its Well Monitoring Plan, PennEast will monitor all wells within 150 feet of the Project workspace [500 feet in karst

areas and near proposed HDDs]. Monitoring will require the approval of the landowner and will include both public and private water supplies.

Measures for minimizing and mitigating impacts to groundwater may include the following:

- Special blasting techniques as described in PennEast's Blasting Plan;
- Installation of trench breakers where appropriate;
- Use of special dewatering methods, as appropriate;
- No refueling or storage of hazardous materials will occur within a 200-foot radius of private wells, and 400-foot radius of community and municipal wells without an approved variance; and
- PennEast will work with well owners to develop and implement plans for monitoring groundwater quality and public/private supply well yields before and after construction to determine whether water supplies have been affected by pipeline construction activities.

In the event that water supply quality or quantity impacts result from construction, PennEast will mitigate the damage through measures, which may include, but are not limited to, providing temporary sources of potable water, and conducting the restoration, repair, or replacement of water supplies. In the event the monitoring identifies a significant release of arsenic to a potable water supply compared to the background level, PennEast will implement the Arsenic Mitigation Plan. Arsenic mitigation measures would include the installation of a point of entry treatment system using a granular ferric adsorption, or similarly effective type adsorptive media at the impacted well.

Requirement: 7. Will not violate any requirement imposed by the United States government to protect any marine sanctuary designated pursuant to the Marine Protection, Research and Sanctuaries Act of 1972, 33 U.S.C. §§ 1401 et seq.;

Compliance: The Project will not impact a marine sanctuary that is protected pursuant to the Marine Protection, Research, and Sanctuaries Act of 1972, 33 U.S.C §§1401 et seq.

Requirement: 8. Will not cause or contribute to a significant degradation, as defined at 40 C.F.R. 230.10(c), of ground or surface waters;

Compliance: 40 C.F.R. 230.10(c) establishes restrictions on discharge applicable to disposal sites for dredged or fill material. The Project is not anticipated to result in the discharge of dredged or fill material that will cause or contribute to significant degradation of ground or surface waters. Excavation to install the pipe is anticipated to range from eight (8) to ten (10) feet in depth. BMPs will be implemented by PennEast in accordance with the Freshwater Wetland Protection Act rules (N.J.A.C. 7:7A) and the requirements of the Hunterdon County and Mercer County Soil Conservation Districts. Additional BMPs will be implemented pursuant to requirements of Bureau of Water Allocation and Well Permit for Construction Dewatering permit(s) and the Bureau of Nonpoint Pollution 5G3 Construction Stormwater permit.

To prevent the inadvertent discharge of dredged or fill material to a wetland or waterway, silt fence will be installed at the limits of exposed soil areas and crushed stone will be installed at unimproved vehicle site access/egress points. At exposed soil areas, mulches, vegetative cover, sprinkling/watering and crushed stone will be used to limit soil erosion and dust propagation. Waterways will be protected from work areas by a line of staked hay bales and silt fencing. Disturbed areas will be re-graded and seeded as soon as possible following completion of construction. Where restoration of the disturbed area immediately upon completion of construction

is not feasible, mulching (hay, straw, etc.) will be placed. Excess soil material remaining after backfill operations will be removed from regulated areas. Ground water removed from trench excavations will be re-infiltrated to the ground in suitable upland areas onsite in accordance with N.J.A.C. 7:14A and N.J.A.C. 7:8.

These measures will prevent discharge of dredged or fill material that might cause or contribute to a significant degradation of ground or surface waters.

Requirement: 9. Will not adversely affect a property that is listed or is eligible for listing on the New Jersey or National Register of Historic Places unless PennEast demonstrates to the Department that the proposed activity avoids or minimizes impacts to the maximum extent practicable or the Department determines that any impact to the affected property would not impact the property's ability to continue to meet the criteria for listing at N.J.A.C. 7:4-2.3 or otherwise negatively impact the integrity of the property or the characteristics of the property that led to the determination of listing or eligibility. The Department shall not issue a conditional permit if it finds that the mitigation proposed is inadequate to compensate for the adverse effect. Any permit for an activity which may adversely affect a property listed or eligible for listing on the New Jersey or National Register of Historic Places shall contain conditions to ensure that any impact to the property is minimized to the maximum extent practicable and any unavoidable impact is mitigated;

i. If the permittee, before or during the authorized work, encounters a possible historic property, as described at N.J.A.C. 7:7A-19.5(l), that is or may be eligible for listing on the New Jersey or National Register, the permittee shall preserve the resource, immediately notify the Department and proceed as directed by the Department;

Compliance: PennEast identified cultural resources properties within the area of potential effects (APE) that are listed or eligible for listing on the New Jersey or National Register of Historic Places (NJ/NRHP). Identification efforts were conducted in consultation with the New Jersey Historic Preservation Office (NJHPO), according to methodology reviewed and approved by NJHPO in letters dated February 18, 2015 and April 8, 2015. For properties that are listed or determined as eligible for listing on the NJ/NRHP, PennEast will develop measures to avoid adversely affecting them or to mitigate for unavoidable adverse effects.

Archaeological Surveys Summary

PennEast has completed Phase I archaeological survey and reporting on 100% of the PennEast mainline route through Hunterdon and Mercer Counties, as well as the Gilbert and Lambertville Laterals in Hunterdon County. Phase I surveys have identified 39 archaeological resources (14 archaeological sites, 25 isolated finds) in the APE, which are summarized in Table 1.3-2.¹ Phase

¹ Four (4) additional sites were documented for previous Project alignments. These sites are now more than 50 feet from the limit of disturbance. Pursuant to *Proposed Guidelines for Avoidance and Protection of Archaeological Resources in New Jersey for the PennEast Pipeline Project* approved by NJHPO in their review letter dated 20 December 2016, sites more than 50 feet from the limit of disturbance require no further assessment. Therefore, these sites are not listed in Table 1.3-2.

II surveys to determine NJ/NRHP eligibility have been completed at two (2) sites (28-Hu-577 and 28-Hu-583). One (1) site (28-Hu-577) has been determined eligible for the NJ/NRHP, and the mitigation plan will be resubmitted for review with a revised/updated Phase II report. Phase II reporting for the other site (28-Hu-583) is currently being prepared. Phase II surveys are planned or recommended for another four (4) sites (28-Hu-588, 28-Hu-589, and 28-Hu-591, and 28-Hu-594). The Phase II work plan for site 28-Hu-589 has been approved by NJHPO; Phase II work plans for the other three sites have been submitted to NJHPO and are currently under review. Seven (7) sites (28-Hu-358A, 28-Hu-394, 28-Hu-566, 28-Hu-574, 28-Hu-590, 28-Hu-593, and 28-Me-386) will be avoided and/or protected; site-specific avoidance/protection plans are being developed and will be submitted to NJHPO for review. One archaeological site (PE-Me27-S1) and 15 of the isolated finds have been determined not eligible for listing on the NJ/NRHP and no further work is required. The remaining ten (10) isolated finds have been recommended not eligible for the NJ/NRHP and are currently under review by NJHPO.

Table 1.3-2 Archaeological Resources within the APE in New Jersey				
Identification Number ^a	Cultural Affiliation/ Site Type	Recommended NJ/NRHP Status	Recommended Action	Agency Comments
Sites				
28-Hu-358A	Prehistoric/Lithic Scatter	Potentially Eligible	Avoidance/Protection	Concur (18 April 2019)
28-Hu-394	Prehistoric/Lithic Scatter	Potentially Eligible	Avoidance/Protection	Concur (18 April 2019)
28-Hu-566	Historic/Farmstead	Eligible (NJHPO Opinion 4 October 2013)	Avoidance/Protection	Concur (18 April 2019)
28-Hu-574	Historic Foundation	Potentially Eligible	Avoidance/Protection	Concur (20 December 2016)
28-Hu-577	Historic/Quarry	Eligible	Alternative Mitigation	Concur with Eligibility (6 December 2018), Mitigation Plan to be Submitted for Review
28-Hu-583	Historic Houselot	Potentially Eligible	Phase II Evaluation Study to Determine NRHP Eligibility (Completed, Reporting Underway)	Concur, Phase II Work Plan Approved (20 December 2016)
28-Hu-588	Historic/Quarry	Potentially Eligible	Phase II Evaluation Study to Determine NRHP Eligibility	Concur (18 April 2019), Work Plan Under Review
28-Hu-589	Prehistoric/Lithic Scatter	Potentially Eligible	Phase II Evaluation Study to Determine NRHP Eligibility	Concur, Phase II Work Plan Approved (18 April 2019)
28-Hu-590	Prehistoric/Lithic Scatter	Potentially Eligible	Avoidance/Protection	Concur (18 April 2019)
28-Hu-591	Prehistoric/Lithic Scatter	Potentially Eligible	Phase II Evaluation Study to Determine NRHP Eligibility	Concur (18 April 2019), Work Plan Under Review
28-Hu-593	Historic/Farmstead	Potentially Eligible	Avoidance/Protection	Under Review

Table 1.3-2 Archaeological Resources within the APE in New Jersey				
Identification Number ^a	Cultural Affiliation/ Site Type	Recommended NJ/NRHP Status	Recommended Action	Agency Comments
28-Hu-594	Prehistoric/Lithic Scatter	Potentially Eligible	Phase II Evaluation Study to Determine NRHP Eligibility	Under Review
28-Me-386	Historic/Joseph P. Blackwell Farm (NJHPO ID 1676)	Joseph P. Blackwell Farm Individually Eligible; Archaeological Component Potentially Eligible	Avoidance/Protection	Concur (20 December 2016)
PE-Me27-S1	Historic/Refuse Dump within Pleasant Valley Historic District/Phillips Mill Site	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 March 2016)
Isolated Finds				
PE-AR-087D-IF1	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Hu37-IF1	Prehistoric-Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Hu37-IF2	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Hu37-IF3	Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Hu37-IF4	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Under Review
PE-Hu43-IF1	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	No Further Comment
PE-Hu47-IF1	Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Under Review
PE-Hu95-IF1	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Hu103-IF1	Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	No Further Comment
PE-Hu105-IF1	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Under Review
PE-Hu113-IF1	Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Under Review

Table 1.3-2 Archaeological Resources within the APE in New Jersey				
Identification Number ^a	Cultural Affiliation/ Site Type	Recommended NJ/NRHP Status	Recommended Action	Agency Comments
PE-Hu137-IF1	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Hu137-IF2	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Hu145-IF1	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Hu146-IF1	Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Hu155-IF1	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Under Review
PE-HuL14-IF1	Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Under Review
PE-HuL14-IF2	Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Under Review
PE-Hu-WS-010-IF1	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Hu-WS-010-IF2	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Concur (18 April 2019)
PE-Me25-IF1	Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	No Further Comment
PE-Me42-IF1	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Under Review
PE-Me44-IF1	Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Under Review
PE-Me44-IF2	Historic/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	Under Review
PE-Me49-IF1	Prehistoric/Isolated Find	Not Eligible	No Further Investigation or Avoidance Needed	No Further Comment
<p><u>Notes:</u> Sources: Phase I Archaeological Survey Report (Ziesing et al. 2015), Phase I Archaeological Survey Report, Addendum 1 (Ziesing et al. 2016), Phase I Archaeological Survey Report, Addendum 2 (Ziesing et al. 2019a), and Phase I Archaeological Survey Report, Addendum 3 (Ziesing et al. 2019b) ^a New Jersey site numbers issued by the NJSM begin with 28. Field numbers begin with PE. Resources with field numbers do not meet the NJSM criteria for a site and were therefore not assigned a New Jersey site number.</p>				

Architectural History Surveys Summary

PennEast has completed architectural history reconnaissance-level survey and reporting on 100% of parcels intersected by the PennEast mainline route through Hunterdon and Mercer Counties, as well as the Gilbert and Lambertville Laterals in Hunterdon County. Background research and desktop survey identified 13 resources listed or determined eligible for listing on the NJ/NRHP, as well as two districts that have been “identified,” but have no formal eligibility determination. Those two districts will be assumed eligible for the purposes of this Project. All previously documented resources are shown in Table 1.3-3.

Table 1.3-3 Previously Documented Historic Architectural Resources in New Jersey				
NJHPO ID	Resource Name	County	Municipality	NRHP Status
NA	Holland Rural Agricultural District	Hunterdon	Holland	Identified
4275	Bunns Valley Agricultural Historic District	Hunterdon	Holland	Eligible: 5/3/2004
5622	William Lindsay White House/The Farm	Hunterdon	Kingwood	Eligible: 4/4/2018
4591	Rosemont Rural Agricultural Historic District	Hunterdon	Delaware	NRHP Listed: 6/18/2010 NJRHP Listed: 2/10/2010
NA	Sandy Ridge Historic District	Hunterdon	Delaware	Identified
5597	Cedar Land Farm Historic District	Hunterdon	Delaware	Eligible: 11/1/2017
1914	Inch Lines Linear Multistate Historic District	Hunterdon	Delaware	Eligible: 8/31/1993
1614	Mount Airy Historic District	Hunterdon	West Amwell	NRHP Listed: 11/13/1989 NJRHP Listed: 9/14/1989
1698	Pleasant Valley Historic District	Mercer	Hopewell	NRHP Listed: 6/14/1991 NJRHP Listed: 4/12/1991
4750	Oldis (Smith-Mershon) Farm	Mercer	Hopewell	Eligible: 5/17/2004
4540	Delaware & Bound Brook Railroad Historic District	Mercer	Hopewell	Eligible: 9/9/2005
4993	NJ Route 31 Circle (Pennington Circle)	Mercer	Hopewell	Eligible: 9/21/2010
1676	Joseph P. Blackwell Farm	Mercer	Hopewell	Eligible: 6/23/1982

During the reconnaissance survey, PennEast identified and completed base-level documentation for 86 additional properties 50 years or older within the APE as shown in Table 1.3-4. Of those, seven (7) were determined eligible through an intensive-level investigation; 41 were determined not eligible or no further information was requested from NJHPO; eight (8) are no longer in the APE. The eligibility determinations for the remaining 30 resources are pending as they are currently with NJHPO for review.

Table 1.3-4 Newly Identified Historic Architectural Resources in New Jersey				
NJHPO ID	PennEast Survey Code	Township	County	NJ/NRHP Status
5581	HU-0070	Holland	Hunterdon	Eligible: 8/7/2017
	HU-0277	Holland	Hunterdon	Under NJHPO Review
	HU-0071	Holland	Hunterdon	Not Eligible
	HU-0095	Holland	Hunterdon	Not Eligible
5580	HU-0148	Holland	Hunterdon	Eligible
	HU-0345	Holland	Hunterdon	Under NJHPO Review
	HU-0198	Holland	Hunterdon	Not Eligible
	HU-0196	Holland	Hunterdon	Not Eligible
	HU-0197	Holland	Hunterdon	Not Eligible
	HU-0247	Holland	Hunterdon	Not Eligible
	HU-0268	Holland	Hunterdon	Under NJHPO Review
	HU-0246	Holland	Hunterdon	No Longer in APE
	HU-0285	Holland	Hunterdon	Not Eligible
	HU-0072	Holland	Hunterdon	No Longer in APE
	HU-0195	Holland	Hunterdon	Not Eligible
	HU-0073	Holland	Hunterdon	Not Eligible
	HU-0074	Holland	Hunterdon	Not Eligible
	HU-0347	Holland	Hunterdon	Under NJHPO Review
	HU-0194	Holland	Hunterdon	Not Eligible
	HU-0075	Holland	Hunterdon	Under NJHPO Review
	HU-0185	Holland	Hunterdon	No Longer in APE
	HU-0186	Holland	Hunterdon	No Longer in APE
	HU-0316	Alexandria	Hunterdon	Under NJHPO Review
	HU-0094	Alexandria	Hunterdon	Under NJHPO Review
	HU-0302	Alexandria	Hunterdon	Not Eligible
	HU-0254	Alexandria	Hunterdon	Not Eligible

Table 1.3-4 Newly Identified Historic Architectural Resources in New Jersey				
NJHPO ID	PennEast Survey Code	Township	County	NJ/NRHP Status
	HU-0348	Alexandria	Hunterdon	Under NJHPO Review
	HU-0093	Alexandria	Hunterdon	Under NJHPO Review
	HU-0349	Kingwood	Hunterdon	Under NJHPO Review
	HU-0317	Kingwood	Hunterdon	Under NJHPO Review
	HU-0386	Kingwood	Hunterdon	Under NJHPO Review
	HU-0350	Kingwood	Hunterdon	Under NJHPO Review
	HU-0255	Kingwood	Hunterdon	Under NJHPO Review
	HU-0147	Kingwood	Hunterdon	Eligible*
	HU-0276	Kingwood	Hunterdon	Not Eligible
	HU-0184	Kingwood	Hunterdon	No Longer in APE
	HU-0364	Kingwood	Hunterdon	Under NJHPO Review
	HU-0318	Kingwood	Hunterdon	Under NJHPO Review
	HU-0319	Kingwood	Hunterdon	Under NJHPO Review
	HU-0105	Kingwood	Hunterdon	Not Eligible
	HU-0320	Kingwood	Hunterdon	Not Eligible
	HU-0259	Kingwood	Hunterdon	Not Eligible
	HU-0110	Kingwood	Hunterdon	Not Eligible
	HU-0275	Kingwood	Hunterdon	Not Eligible
	HU-0256	Kingwood	Hunterdon	Not Eligible
	HU-0352	Kingwood	Hunterdon	Under NJHPO Review
	HU-0165	Delaware	Hunterdon	Not Eligible
	HU-0232	Delaware	Hunterdon	Not Eligible
	HU-0322	Delaware	Hunterdon	Under NJHPO Review
	HU-0248	Delaware	Hunterdon	Not Eligible
	HU-0216	Delaware	Hunterdon	Not Eligible

Table 1.3-4 Newly Identified Historic Architectural Resources in New Jersey				
NJHPO ID	PennEast Survey Code	Township	County	NJ/NRHP Status
4591	HU-0210	Delaware	Hunterdon	Not Individually Eligible; Contributing to NRHP-Listed Rosemont Rural Agricultural HD
	HU-0193	Delaware	Hunterdon	Not Eligible
	HU-0328	Delaware	Hunterdon	Under NJHPO Review
	HU-0359	Delaware	Hunterdon	Under NJHPO Review
	HU-0257	Delaware	Hunterdon	Not Eligible
	HU-0333	Delaware	Hunterdon	Under NJHPO Review
	HU-0363	Delaware	Hunterdon	Under NJHPO Review
	HU-0191	West Amwell	Hunterdon	Not Eligible
	HU-0207	West Amwell	Hunterdon	Under NJHPO Review
	HU-0286	West Amwell	Hunterdon	Under NJHPO Review
	HU-0233	West Amwell	Hunterdon	Not Eligible
	HU-0166	West Amwell	Hunterdon	Not Eligible
	HU-0330	West Amwell	Hunterdon	Under NJHPO Review
	HU-0199	West Amwell	Hunterdon	Not Eligible
	HU-0171	West Amwell	Hunterdon	No Longer in APE
	HU-0221	West Amwell	Hunterdon	Eligible
	HU-0234	West Amwell	Hunterdon	Not Eligible
	HU-0208	West Amwell	Hunterdon	No Longer in APE
	HU-0331	West Amwell	Hunterdon	Under NJHPO Review
	ME-0335	Hopewell	Mercer	Under NJHPO Review
	ME-0168	Hopewell	Mercer	Not Eligible
1698	ME-0172	Hopewell	Mercer	Contributing to NRHP-Listed Pleasant Valley HD
	ME-0215	Hopewell	Mercer	Not Eligible
	ME-0304	Hopewell	Mercer	Not Eligible
	ME-0209	Hopewell	Mercer	Not Eligible

Table 1.3-4 Newly Identified Historic Architectural Resources in New Jersey				
NJHPO ID	PennEast Survey Code	Township	County	NJ/NRHP Status
	ME-0336	Hopewell	Mercer	Under NJHPO Review
	ME-0190	Hopewell	Mercer	Not Eligible
	ME-0249	Hopewell	Mercer	Not Eligible
	ME-0367	Hopewell	Mercer	Under NJHPO Review
	ME-0181	Hopewell	Mercer	Not Eligible
	ME-0180	Hopewell	Mercer	Not Eligible
	ME-0219	Hopewell	Mercer	Not Eligible
	ME-0170	Hopewell	Mercer	No Longer in APE
1676	ME-0218	Hopewell	Mercer	Eligible
	ME-0287	Hopewell	Mercer	Not Eligible
Notes: * Property determined Not Eligible by NJHPO in response to reconnaissance-level study, but later determined eligible on 4/4/2018 in response to a COE documenting the property as the William Lindsay White House (ID# 5622)				

Requirement: 10. Will not violate the Flood Hazard Area Control Act, N.J.S.A. 58:16A-50 et seq., or implementing rules at N.J.A.C. 7:13;

Compliance: The proposed Project has been designed and will be constructed in accordance with the Flood Hazard Area Control Act rules (NJAC 7:13-1.1, et seq.). Details regarding how the Project complies with the Flood Hazard Control Act rules are provided in Attachment G-3 of this application. Construction activities will not result in a violation of the FHACA or implementing rules.

Requirement: 11. Is otherwise lawful;

Compliance: N.J.A.C. 7:7A-10.2(b)11 broadly requires that a project “is otherwise lawful.” Lawful is taken as being defined as allowed or permitted by the law, or in conformance with the law, as administered through statutes and administrative rules. The Project has been designed and will be implemented in full compliance with all applicable State and federal rules, laws and regulations.

PennEast applied to the FERC for Certificates of Public Convenience and Necessity and Related Authorizations on September 24, 2015 for the Project. FERC granted the certificates to PennEast on January 19, 2018 and authorized the construction and operation of facilities to provide service under Section 7 of the Natural Gas Act (NGA). Issuance of the certificate indicates that the FERC carefully considered the existing laws that govern the certificate process and determined the Project to be lawful. The conditions of the Certificates ensure that the Project conforms to and is permitted by existing laws and rules that apply to the pipeline and aboveground facilities in New Jersey.

Requirement: 12. Is in the public interest, as determined by the Department in consideration of the following:

Compliance: N.J.A.C. 7:7A-10.2(b)12 mandates that NJDEP consider seven (7) factors relative to determining if the proposed activities are in the public interest, listed as i through vii and addressed below. However, in cases of interstate natural gas pipelines, it is a settled administrative policy of NJDEP that the FERC's finding of public need for a project under Section 7 of the NGA is controlling for purposes of the Freshwater Wetlands Protection Act requirement that project activities are in the public interest and necessary to meet a compelling public need. In summary, the FERC is charged with making a determination that there is a compelling public need for the Project. PennEast applied to the FERC for Certificates of Public Convenience and Necessity and Related Authorizations on September 24, 2015 for the Project. The FERC granted the certificates to PennEast on January 19, 2018 and authorized the construction and operation of facilities to provide service under Section 7 of the NGA. The Project satisfies a compelling public need for new natural gas infrastructure to ensure future domestic energy supplies and enhance the pipeline grid by providing additional transportation capacity connecting sources of natural gas to markets in Pennsylvania and New Jersey. The FERC has exclusive jurisdiction to determine if the construction and operation of proposed interstate pipeline facilities are in the public convenience and necessity. A complete copy of the FERC's Order is provided as an attachment to the cover letter of the application. Nevertheless, specific facts set forth in the Alternatives Analysis provided in Attachment K and in the individual sections of this Freshwater Wetlands Individual Permit Application demonstrate that the Project fully conforms to the factors set forth in N.J.A.C. 7:7A-10.2(b)12 and the requirements of N.J.A.C. 7:7A-10.4(a)1.

Requirement: i. The public interest in preservation of natural resources and the interest of the property owners in reasonable economic development. In determining whether a proposed activity is in the public interest, the Department shall consider, as one source of guidance, the goals, strategies, policy objectives and policies of the New Jersey State Development and Redevelopment Plan, adopted and/or readopted by the State Planning Commission pursuant to the New Jersey State Planning Act, N.J.S.A. 52:18A-196 et seq., and the State Planning Act rules, N.J.A.C. 17:32;

Compliance: An analysis of how the Project advances the goals, strategies, objectives and policies of the State Plan and New Jersey State Planning Act is central to identification of the public interest from a State perspective.

Consistent with the goals, strategies, objectives and policies of the State Plan, the Project supports New Jersey's existing utility infrastructure and meets existing and future needs in terms of energy supply, resiliency, and dependability. The vast majority of existing households in New Jersey use natural gas and a large portion of the State's electrical generating capacity is fueled with natural gas. This infrastructure supports the development and redevelopment in New Jersey's existing urban and suburban areas. It also supports the extension of natural gas to support cogeneration and adequate energy capacity to meet cogeneration and facility additions, which are both policies of the State Plan.

PennEast has engaged in a planning process that supports the State Plan principles that statewide planning respect the interests of the public and private sectors and be a collaborative process that involves sectors at all levels of interest. PennEast's efforts to protect natural and cultural resources

and contributions to the socioeconomic environment are consistent with each of the eight goals and the applicable policies defined in the State Plan.

The PennEast pipeline will provide a reliable source of supply into the existing energy infrastructure of the State. This Project will also enhance the reliability of infrastructure that supports existing communities throughout New Jersey including areas within Hunterdon and Mercer Counties.

Requirement: ii. The relative extent of the public and private need for the proposed regulated activity;

Compliance: On September 24, 2015, PennEast submitted an application to FERC for Certificate to construct and operate the Project pursuant to Section 7 of the NGA (FERC Application)². The FERC granted the Certificate on January 19, 2018, which directed PennEast to construct and operate facilities to provide service to the public. Based upon FERC’s detailed findings in support of issuance of the Certificate under Section 7 of the NGA, there is a compelling public need for the proposed activity and which need cannot be met by essentially similar projects in the region that are under construction or expansion, or that have received the necessary governmental permits and approvals.

The Project satisfies a compelling public need for two independent reasons. First, the FERC has determined that this new natural gas infrastructure is needed to ensure future domestic energy supplies and to enhance the reliability of the natural gas supply grid by providing additional transportation capacity connecting New Jersey local distribution companies and their residential, commercial, and industrial customers with sources of natural gas in Pennsylvania. The findings made by FERC in the Certificate pursuant to the NGA establish a compelling public need for the Project and control the determination of public interest and need under both the FWPA (N.J.S.A. 13:9B) and the FHACA (N.J.S.A. 58:16A-50). Second, a compelling public need is established by the specific facts set forth in this application demonstrating the essential nature of the public services that will be provided by the Project, which will serve the heating and electricity needs of homes and businesses in each of the municipalities through which the Project traverses.

FERC Determination of Need

The FERC issued the Certificate to PennEast pursuant to Section 7 of the NGA. FERC has exclusive jurisdiction to determine if the construction and operation of proposed interstate pipeline facilities are in the public convenience and necessity. FERC granted the Certificate on January 19, 2018, which authorized the construction and operation of the Project facilities to provide service under Section 7 of the NGA. A complete copy of the FERC Order is provided as Attachment B of the Freshwater Wetlands Individual Permit Application. In the FERC Order, FERC found that there was market demand for the Project and agreed with the Environmental Impact Statement

² Information contained herein was derived in part from PennEast’s Certificate Application for the Project. Information was also derived in part from PennEast’s supplemental filings with FERC and FERC’s Final Environmental Impact Statement (FEIS) for the Project.

(EIS) finding that there was insufficient firm capacity available on existing pipeline systems to provide the service proposed by PennEast. Specifically, Paragraphs 2, 28, 30, 36 and 40 of the FERC Order state:

“we find that the benefits that the PennEast Project will provide to the market outweigh any adverse effects on existing shippers, other pipelines and their captive customers, and on landowners and surrounding communities. Further, as set forth in the environmental discussion below, we agree with Commission staff’s conclusion in the Environmental Impact Statement (EIS) that the project will result in some adverse environmental impacts, but that these impacts will be reduced to acceptable levels with the implementation of the applicant’s proposed mitigation and staff’s recommendations, as modified herein, and adopted as conditions in the attached Appendix A of this order. . .

PennEast has entered into precedent agreements for long-term, firm service with 12 shippers. Those shippers will provide gas to a variety of end users, including local distribution customers, electric generators, producers, and marketers and those shippers have determined, based on their assessment of the long-term needs of their particular customers and markets, that there is a market for the natural gas to be transported and the PennEast Project is the preferred means for delivering or receiving that gas. Given the substantial financial commitment required under these contracts by project shippers, we find that these contracts are the best evidence that the service to be provided by the project is needed in the markets to be served. We also find that end users will generally benefit from the project because it would develop gas infrastructure that will serve to ensure future domestic energy supplies and enhance the pipeline grid by providing additional transportation capacity connecting sources of natural gas to markets in Pennsylvania and New Jersey. . .

. . . shippers on PennEast’s system have noted several reasons other than load growth for entering into precedent agreements with PennEast to source gas from the Marcellus Shale region. Project shippers state they believe that the project will provide a reliable, flexible, and diverse supply of natural gas that will lead to increased price stability, and the opportunity to expand natural gas service in the future. Based on the record before us, we find no reason to second guess the business decisions of these shippers that they need the service to which they have subscribed.

we find that the PennEast Project will provide reliable natural gas service to end use customers and the market. Precedent agreements signed by customers for approximately 90 percent of the project’s capacity adequately demonstrate that the project is needed. . .

Based on the benefits the project will provide to the shippers, the lack of adverse effects on existing customers, other pipelines and their captive customers, and effects on landowners and surrounding communities, we find, consistent with the Certificate Policy Statement and section 7 of the NGA, that the public convenience and necessity requires approval of PennEast’s proposal, subject to the conditions discussed below.”

FERC’s Order under Section 7 of the NGA is a conclusive determination there is a compelling public need for the Project.

The FERC's finding under Section 7 of the NGA that there is a public need for the Project is controlling for purposes of the Freshwater Wetlands Protection Act requirement that the Project activities are in the public interest and necessary to meet a compelling public need. The preemptive effect of the FERC's determination of public interest and compelling public need arises both from the language of the NGA, judicial precedent interpreting it, and the terms of the FERC Certificate.

In the Certificate issued to PennEast, FERC determined that the Project satisfies a public need for new natural gas infrastructure to "ensure future domestic energy supplies and enhance the pipeline grid by providing additional transportation capacity connecting sources of natural gas to markets in Pennsylvania and New Jersey." FERC Order, Para. 28. FERC also determined that any state or local laws may not prohibit or unreasonably delay the construction or operation of the Project:

Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. The Commission encourages cooperation between interstate pipelines and local authorities. However, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.

FERC Order, Para. 218.

Deference to the FERC's determination of public need is a requirement of New Jersey's delegated 404 program under the Federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. §1344. In 1994, the United States Environmental Protection Agency (USEPA) authorized New Jersey to implement the federal Clean Water Act 404 permitting program in the State's non-tidal waters. *See* 59 Fed. Reg. 9933 (March 2, 1994). USEPA's authorization of New Jersey's administration of the CWA 404 program is subject to 40 C.F.R. Part 233. The delegating regulation directs authorized states to follow prescribed permit application requirements of the U.S. Army Corps of Engineers (USACE) program set forth in 33 C.F.R. Part 325, as "under this approach, State assumption of the program should not result in any change in either the kind of information available for review or the burden upon the applicant to supply the information." 53 Fed. Reg. 20764 (June 6, 1988).

USEPA's specific delegation of the 404 permitting authority to New Jersey also is conditioned upon the State's compliance with the Freshwater Wetlands Act of 1987, N.J.S.A. 13:9B-1.1, *et. seq.* (the State Act), which was incorporated by reference into the delegation regulation. 40 C.F.R. §233.71(b)(1) (incorporating by reference New Jersey Statutory Requirements Applicable to the Freshwater Wetlands Program, 1994). The State Act was passed with the specific purpose of enabling New Jersey to take over the wetlands permitting program from the federal government. It expressly mandated that in its administration of the 404 program, NJDEP must "utilize to the maximum extent practicable and feasible, forms and procedures for permit applications which are identical to those used by the USACE in issuing permits under the Federal Act." N.J.S.A. §13:9B-27 (Assumption of Permit Jurisdiction).

USEPA's delegation of the 404 program also was conditioned upon the State's compliance with the terms of the 1993 Memorandum of Agreement between USEPA and NJDEP authorizing the State to carry out the policies, regulations and procedures necessary to administer the federal wetlands permit program pursuant to Section 404 of the Clean Water Act (CWA), 33 U.S.C. §1344 (404 Program MOA). *See* 40 CFR 233.71(d). The 404 Program MOA states that New Jersey's authorization to issue federal 404 permits is conditioned upon the State maintaining consistency

with the evolving framework of federal guidelines, standards, and policy decisions impacting on wetlands permitting. *404 Program MOA* Part IV.A. “Duty to Maintain Program Compatibility.” NJDEP is required to remain informed of the changing content and meaning of federal statutes, regulations, guidelines, standards, policy decisions, directives, and any other factors that affect New Jersey’s implementation of the federal 404 program. *404 Program MOA*, Part IV.A.(2). NJDEP is to maintain copies of all federal guidance documents as they become available and to administer the 404 wetlands program in a manner equivalent and consistent with the CWA, the MOA, and all applicable federal requirements and policies. *404 Program MOA* Part IV.B.(1). USEPA is required to evaluate New Jersey’s consistency with the program as approved, and with applicable federal regulations, guidance and policies. *404 Program MOA* Part IV.D.(1). The federal statutes, regulations, guidelines, standards, policy decisions, directives, and other factors affecting New Jersey’s implementation of the federal 404 program are described below.

The policy of the federal government, implemented through federal legislation, federal regulations, federal guidance documents, and a succession of Executive Orders over the past 20 years, is to expedite environmental reviews and approvals of infrastructure projects necessary to supply consumers and businesses with access to vital energy supplies, including new interstate natural gas pipelines needed to ensure an adequate supply of natural gas to meet the essential needs of homes and businesses.

In 2005, the FERC and the USACE entered into a *Memorandum of Understanding* to further refine streamlining, early involvement and cooperation between the USACE and the FERC to identify project purpose, need, and alternatives that can be used by both the USACE and the FERC in carrying out their respective legal responsibilities under the NGA, NEPA, and section 404 of the CWA. (33 U.S.C. §1344, 33 C.F.R. Parts 320-331 and 40 C.F.R. Part 230). See, *Memorandum of Understanding between USACE and FERC*, (June 30, 2005) (*USACE-FERC MOU*). The *USACE-FERC MOU* requires the USACE to defer “to the maximum extent allowed by law” to FERC’s determination of purpose and need and project alternatives for pipeline projects subject to the NGA. The *USACE-FERC MOU* provides the USACE will use the FERC record to the maximum extent practicable and as allowed by law so that the USACE can satisfy the legal requirements of the CWA with respect to any adverse effects on aquatic resources as efficiently and expeditiously as possible.

In individual permit proceedings conducted by NJDEP, it is a longstanding NJDEP administrative policy to defer to the FERC’s determination of public need set forth in the Certificate of Public Convenience and Necessity authorizing the construction of interstate natural gas pipelines pursuant to Section 7 of the NGA. NJDEP’s longstanding administrative policy of deferring to FERC’s determination of public need for interstate natural gas pipelines appropriately reflects the preemptive effect of FERC’s exclusive jurisdiction under the NGA and the foregoing applicable requirements of NJDEP’s 404 program.

Two recent examples illustrate NJDEP’s longstanding administrative policy of deferring to FERC’s determination of public need for interstate natural gas pipelines. In both cases, the Tennessee Gas Northeast Upgrade Project (NEUP) (FERC Docket No. CP11-161-001) and the Transcontinental Gas Pipeline Leidy Southeast Project (Leidy) (FERC Docket No. P13-551-001), NJDEP found that FERC’s issuance of a Certificate of Public Convenience and Necessity established the compelling public need for the project. In the case of the NEUP, NJDEP concluded:

NJDEP must also acknowledge the constraints imposed by the Natural Gas Act on landowners whose property is determined by the FERC to be needed for a particular

interstate natural gas transmission pipeline alignment. If the FERC determines, pursuant to Section 7 of the Natural Gas Act (15 U.S.C. 717f(c)), that there is a need for the Project and that the Project is in the public interest, and if the FERC issues a Certificate of Public Convenience and Necessity (“FERC Certificate”), and if the route endorsed by FERC in the FERC certificate includes State property, then NJDEP is more limited in its objections to the Project than it would be in evaluating another type of project.

Although Tennessee is a private company, *the NEUP is proposed to transport natural gas to markets in the northeastern U.S., which the State of New Jersey considers to be a significant public benefit.* In deciding whether this Project is in the public convenience and necessity, the FERC will balance the public benefits of the Project (bringing natural gas from production areas to northeastern U.S. markets and alleviating transportation constraints in the northeast region) against potential adverse consequences, pursuant to the Natural Gas Act and the FERC’s Certificate Policy Statement. *Energy infrastructure projects such as the NEUP provide an essential service which is not otherwise provided by the government.*

The commenter stated that NJDEP should provide an analysis of the need of the Project, independent of the FERC’s analysis, in order to determine whether it should enter into the lease with Tennessee. . . The determination of the need for an interstate natural gas pipeline construction project, such as the NEUP, is made by the FERC in accordance with Section 7(c) of the Natural Gas Act, 15 U.S.C. §717f(c). . . While NJDEP’s Green Acres rules also require a finding of compelling public need to justify a diversion of local parkland, these rules do not apply to transactions involving State property. *The NJDEP acknowledges that there are competing public interests involved in determining the need for a project such as the NEUP. However, it is the issuance of a FERC Certificate that establishes the need for a particular pipeline project if it is an interstate natural gas pipeline project subject to the jurisdiction of the FERC.*

NJDEP Response to Public Comments on the Proposed Conveyance of State-Owned Lands to Tennessee Gas Pipeline Company, LLC (2011), pp. 5, 7-8 & 59-60 (emphasis added). See also, NJDEP, *Report on Proposed Conveyance of Lands to Tennessee Gas Pipeline Company* (July 11, 2011), pp. 11-12 (deferring to FERC’s determination of need for NEUP pipeline) available at <https://www.nj.gov/dep/greenacres/pdf/tgp.neup.report.pdf> (Accessed on July 24, 2019); New Jersey State House Commission, *Hearing on NEUP Project* (June 7, 2012), Testimony of NJDEP’s Judeth Piccinini Yeany, NJDEP, Chief of the Bureau of Legal Services and Stewardship, available at <https://www.njleg.state.nj.us/legislativepub/pubhear/shc06072012.pdf> (Accessed on July 17, 2019).³

³ NJDEP’s administrative policy of deferring to FERC’s determination of need is clearly referenced in this colloquy between NJDEP and the State House Commission:

Similarly, in the case of the Leidy Project, NJDEP concluded:

On December 18, 2014, the FERC issued an Order – Issuing Certificate and Approving Abandonment for a certificate of public necessity authorizing Transco to “construct and operate its proposed Leidy Southeast Project (Leidy Project). In issuing the Order, the FERC has determined that the project is required by the public convenience and necessity, thus, there is a need for the project.

The FERC has issued an Order dated December 18, 2014, which determined “the project is required by the public convenience and necessity, therefore there is a need for the project. The Department concurs that there is a compelling public need for the project which cannot be met with similar projects in the region.

NJDEP Staff Summary Report, April 6, 2015, pp. 3 & 10.

ASSEMBLYMAN MORIARTY: . . . I guess I’d like to hear from the DEP -- I’d like to hear, on the record, what they believe is the public benefit that’s so overarching here.

JUDETH PICCININI YEANY, ESQ.: When we evaluate these natural gas pipeline projects, one of the things we have to keep in mind is that they do require a certificate from the Federal Energy Regulatory Commission, and that’s called a certificate of public convenience and necessity. *And basically it is a Federal agency that is determining the need for the project and, to some extent, the route for the project. And everything we do flows from the issuance of that certificate.* So when we first proposed to enter into this lease with Tennessee Gas, it was in the context of: If the project gets a certificate, we need to be prepared to decide whether we’re going to lease these lands with the backdrop, as you just discussed, of whether potentially an eminent domain action could be brought against the State at some future point in time. *So I do feel that we do treat these projects differently than we do some of the utility projects, as far as how we approach them and what our constraints are. . .*

ASSEMBLYMAN MORIARTY: I want to ask again though, what do you see as the public benefit to the residents of New Jersey? From New Jersey’s perspective, is there a public benefit?

MS. PICCININI YEANY: Well, I think the FERC certificate discusses, and there’s certainly been other discussions of, the impact that bringing more natural gas into the market will have on the available supply for New Jersey residents and overall prices. I know there is some concern about gas passing through the state as opposed to serving residents. But we’ve been told by the company that it serves both purposes.

Ibid, p. 32-33 (emphasis added).

Based on the foregoing authorities, the FERC's determination of public need set forth in the Certificate authorizing the construction of the Project under Section 7 of the NGA conclusively establishes the public need for the Project.

FWPA Rules Criteria for Purpose and Need

As discussed in Section 2.1, the FERC's issuance of the Certificate is a conclusive and preemptive determination that the proposed activities are in the public interest and that there is a compelling public need for the Project. To the extent NJDEP departs from the settled administrative policy of deferring to FERC's determination of the public need for the Project, it does so outside the confines of its delegated federal 404 wetlands program. *See* 40 C.F.R. §233.1(c); *404 Program MOA* Part IV. However, even if NJDEP re-examines FERC's and Judge Martinotti's findings of public interest, there are abundant specific facts independently demonstrating the essential nature of the public services provided by the Project, which will serve homes and businesses in each of the municipalities through which the Project traverses. These facts independently establish the public interest in and compelling public need for the Project.

Pursuant to various provisions of the Freshwater Wetland Protection Act rules, NJDEP evaluates IP Applications to determine if the proposed activities are in the public interest (N.J.A.C. 7:7A-10.2(b)12) and, in the case of exceptional resource value wetlands, that the proposed project has a compelling public need that is greater than the need to protect the wetland against the minor impacts associated with the Project (N.J.A.C. 7:7A-10.4(a)1).

N.J.A.C. 7:7A-10.2(b)12 mandates that NJDEP consider seven (7) factors relative to determining if the proposed activities are in the public interest:

- i. The public interest in preservation of natural resources and the interest of the property owners in reasonable economic development. In determining whether a proposed activity is in the public interest, the Department shall consider, as one source of guidance, the goals, strategies, policy objectives and policies of the New Jersey State Development and Redevelopment Plan, adopted and/or readopted by the State Planning Commission pursuant to the New Jersey State Planning Act, N.J.S.A. 52:18A-196 et seq., and the State Planning Act rules, N.J.A.C. 17:32;
- ii. The relative extent of the public and private need for the proposed regulated activity;
- iii. Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods, to accomplish the purpose of the proposed regulated activity;
- iv. The extent and permanence of the beneficial or detrimental effects which the proposed regulated activity may have on the public and private uses for which the property is suited;
- v. The quality and resource value classification pursuant to N.J.A.C. 7:7A-3.3 of the wetland which may be affected and the amount of freshwater wetlands to be disturbed;
- vi. The economic value, both public and private, of the proposed regulated activity to the general area; and
- vii. The functions and values provided by the freshwater wetlands and probable individual and cumulative impacts of the regulated activity on public health and fish and wildlife.

N.J.A.C. 7:7A-10.4(a) provides additional requirements for a non-water dependent activity in exceptional resource value wetlands or trout production waters. In this condition, the applicant must further demonstrate:

1. That there is a “compelling public need” for the proposed activity greater than the need to protect the freshwater wetland or trout production water, and that the need cannot be met by essentially similar projects in the region which are under construction or expansion, or which have received the necessary governmental permits and approvals; *or*
2. That denial of the permit would impose an extraordinary hardship on the applicant brought about by circumstances peculiar to the subject property.

Under the Freshwater Wetlands Protection Act rules, a “compelling public need” exists when “based on *specific facts*, the proposed regulated activity [i] will serve an *essential health or safety need of the municipality in which the proposed regulated activity is located*, [ii] *that the public health and safety benefit from the proposed use and* [iii] *that the proposed use is required to serve existing needs of the residents of the State, and* [iv] *that there is no other means available to meet the established public need.*” N.J.A.C. 7:7A-1.3. (emphasis added).

As discussed above in Section 2.1, the FERC Order conclusively determined that the proposed activities associated with the Project are in the public interest and are necessary to satisfy a compelling public need and thus the Project fully conforms to the factors set forth in N.J.A.C. 7:7A-10.2(b)12 and the requirements of N.J.A.C. 7:7A-10.4(a)1. Nevertheless, the criteria for demonstrating the proposed activities are in the public interest and satisfy a “compelling public need” also are independently satisfied by the specific facts set forth below and in the individual sections of this Freshwater Wetlands Individual Permit Application.

The Project Provides Infrastructure to Supply Essential Utility Services that is a Compelling Public Need Under New Jersey Law

The fundamental purpose of the Project is to transport natural gas in interstate commerce “for ultimate public consumption for domestic, commercial, industrial, or any other use.” See 15 U.S.C. § 717(b). Thus, while PennEast is not a local distribution company, the fundamental purpose of the Project is to deliver natural gas to the ultimate consumers in New Jersey through local distribution companies. New Jersey law is clear that infrastructure intended to “supply adequate heat, water, hot water, electricity, gas, and telephone service . . . [is an] essential service,” which fulfills a “compelling public need.” *In the Matter of The Certificate of the Department of Environmental Protection Granting Partial Release of Conservation Restrictions*, No. A-2316-10T2, 2017 WL 3225723 (upholding NJDEP’s determination that a private solar project provided public benefits and satisfied the standard of “compelling public need” because it provided “essential” utility services to commercial, residential and public buildings) *quoting* N.J.S.A. 52:27D-224.2 (defining essential services as utility services supplied to people living in multiple dwellings and requiring notification when such essential services are disrupted);⁴ *see also*,

⁴ In holding that the solar project satisfied the standard of “compelling public need” the court acknowledged NJDEP’s longstanding agency interpretation that utility projects provide a public benefit:

As a matter of longstanding agency interpretation, [DEP] has generally considered utility projects such as the proposed diversion to fall into the “public benefit” category. Although most electric and gas projects are not

15 U.S.C. 3391 (prohibiting curtailment of natural gas services to “high-priority users,” defined as any person who uses natural gas in a residence, in a commercial establishment in amount less than 50 Mcf on a peak day, in any school, hospital, or similar institution, or in any other use the curtailment of which would endanger life, health, or maintenance of physical property).

The Project is Consistent with the Goals of the State Development and Redevelopment Plan

The Project likewise is consistent with the goals of the State Development and Redevelopment Plan (State Plan), one of the enumerated factors in NJDEP’s assessment of public benefit pursuant to N.J.A.C. 7:7A-10.2(b)12. Statewide Policy Goal 13—Energy Resources—calls for all levels of government to improve both the planning and the coordination of public policy to ensure adequate energy resources through conservation, facility modernization, renewable energy and *cogeneration*. *New Jersey State Development and Redevelopment Plan* (2001), p. 156 (emphasis added). Policy 6—Cogeneration—calls for the State to encourage and promote natural gas cogeneration of energy from waste heat produced by on-site industrial processes. *Ibid.* Policy 8—Adequate Energy Capacity—calls for the State to ensure that adequate energy capacity exists to meet statewide demands through conservation, cogeneration and either facility additions or upgrades. *Ibid.* The Project meets all of these goals. Current BPU policy strongly encourages the development of CHP and Fuel Cell (FC) energy efficiency projects, which rely upon natural gas and which the Project clearly will help to advance. In fact, the New Jersey Clean Energy Program just announced Fiscal Year 2020 guidelines for its natural gas CHP-FC program, which notes that “by installing CHP-FC systems, participants will assist in reducing overall system peak demand, furthering the use of emerging technologies, reducing emissions, and using distributed generation to provide reliability solutions for New Jersey while supporting the state’s Energy Master Plan.” NJBPU Clean Energy Program, New Jersey Combined Heat & Power – Fuel Cell (CHP-FC) Program For Fiscal Year 2020 (7/1/2019 through 6/30/2020) (July 1, 2019).

constructed by a local government unit or nonprofit, the provision of energy is an essential service, and both public and private utility companies provide a commodity that local governments would otherwise be required to provide (such as many municipalities still do for water and sewer services.) Therefore, the fact that the project is sponsored by a private, for-profit enterprise has not in the past disqualified consideration of a diversion application.

Ibid. at *6 (emphasis added).

The Specific Facts Demonstrate that the Project Will Serve an Essential Health and Safety Need of Each Municipality in which it is Located

The public needs served by the Project are numerous and are distributed to families and businesses across the State. More than half of the capacity from the Project will be delivered to New Jersey consumers, through long-term precedent agreements with three out of the four local New Jersey distribution companies, New Jersey Natural Gas Company (180,000 Dth/d), South Jersey Gas Company (105,000 Dth/d), and Elizabethtown Gas Company (100,000 Dth/d), and with two New Jersey electricity providers, PSE&G Power, LLC (125,000 Dth/d) and Gilbert Power, LLC (f/k/a NRG Rema, LLC) (10,000 Dth/d). Elizabethtown Gas is the local distribution company responsible for distributing natural gas to families and businesses in Hunterdon and Mercer Counties, including in every municipality along the Project route. Elizabethtown Gas has contracted to purchase 100,000 Dth/d of natural gas because it has a current and long-term planning need for new capacity. *See* PennEast FERC Section 7(c) Application, Resource Report 1, September 2015, p. 1-3 & 1-4; FERC Certificate, Para. 30, n. 39 (noting that “[c]ommenters also overlook the fact that shippers on PennEast’s system have noted several reasons other than load growth for entering into precedent agreements with PennEast to source gas from the Marcellus Shale region.”). According to Elizabethtown Gas, the Project provides

a unique option to economically increase the reliability of firm pipeline transportation in a market area where the availability of new pipeline and peak shaving capacity is constrained. More direct-connected interstate supply options allows for less reliance on the continued addition of supplemental on-system peak shaving facilities or the use of third-party, delivered peaking supplies to meet growing firm customer demand. Additionally, service from PennEast will increase ETG’s system reliability. Existing interstate natural gas pipelines to the northwest portion of Elizabethtown’s territory are fully subscribed and recent expansions have been costly. PennEast will deliver to the northwestern portion of ETG’s system thereby significantly reducing, if not eliminating, the need to rely on third parties for bundled, city-gate delivered supplies. ETG has subscribed to service from PennEast to increase supply diversification for ETG’s current customers, and to provide capacity from new sources to serve the immediate and long-term growth in ETG’s service territory. Service from PennEast will provide an important new source of firm gas supply that can also help ETG extend service to more communities as significant opportunities develop. In an effort to extend gas service to more customers, over the next three years, ETG intends to work with local municipal and county officials, local and state economic development authorities, community leaders and the New Jersey Board of Public Utilities to find affordable solutions that will allow ETG to extend additional service within communities near the PennEast Project.

Ibid. (emphasis added).

The Project will ensure an adequate supply of natural gas, or natural gas used to generate electricity, for use in homes and businesses in New Jersey, in Hunterdon County, and in each municipality along the route, which is both a critical safety *and* economic imperative for the people who live and work there. Together, the Project and the local distribution

companies operate an integrated system of interstate transportation and local distribution facilities to ensure that natural gas is provided to New Jersey families and businesses in a safe and reliable manner.

In terms of the public safety, the Project provides critical redundancy to ensure greater reliability of the interstate supply of natural gas to New Jersey, including to Hunterdon County. The reliability need for more diversity in the interstate supply of natural gas is clear and compelling. See U.S. Department of Energy, *Assessment of the Adequacy of Natural Gas Pipeline Capacity in the Northeast United States*, (November 2013) (concluding that a disruption of just thirty six percent (36%) of the interstate natural gas supply to New Jersey during a cold winter period would require local curtailment of essential human needs customers) (available at https://www.energy.gov/sites/prod/files/2013/11/f5/NE_Natural%20Gas%20Pipeline%20Study%202013-11-26_Final.pdf) (Accessed on July 24, 2019); U.S. Department of Energy, *Implications of Disruption to Natural Gas Deliverability, Analysis of the Ability of the Natural Gas Market to Withstand Loss of Pipeline Capacity, Summary of All Project Reports* (September 2008) (available at <https://www.osti.gov/servlets/purl/1001214>) (Accessed on July 24, 2019); American Gas Association, *Workshop materials on Natural Gas Resiliency* (April 29, 2014) (available at <https://www.energy.gov/sites/prod/files/2015/01/f19/AGA.Resiliency%20Metrics%20workshop.pdf>) (Accessed on July 24, 2019).

In 2017, the BPU conducted an emergency planning modeling exercise to assess the vulnerability of New Jersey's natural gas transmission and distribution infrastructure following an April 2016 unplanned outage downstream of Texas Eastern's Delmont Compressor Station in Delmont, Pennsylvania.⁵ See Spectra Energy, *Pennsylvania Public Utility Commission Delmont Line 27 Incident Update* (July 21, 2016) (available at <https://infopost.spectraenergy.com/GotoLINK/GetLINKdocument.asp?Pipe=10076&Environment=Production&DocumentType=Notice&FileName=08122016+2016-07+Delmont+Incident+PA+PUC+Update.pdf&DocumentId=8aa1649f5655242601567ec8abcd06a9>) (Accessed on July 21, 2019).

A major finding which emerged from the BPU's emergency planning exercise, titled *New Jersey Pilot Light 2017*, was that "[i]dentification of diverse natural gas supplies and interconnection to multiple interstate sources offers improvements in resiliency for the natural gas sector. Furthermore, interconnections between multiple LDCs can mitigate the potential loss of supply from a disruption of service to an interstate supply source." BPU, *N.J. Board of Public Utilities Receives Staff's Preliminary Report on Natural Gas Outage Tabletop Exercise* (July 26, 2017). According to the then BPU President, "[w]hile this

⁵ See *In the Matter of the Discussion of Natural Gas Tabletop Exercise ... "New Jersey Pilot Light 2017"*, Minutes of the Regular Meeting of the Board of Public Utilities, Item 6. Reliability & Security (Aug. 23, 2017) (available at <https://www.state.nj.us/bpu/pdf/boardminutes/2017/20170726/07-%2026-17%20Minutes.pdf>) (accessed July 24, 2019).

exercise supports that the Board’s approval of resiliency, redundancy and accelerated pipeline replacement programs have strengthened the local natural gas distribution systems delivering gas to residents, businesses and in-state electric generation, *it also demonstrates that service reliability risks exist outside of New Jersey with interstate pipelines that bring gas into the state and in New Jersey where distribution systems have only single source connections to interstate pipelines, rather than redundant connections to alternative suppliers.” Ibid.*

The PennEast Project, by providing an alternative supply of natural gas into the Elizabethtown Gas system and the gas systems of the other local distribution companies, New Jersey Natural Gas and South Jersey Gas, increases the reliability of firm pipeline transportation into the market, which is currently constrained, and provides a more direct-connected interstate supply that will increase system reliability. The alternative supply of natural gas provided by the Project improves the reliability of the interstate supply of natural gas to New Jersey, which is essential to meet the heating, cooking, and electric needs of New Jersey families and businesses.

In terms of the economic benefits, the Project will enable Elizabethtown Gas, and the other local distribution companies to better serve existing customers in their service territories. Each municipality along the route benefits from the extension of more affordable natural gas service. The communities near the Project are disproportionately dependent on heating oil and propane—fuels significantly more expensive and more polluting than natural gas. About three-quarters of New Jersey households rely upon natural gas for heating and about half of all homes and businesses in the State depend upon natural gas for electricity. (EIA, 2018).

However, while natural gas is the predominant home heating fuel in New Jersey, homes in Hunterdon County and in the municipalities where the Project will be located are more heavily dependent upon heating oil and to a lesser extent upon propane, both of which on a per unit basis are significantly more polluting and more expensive compared to natural gas. Accordingly, the Project will help advance the objectives of Elizabethtown Gas to extend service to more communities and customers. The data presented in Table 2.1 demonstrates the greater dependence on heating oil and propane in the communities along the Project route compared to the rest of the State.

Home Heating Fuel	New Jersey	Hunterdon County	Holland	Alexandria	Kingwood	Delaware	Lambertville	W. Amwell
Natural Gas	75%	43%	25%	2%	1%	13%	75%	23%
Heating Oil	9%	36%	54%	57%	47%	56%	16%	51%
Propane	2%	10%	0%	37%	29%	20%	1%	15%
Electricity	12%	8%	13%	3%	14%	4%	8%	6%

Notes:
Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates. Available at: <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml> (Accessed July 14, 2019).

The data presented in Table 2.2 compares the relative CO₂ and NO_x emissions of heating oil, propane, and natural gas based upon an apples-to-apples comparison, which demonstrates that greater use of natural gas for home heating in the communities along the route would significantly reduce emissions.

Home Heating Fuel	Emission of CO ₂ (lbs/CO ₂ /MBTU)*	Emission of NO _x (10-3 kg/NO _x / kgfuel)**	% Reduction CO ₂	% Reduction NO _x
Coal	206-229	4.5	43%-49%	78%
Heating Oil	161	3.0	27%	67%
Propane	139	2.3	16%	57%
Natural Gas	117	1.0	0%	0%

Notes:
 Sources: EIA, How much carbon dioxide is produced when different fuels are burned? Available at <https://www.eia.gov/tools/faqs/faq.php?id=73&t=11> (Accessed July 17, 2019).
 Engineering Toolbox (2009). Combustion of Fuels and Nitrogen Oxides (NO_x) Emission. Available at: https://www.engineeringtoolbox.com/nox-emission-combustion-fuels-d_1086.html (Accessed July 17, 2019).

The data presented in Table 2.3 compares the relative costs of heating oil, propane, natural gas, and electricity, which demonstrates that greater use of natural gas for home heating in the communities along the route would result in significant annual savings for residents.

Fuel	Home Heating (standard appliance)	Home Water Heating (standard)	Total Annual Cost	Total Annual Savings with Natural Gas
Heating Oil	\$2,203	N/A	\$2,814-\$3,235	\$1,791-\$2,212
Propane	\$3,784	\$1,032	\$4,816	\$3,793
Natural Gas	\$809	\$214	\$1,023	\$0
Electricity	\$3,133	\$611	\$3,744	\$2,721

Notes:
 Source: Elizabethtown Gas, Switch to Natural Gas and Save (Feb. 2019) (based on 2,000 ft² house and Feb. 2019 prices). Available at <https://www.elizabethtowngas.com/residential/choosing-natural-gas/savings-calculator> (Accessed on July 17, 2019).

With the growth in usage of natural gas by New Jersey consumers to meet their heating and electricity needs, there is a greater interdependence between adequate supplies of natural gas and electricity and natural gas prices. As natural gas prices are a large portion of the overall cost to generate electricity with natural gas combined cycle generation plants, interstate natural gas transmission constraints periodically cause spikes in the price of natural gas, which significantly affects the price of electricity New Jersey consumers pay. These transmission-constrained price spikes occurred in the winters of 2013-2014 and 2017-2018, when New Jersey and the northeast region experienced severe cold spells caused by perturbations in the jet stream encircling the Arctic, which resulted in masses of extremely cold air flowing down from the Arctic for extended periods of time. These conditions, often referred to as the “Polar Vortex,” caused extremely high demand for natural gas from local natural gas distribution companies, industrial customers and electric generators. A number of scientists find that the frequency of periods of extremely cold

winter temperatures, which place a severe stress on the natural gas delivery system on which New Jersey families and businesses depend for their essential heat and electricity needs, is increasing.⁶ The spike in natural gas demand for heating caused significantly higher natural gas and electricity prices in the U.S. Northeast, including in New Jersey. See EIA, *Northeast and Mid-Atlantic power prices react to winter freeze and natural gas constraints* (Jan. 21, 2014); PJM, *PJM Cold Snap Performance Dec. 28, 2017 to Jan. 7, 2018*; EIA, *Energy Markets Alert: Northeastern Winter Energy Alert* (January 22, 2018); EIA, *Northeastern Winter Energy Alert*, (Jan. 22, 2018)). The cold weather resulted in extremely volatile pricing despite certain new infrastructure projects being added to the region. The colder than normal weather increased peak demands while at the same time the capacity available on existing natural gas pipelines was limited as was available natural gas storage inventories. In January 2014, the weather was so severe that natural gas supplies were diminished and natural gas prices reached well over \$100/million cubic feet (Mcf), exceeding the previous high price in the region (\$20/Mcf) on 13 days during the winter. The same circumstance presented again between December 2017 to January 2018, when severe cold weather caused supply shortages and a spike in natural gas price to over \$100Mcf, which caused widespread unplanned electric outages.

According to detailed economic analyses conducted by Concentric Energy Advisors in 2015 and again in 2018, the additional natural gas capacity from the Project would have reduced electricity and natural gas costs for New Jersey consumers by \$378 million during the winter of 2013-2014 and by \$171 million during the winter of 2017-2018. See, Concentric, *Estimated Energy Market Savings from Additional Pipeline Infrastructure Serving Eastern Pennsylvania and New Jersey*, March 2015; Concentric, *Estimated Energy Market Savings from Additional Pipeline Infrastructure Serving Eastern Pennsylvania and New Jersey: Update for Winter 2017/2018*, April 2018).

For these reasons, the Project clearly is in the public interest and serves the essential needs of families and businesses in safe and reliable natural gas services for heating, cooking, and electricity.

Requirement: iii. Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods, to accomplish the purpose of the proposed regulated activity;

Compliance: The Project has been designed to minimize impacts to regulated wetlands and transition areas, as well as to meet the goals of all other rules and regulations governing development of this nature. Attachment K provides a complete Alternatives Analysis that details impact avoidance and minimization efforts.

⁶ See Rutgers Institute of Earth, Ocean, and Atmospheric Sciences, *Warm Arctic Means Colder, Snowier Winters in Northeastern U.S.* (March 13, 2018).

Requirement: iv. The extent and permanence of the beneficial or detrimental effects which the proposed regulated activity may have on the public and private uses for which the property is suited;

Compliance: The impacts associated with the proposed Project are construction related and largely temporary in nature. Upon completion of construction and restoration activities, the Project will alter the public and private uses for which affected properties are suited in that the pipeline ROW limits future construction activities within portions of the ROW. In addition, trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline to be cut and removed in compliance with FERC requirements to protect the integrity of the pipe. That permanent maintenance activity will result in the conversion of some habitat. PennEast's construction BMPs, HPP (Attachment J-1), and Restoration Plans (Attachment E-3) detail how the functions and values of affected wetlands will be protected to the maximum extent practicable and largely restored following construction. Generally, given that most of the route is located on previously disturbed farmland (which will be unaffected once the pipeline is installed), or collocated with existing utility ROWs, these changes are not anticipated to result in significant adverse impacts to public and private uses for which affected properties are suited.

Requirement: v. The quality and resource value classification pursuant to N.J.A.C. 7:7A-3.3 of the wetland, which may be affected and the amount of freshwater wetlands to be disturbed;

Compliance: Based on a review of alternatives to the Project as proposed, adherence to applicable timing restrictions, consideration of the BMPs utilized during construction to avoid or minimize adverse impacts associated with soil disturbance and proposed post-construction restoration, it is anticipated that Project construction will result in the minimum feasible alteration or impairment of the affected aquatic ecosystems and the hydrologic patterns of the affected HUC 11s. The Project falls within four (4) HUC 11s: (1) Hakhokake Creek / Harihokake Creek / Nishisakawick Creek; (2) Locketong Creek / Wickecheoke Creek; (3) Alexauken Creek / Moore Creek / Jacobs Creek; and (4) Stony Brook.

No significant long-term impact to the quality and resource value classification of the affected wetlands is anticipated. The Alternatives Analysis provided in Attachment K documents how adverse impacts have been avoided and minimized to the maximum extent practicable. PennEast's construction BMPs, HPP (Attachment J-1), and Restoration Plans (Attachment E-3) detail how the functions and values of affected wetlands will be protected to the maximum extent practicable and largely restored following construction. Implementation of the Conceptual Wetland & Riparian Zone Mitigation Proposal, provided as Attachment N to this application, will result in replacement wetland resources of equal ecological value to those lost or disturbed.

Requirement: vi. The economic value, both public and private, of the proposed regulated activity to the general area; and

Compliance: The Project reinforces and enhances the availability, reliability, and resiliency of New Jersey's energy infrastructure and therefore provides State-wide benefits. The Project will provide an economically important lower cost natural gas to meet the energy needs of homes and businesses in the region. Because most of the route is located on previously disturbed farmland, and/or collocated with existing utility ROWs, these economic benefits are provided without significant adverse impacts to the affected properties.

As documented in the Alternatives Analysis provided as Attachment K, numerous studies confirmed the economic benefits associated with the Project, including studies performed by Concentric Energy Advisors, Drexel University's School of Economics, and others. These studies find that the Project will generate positive economic benefits, which range from energy cost savings to consumers and businesses to long-term job creation and an increase in disposable income to consumers. Also, the additional supply of natural gas from a geographically diverse pipeline route will significantly improve the resilience of the interstate supply to New Jersey, Hunterdon and Mercer Counties, and the municipalities along the route, which are vulnerable to disruptions that could occur along existing interstate pipelines.

Requirement: vii. The functions and values provided by the freshwater wetlands and probable individual and cumulative impacts of the regulated activity on public health and fish and wildlife;

Compliance: PennEast designed its Project to provide an environmentally sound, direct and flexible path for transporting natural gas produced in the Marcellus Shale production region in northern Pennsylvania to growing natural gas markets principally in New Jersey.

Wetlands proposed to be crossed by the Project provide a wide variety of functions and values such as providing habitat and movement/dispersal corridors for aquatic and terrestrial species (including certain threatened & endangered species as well as vernal habitat dispersal areas). Existing hydrologic regimes function to improve water quality, by removing nutrients and pollutants from surface runoff. Groundwater recharge is also provided. Floodplain wetlands, particularly forested wetlands, increase flood storage capacity and serve to attenuate flows to streams during storm events - thereby reducing downstream flooding. Wetlands located on publicly accessible parcels also provide values associated with education and recreation opportunities provided to their users.

The tabulation of temporary and permanent impacts to wetlands, transition areas, and State Open Waters are provided on Drawing Sheet PE-FWW-C-004.1 through 7 in Attachment E-1. Approximately 5.1 acres of Project construction will occur in modified agricultural (ModAg) wetlands. Due to the actively managed nature of these wetlands, certain habitat functions and values are diminished compared to surrounding, successional emergent, scrub/shrub, or forested communities. As there will be no permanent vegetation community conversion of these areas, loss of ModAg functions and values will be temporary and will be fully restored upon completion of post-construction restoration. Similarly, approximately 17.1 acres of proposed wetland disturbance will occur in palustrine emergent (PEM) wetlands, which will also be fully restored to PEM wetland communities following construction. In addition, approximately 0.2 acres of palustrine scrub/shrub (PSS) wetlands will be fully restored to PSS wetland communities following construction. Therefore, approximately 63.8% of all wetlands proposed to be disturbed by this Project will experience only temporary disruptions to wetland functions, which will resume following the completion of restoration activities and post construction monitoring.

Alteration to habitat functions provided by palustrine forested (PFO) and PSS wetlands will occur due to an estimated disturbance of approximately 12.5 acres, and 0.2 acres in these wetland communities, respectively. Such alterations are anticipated to result in non-temporary changes to vegetation composition and structure. The HPP provided in Attachment J-1 documents the species composition of wildlife and the steps taken to protect the wildlife in these areas.

In PFO/PSS wetlands located outside of the operational easement, vegetation clearing will consist of cutting vegetation flush to the ground, but no grubbing of stumps is proposed. This clearing

method will serve to preserve vegetation composition and effectuate regeneration of said vegetation. Additionally, these temporary workspaces will be restored in-place, in accordance with a NJDEP approved restoration plan. Over time, these temporary workspaces will recapture functions and values lost during construction of the proposed Project.

Whereas each regulated activity, when performed separately, will cause only minimal adverse environmental impacts, as required by N.J.A.C. 7:7A-10.2(b)12 the cumulative effect of all Project related the regulated activities was reviewed. Based on the sensitive resource avoidance and minimization effort, construction related impact minimization (i.e., utilization of BMPs) and the proposed comprehensive mitigation plan, the cumulative effect of the Project as a whole is also anticipated to have only minimal adverse impacts on the environment, and will cause only minor impacts on freshwater wetlands and State open waters.

Requirement: 13. Will not involve a discharge of dredged material or a discharge of fill material, unless the material is clean, suitable material free from toxic pollutants in toxic amounts, which meets Department rules for use of dredged or fill material;

Compliance: The construction activities will not discharge any dredge material or fill material unless the material is clean, suitable, and free of toxic pollutants in toxic amounts, and which meets the Department rules for use of dredged or fill material.

Implementation of the project specific Soil Erosion and Sediment Control Plan and the employment of PennEast's proposed BMPs will minimize or prevent the inadvertent discharge of soils and sediments to wetland areas. In addition, PennEast has prepared a HDD Inadvertent Returns and Contingency Plan (Attachment R-1) that describes how an inadvertent release of drilling mud would be contained and cleaned up and provides a contingency plan for crossing waterbodies or wetlands in the event an HDD is unsuccessful and how the abandoned drill hole would be sealed, if necessary. Under the Contingency Plan, if there is an inadvertent return, the contractor will immediately take measures to eliminate, reduce, or control the inadvertent return based on the location of the inadvertent return, site specific geologic conditions, and the volume of the inadvertent return.

With respect to any contaminated soils or groundwater encountered during Project construction, NJDEP's Linear Construction Technical Guidance document will be followed. Depending upon contamination levels, measures may include retaining a New Jersey Licensed Site Remediation Professional (LSRP), characterizing/sampling the material, and developing a Material Management Plan that will govern the storage and reuse of excavated materials.

The only known contaminated sites within the workspace along the New Jersey portion of the PennEast Pipeline are located near the Pennington Circle in Hopewell Township. An HDD is proposed in this area. Construction in this area will be conducted in accordance with all NJDEP Site Remediation Program requirements. Construction workspace has been designed to minimize the potential for discharge of impacted soil to wetlands, wetlands transition areas, and other sensitive environmental resources. Construction in this area will be closely monitored to assure that BMPs and other protective measures are properly installed and maintained in this area.

Based upon a review of the Environmental Protection Agency's Clean Water Act (CWA) Section 303(d) list of impaired waters, there is one impaired waterbody crossed by the Project, which is Jacobs Creek. Jacobs Creek is reportedly contaminated with metals, including Mercury. Since the

proposed waterbody crossing construction method at Jacobs Creek is a bore, no disturbance of sediments at Jacobs Creek is anticipated.

Requirement: 14. Is consistent with the applicable approved Water Quality Management Plan (208 Plan) adopted under the New Jersey Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq., unless the activities are not subject to the Department's Water Quality Management Planning rules at N.J.A.C. 7:15; and

Compliance: Construction of the proposed Project will not involve the discharge of wastewater that is subject to NJDEP's Water Quality Management Planning rules. The Project involves the construction of a natural gas transmission pipeline and is not a development that will require new wastewater service or facilities that are the subject of these rules.

Requirement: 15. In accordance with N.J.A.C. 7:7A-2.7, is part of a project that in its entirety complies with the Stormwater Management rules at N.J.A.C. 7:8.

Compliance: "Major Development" is defined in the Stormwater Management rules (N.J.A.C. 7:8-1.2) as:

"Major development" means any "development" that provides for ultimately disturbing one or more acres of land or increasing impervious surface by one-quarter acre or more. Disturbance for the purpose of this rule is the placement of impervious surface or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation. Projects undertaken by any government agency which otherwise meet the definition of "major development" but which do not require approval under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., are also considered "major development."

The overall Project, including aboveground facilities, will ultimately disturb one or more acres of land and increase impervious surface by one-quarter acre or more. As such, the Project is classified as a Major Development.

The pipeline, as linear development, is exempt from the groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements pursuant to N.J.A.C. 7:8-5.2(d)1, since disturbed areas will be revegetated upon completion of the proposed work. Above-ground improvements that include the installation of impervious surfaces will meet the standards found at N.J.A.C. 7:8 with the implementation of stormwater management facilities. The proposed stormwater management facilities are designed to meet groundwater recharge, stormwater runoff quantity, and stormwater runoff quality. A Stormwater Management Report has been prepared for the aboveground facilities associated with the Project. The Stormwater Management Report is provided herewith as Attachment M.

Requirement: (c) The following shall apply to the Department's consideration of whether an alternative is practicable under (b)1 above:

1. **An alternative shall be practicable if it is available and capable of being carried out after taking into consideration cost, existing technology, and logistics in light of overall project purposes;**
 - i. **In considering cost in accordance with (c)1 above, the Department shall consider the acquisition history of the property as a whole, and the amount, nature, and date of investments that PennEast has made in the property as a whole; and**

2. *An alternative shall not be excluded from consideration under this provision merely because it includes or requires an area not owned by PennEast which could reasonably have been or be obtained, utilized, expanded, or managed in order to fulfill the basic purpose of the proposed activity*

Compliance: Various alternatives to the proposed pipeline route that could achieve the overall Project purpose were evaluated in a detailed Alternatives Analysis provided herewith as Attachment K. Alternatives were examined to determine if they would reduce or avoid impacts to freshwater wetlands. In addition to evaluating the impact that each alternative would have on freshwater wetlands and other environmental resources, the Alternatives Analysis examined the cost of each alternative, the feasibility of using existing trenchless technology, and logistics associated with the alternative. Alternatives were compared to the proposed route and a conclusion was reached regarding whether an alternative was preferable to the proposed route.

As a linear development, the property involved is a ROW that is being established for the Project. Therefore, there is no “acquisition history” in the context of this rule for the Project. In addition, PennEast has not yet made investments in the physical modification of the ROW.

All of the alternatives studied in the Alternatives Analysis (Attachment K) are areas not owned by PennEast. Whether or not the properties could reasonably be obtained, utilized, expanded, or managed to fulfill the basic purpose of the proposed activity, had no bearing on the findings of the Alternatives Analysis.

1.4 N.J.A.C. 7:7A-10.3 Additional Requirements for a Non-Water Dependent Activity in a Wetland or Special Aquatic Site

Requirement: (a) In addition to meeting the requirements of N.J.A.C. 7:7A-10.2, a non-water dependent activity in a freshwater wetland or special aquatic site shall meet the requirements of this section. If an activity is water-dependent, or if it disturbs only a State open water that is not a special aquatic site, this section does not apply to the activity.

(b) There shall be a rebuttable presumption that there is a practicable alternative to a nonwater dependent activity in a freshwater wetland or in a special aquatic site, which alternative does not involve a freshwater wetland or special aquatic site, and that such an alternative would have less of an impact on the aquatic ecosystem.

Compliance: A pipeline is not a water-dependent activity as defined at N.J.A.C. 7:7A-1.3. Therefore, pursuant to N.J.A.C. 7:7A-10.3(b), there is a rebuttable presumption that there is a practicable alternative to a nonwater-dependent activity in a freshwater wetland or in a special aquatic site, which alternative does not involve a freshwater wetland or special aquatic site, and that such an alternative would have less of an impact on the aquatic ecosystem. N.J.A.C. 7:7A-10.3(c) establishes what an applicant must demonstrate to rebut that presumption.

Requirement: (c) In order to rebut the presumption established in (b) above, an applicant must demonstrate all of the following:

1. *That the basic project purpose cannot reasonably be accomplished using one or more other sites in the general region that would avoid or reduce the adverse impact on an aquatic ecosystem;*

Compliance: PennEast applied to the FERC for a Certificate and Related Authorizations on September 24, 2015 (FERC Application) for the Project. The FERC granted this Certificate on January 19, 2018 and authorized the construction and operation of facilities to provide service under Section 7 of the NGA.

PennEast designed its Project to provide an environmentally sound, direct, and flexible path for transporting natural gas produced in the Marcellus Shale production region in northern Pennsylvania to growing natural gas markets principally in New Jersey.

PennEast has completed an Alternatives Analysis that examined each wetland crossing to determine if there were practicable alternatives that would avoid or reduce adverse impact on these aquatic ecosystems. That Alternatives Analysis is provided herewith as Attachment K.

In addition, PennEast applied to the FERC for a Certificate and Related Authorizations on September 24, 2015 for the Project. The FERC conducted an environmental review of the Project pursuant to the NEPA, including the preparation of a FEIS which the FERC issued on April 7, 2017. Section 3 of the FEIS provides a summary of the FERC's evaluation of alternatives to the Project, including the no-action alternative, system alternatives, major route alternatives, and minor route variations. The FEIS discusses the FERC's evaluation of four major route alternatives to the proposed pipeline route and 83 route variations (39 of which were integrated into the route).

Attachment K demonstrates that the basic purpose of the Project cannot reasonably be accomplished using one or more other routes in the general region and Project corridor, as defined by the Project delivery points, that would avoid or reduce the adverse impact on the aquatic ecosystems in New Jersey that are affected by the Project. The Project purpose requires the pipeline to meet the specified delivery points, which in turn dictates a Project corridor with a defined northwest-southeast orientation connecting the delivery point in Holland Township (Gilbert Electric Generating Station) to the delivery point in West Amwell Township (Algonquin and Texas Eastern pipelines) to the delivery point in Hopewell Township (Transco pipeline). The Project's three New Jersey connection points dictate a route that traverses a myriad of freshwater wetland complexes and stream networks. Simply and repeatedly shifting the Project route to the west or to the east within any similarly-oriented corridor would not result in less adverse impact on the aquatic ecosystem or avoid freshwater wetlands, State open waters, or riparian areas. Rather, such realignments would merely substitute similar environmental consequences for those associated with the Proposed Route. No practicable alternatives have been identified that will result in less alteration or impairment of the affected aquatic ecosystems and the hydrologic patterns of the affected HUC 11s.

Requirement: 2. That the basic project purpose cannot reasonably be accomplished if there is a reduction in the size, scope, configuration, or density of the project as proposed;

Compliance: Pursuant to the NGA, the FERC is the agency that determines whether there is a public need and/or public benefit from a proposed project and determines that the size, scope and configuration of the project is necessary. The FERC's issuance of a Certificate is a dispositive finding that the Project serves a compelling public benefit. Upon the FERC's issuance of a Certificate, the Project is presumed to serve a significant public benefit. This Certificate, granted by the FERC on January 19, 2018, authorized the construction and operation of pipeline facilities to provide 1.1 billion cubic feet per day (bcf/d) of year-round natural gas transportation service, a capacity which dictates the particular size, scope and configuration to provide service under Section 7 of the NGA.

Requirement: 3. That the basic project purpose cannot reasonably be accomplished by an alternative design that would avoid or reduce the adverse impact on an aquatic ecosystem;

Compliance: PennEast has completed an Alternatives Analysis that examined each wetland crossing to determine if there were practicable alternatives that would avoid or reduce adverse impact on these aquatic ecosystems. That Alternatives Analysis is provided herewith as Attachment K.

As noted in the compliance statement for N.J.A.C. 7:7A-10.2(b)12ii above, the Project cannot reasonably be accomplished using one or more other routes in the general region and Project corridor, as defined by the Project delivery points, that would avoid or reduce the adverse impact on the aquatic ecosystems in New Jersey that are affected by the Project. The Project purpose requires the pipeline to be designed to accommodate the needed capacity and to meet the specified delivery points, which in turn dictates a Project design and corridor that traverses a myriad of freshwater wetland complexes and stream networks. Simply and repeatedly shifting the Project route to the west or to the east within any similarly-oriented corridor would not result in less adverse impact on the aquatic ecosystem or avoid freshwater wetlands, State open waters, or riparian areas. Rather, such realignments would merely substitute similar environmental consequences for those associated with the Proposed Route. No practicable alternative designs have been identified that will result in less alteration or impairment of the affected aquatic ecosystems and the hydrologic patterns of the affected HUC 11s.

Requirement: 4. That in cases where PennEast has rejected alternatives to the project as proposed due to constraints such as inadequate zoning, infrastructure, or parcel size, PennEast has made reasonable attempts to remove or accommodate such constraints; and

Compliance: None of the alternatives to the proposed Project were rejected due to constraints such as inadequate zoning, infrastructure, or parcel size.

Requirement: 5. If any portion of the proposed activity will take place in an exceptional resource value wetland or in trout production waters, that the requirements of N.J.A.C. 7:7A-10.4 are met.

Compliance: N.J.A.C. 7:7A-10.4 requires that an applicant for a non-water dependent activity in exceptional resource value wetlands or trout production waters demonstrate that either:

- 1. That there is a compelling public need for the proposed activity greater than the need to protect the freshwater wetland or trout production water, and that the need cannot be met by essentially similar projects in the region which are under construction or expansion, or which have received the necessary governmental permits and approvals; or*
- 2. That denial of the permit would impose an extraordinary hardship on PennEast brought about by circumstances peculiar to the subject property.*

As noted in the compliance statement for N.J.A.C. 7:7A-10.2(b)12ii above, the Project satisfies a compelling public need for two independent reasons. First, the FERC has determined that this new natural gas infrastructure is needed to ensure future domestic energy supplies and to enhance the reliability of the natural gas supply grid by providing additional transportation capacity connecting New Jersey local distribution companies and their residential, commercial, and industrial customers with sources of natural gas in Pennsylvania. The findings made by FERC in the Certificate pursuant

to the NGA establish a compelling public need for the Project and control the determination of public interest and need under both the FWPA (N.J.S.A. 13:9B) and the FHACA (N.J.S.A. 58:16A-50). Second, a compelling public need is established by the specific facts set forth in this application demonstrating the essential nature of the public services that will be provided by the Project, which will serve the heating and electricity needs of homes and businesses in each of the municipalities through which the Project traverses.

Additionally, the compliance statement for N.J.A.C. 7:7A-10.2(b)12ii above demonstrates that a denial of the permit would impose an extraordinary hardship on PennEast brought about by circumstances peculiar to the subject property, namely the fact that FERC has ordered PennEast to construct the Project of the defined capacity, along the defined corridor to serve the defined delivery points.

1.5 N.J.A.C. 7:7A-10.4 Additional Requirements for a Non-Water Dependent Activity in Exceptional Resource Value Wetlands or Trout Production Waters

Requirement: (a) If an applicant proposes a non water-dependent activity in wetlands of exceptional resource value or in trout production waters, PennEast, in addition to complying with all other requirements in this subchapter, shall also demonstrate either:

- 1. That there is a compelling public need for the proposed activity greater than the need to protect the freshwater wetland or trout production water, and that the need cannot be met by essentially similar projects in the region which are under construction or expansion, or which have received the necessary governmental permits and approvals; or***
- 2. That denial of the permit would impose an extraordinary hardship on PennEast brought about by circumstances peculiar to the subject property.***

Compliance: The pipeline is the only proposed Project that has been designed to provide a long-term solution to bring the lowest priced natural gas in the country, produced in the Marcellus Shale region in northern Pennsylvania, directly to homes and businesses in New Jersey. This Project was developed in response to market demands in New Jersey, and a commitment to distribute this domestically produced, low cost energy to existing gas transmission and distribution pipelines in New Jersey. At present, many other States in the country have begun to benefit from this low-cost domestically produced source of energy: this Project will enable New Jersey to tap this beneficial source of natural gas.

As noted in the compliance statement for N.J.A.C. 7:7A-10.2(b)12ii above, the Project satisfies a compelling public need for two independent reasons. First, the FERC has determined that this new natural gas infrastructure is needed to ensure future domestic energy supplies and to enhance the reliability of the natural gas supply grid by providing additional transportation capacity connecting New Jersey local distribution companies and their residential, commercial, and industrial customers with sources of natural gas in Pennsylvania. The findings made by FERC in the Certificate pursuant to the NGA establish a compelling public need for the Project and control the determination of public interest and need under both the FWPA (N.J.S.A. 13:9B) and the FHACA (N.J.S.A. 58:16A-50). Second, a compelling public need is established by the specific facts set forth in this application demonstrating the essential nature of the public services that will be provided by the Project, which will serve the heating and electricity needs of homes and businesses in each of the municipalities through which the Project traverses.

The Project has been designed to be in compliance with the NJDEP Freshwater Wetlands Rules, avoiding impacts through construction techniques and routing considerations, and minimizing impacts to the maximum extent practicable.

Denial of this permit would not only bring extraordinary hardship to the Project as proposed, but to the residents and businesses of New Jersey who would lose the opportunity to receive domestically produced, low cost natural gas as an energy supply from a geographically diverse interstate pipeline to improve resiliency, reduce heating and electricity costs, and reduce air pollution emissions.

1.6 N.J.A.C. 7:7A-11.2 General Mitigation Requirements

Requirement: (a) Mitigation shall be in-kind and shall fully compensate for any ecological loss. The Department will consider proposals for out-of-kind mitigation, provided the mitigator demonstrates to the Department that the mitigation meets the goals and objectives of this subchapter and would result in equal ecological functions and values as compared to the ecological functions and values of the resource(s) prior to loss or impact. In order to demonstrate equal ecological functions and values, the mitigator shall provide current scientific literature concerning wetlands, aquatic resources, and mitigation; as well as survey the conditions on the site of disturbance and on the proposed mitigation area and provide written documentation regarding the existing and proposed soil conditions, type and density of vegetation, any existing contamination or other degradation, sediment and pollution removal ability and flood storage capacity of the wetland resources, all proposed soil erosion protection measures, and existing, as well as any anticipated, wildlife habitat conditions. The documentation shall also detail how the mitigation proposal will replace the ecological values of the wetland resource lost or disturbed.

Compliance: PennEast has developed a Conceptual Wetland & Riparian Zone Mitigation Proposal provided as Attachment N to this application. The mitigation plan provides a discussion of how the mitigation activities proposed will result in replacement wetland resources of equal ecological value to those lost or disturbed.

Requirement: (b) Mitigation proposals may be submitted as part of a permit application for concurrent review. The determination as to whether a permit application should be approved shall be independent of the analysis of proposed mitigation for compliance with this subchapter. Where a mitigation proposal is not submitted as part of a permit application for an otherwise approvable project and this chapter requires mitigation for wetland, State open water, and/or transition area impacts proposed, the Department shall place a condition upon any permit issued requiring submission and Department approval of a mitigation proposal prior to the commencement of any regulated activities under the permit.

Compliance: A Conceptual Wetland & Riparian Zone Mitigation Proposal is provided for concurrent review as Attachment N of this application.

Requirement: (c) A mitigator shall carry out the full acreage amount of mitigation required under this subchapter, unless the mitigator demonstrates, through use of productivity models or other similar studies, that a smaller mitigation area will result in replacement wetland resources of equal ecological value to those lost or disturbed. However, in no case shall the Department approve a mitigation ratio of less than 1:1. The mitigator shall demonstrate equal ecological value in accordance with (a) above.

Compliance: The Conceptual Wetland & Riparian Zone Mitigation Proposal provides a discussion of how the mitigation activities proposed will result in replacement wetland resources of equal ecological value to those lost or disturbed.

Requirement: (e) *When mitigation is required in order to compensate for impacts to a freshwater wetland, State open water, and/or transition areas resulting from regulated activities, the Department shall authorize any regulated activities required to undertake and complete the mitigation through:*

1. *An authorization under a general permit;*
2. *A freshwater wetlands individual permit;*
3. *An open water fill individual permit;*
4. *A special activity transition area waiver at N.J.A.C. 7:7A-8.3(g);*
5. *Approval of a mitigation proposal submitted to comply with a condition of a permit;*
6. *An enforcement document specifying mitigation requirements; or*
7. *Approval of a mitigation proposal submitted to comply with the requirements of an enforcement document.*

Compliance: PennEast is seeking NJDEP's concurrence on the Conceptual Wetland & Riparian Zone Mitigation Proposal, submitted herewith as Attachment N. Upon obtaining concurrence regarding a mitigation concept, PennEast will finalize plans for the mitigation sites and request permit authorization for regulated activities.

Requirement: (f) *To be approved under this subchapter, mitigation must have a high probability of long-term success which, at a minimum, requires the following:*

1. *Adequate financial and other resources dedicated to the project;*
2. *A project design that takes advantage of and works within the existing conditions in the proposed mitigation area to the extent possible;*
3. *Hydrology in and around the mitigation area adequate to support wetland conditions year round and indefinitely into the future. The hydrology for a proposed wetland mitigation site shall not include discharged stormwater;*
4. *Soils in the mitigation area must be adequate to support wetland conditions; and*
5. *Assignment of responsibility for long-term maintenance of the mitigation area to an entity that has adequate resources to ensure maintenance as required by this subchapter.*

Compliance: PennEast has sufficient financial and other resources to assure that wetland mitigation for the Project will be successful. PennEast retained Amy S. Green Environmental Consultants (ASGEC) to prepare and implement the Conceptual Wetland & Riparian Zone Mitigation Proposal for the Project. ASGEC has a proven track record of designing and implementing successful wetland mitigation projects.

The proposed mitigation project design is framed within the context of existing conditions at the mitigation sites. Information regarding soils and hydrology (both on and off-site) has been used in preparation of the mitigation design to assure that soils and hydrology will support wetland conditions.

Requirement: (g) *Mitigation shall not commence until the Department has approved a mitigation proposal through one of the approvals listed at (e) above. In addition, for mitigation through a monetary contribution to the in-lieu fee mitigation program or a land donation, the amount of*

money or the particular parcel of land must also be approved by the Wetlands Mitigation Council.

Compliance: Off-site mitigation activities will not commence without NJDEP approval.

Requirement: (h) Mitigation approved under this subchapter may also require additional State or Federal permits or approvals, such as a flood hazard area permit or a coastal permit from the Department or an approval from the USACE. Mitigation shall not commence until all necessary permits or approvals are obtained.

Compliance: Mitigation shall not commence until all necessary permits or approvals are obtained.

Requirement: (j) A mitigation area shall be permanently protected from future development by a conservation restriction in accordance with N.J.A.C. 7:7A-12.

Compliance: Off-site mitigation areas will be permanently protected from future development by a conservation restriction in accordance with N.J.A.C. 7:7A-12.

Requirement: (k) Mitigation may consist of one or more mitigation alternatives set forth under this subchapter.

Compliance: The mitigation alternatives proposed comply with the Subchapter 11 of the Freshwater Wetland Protection Act rules as detailed in the Conceptual Wetland & Riparian Zone Mitigation Proposal (Attachment N).

Requirement: (l) Mitigation for multiple disturbances by a single permittee may, upon Department approval, be aggregated into a single mitigation project. Such an aggregated mitigation project shall not be used as mitigation for disturbances by any person other than the permittee, unless the permittee obtains approval of the project as a mitigation bank under this subchapter.

Compliance: As is generally true of any linear development, the Project will disturb multiple wetland areas. Aggregated mitigation of these disturbances is proposed. Comparatively, one larger area of aggregated mitigation is generally understood to be preferred to several small mitigation projects. PennEast is not seeking approval of the mitigation project as a mitigation bank. Areas approved for mitigation of Project-related wetland impacts will not be used as mitigation for disturbances by any person other than PennEast.

Requirement: (m) Mitigation provided to satisfy a mitigation requirement of a Federal or local law or another State law shall not substitute for, or otherwise satisfy, any mitigation requirement under this chapter unless the mitigation project also meets the requirements of this subchapter. For example, a mitigation project proposed to meet a mitigation requirement of the Coastal Zone Management Rules at N.J.A.C. 7:7 shall satisfy a mitigation requirement imposed under this chapter only if the proposed mitigation project meets the requirements of this subchapter.

Compliance: PennEast is seeking approval of a Conceptual Wetland & Riparian Zone Mitigation Plan, provided as Attachment N, pursuant to the requirements of N.J.A.C. 7:7A, Subchapter 11.

Requirement: (n) *If the mitigator encounters a possible historic property that is or may be eligible for listing in the New Jersey or National Register, the mitigator shall preserve the resource, immediately notify the Department, and proceed as directed by the Department.*

Compliance: Details regarding the potential effect of the proposed mitigation activities on cultural resources are provided in the Conceptual Wetland & Riparian Zone Mitigation Proposal.

1.7 N.J.A.C. 7:7A-11.3 Timing of Mitigation

Requirement: (a) *Mitigation shall be performed within the applicable time period below:*

- 1. Except for restoration of a temporary disturbance under (a)2 below, mitigation required under a general permit authorization, individual permit, or special activity transition area waiver shall be performed prior to or concurrently with the regulated activity that causes the disturbance;*
- 2. Mitigation for any temporary disturbance shall commence immediately upon completion of the regulated activity that caused the disturbance and shall continue until completion, which shall not exceed six months after the cessation of the regulated activities that caused the disturbance; and*
- 3. Mitigation required as part of an enforcement action shall be performed in accordance with the schedule set forth in the enforcement document.*

Compliance: Mitigation for temporary disturbances will commence immediately upon completion of regulated activities. Other mitigation will occur prior to or concurrently with the regulated activities.

Requirement: (b) *All mitigation shall be continued until completion according to the schedule in the approved mitigation proposal.*

Compliance: A schedule for implementation and monitoring of proposed mitigation activities will be finalized as part of NJDEP's review of the Conceptual Mitigation Plan.

1.8 N.J.A.C. 7:7A-11.4 Property Suitable for Mitigation

Requirement: (a) *The Department shall approve mitigation only on property that is owned in fee simple and under legal control of the person responsible for performing the mitigation, unless the person responsible for performing the mitigation demonstrates that they have legal rights to the property sufficient to enable compliance with all requirements of this chapter.*

Compliance: Property included in the Conceptual Mitigation Plan is owned in fee simple by PennEast or is otherwise under sufficient legal control of PennEast so as to enable compliance with NJDEP's requirements.

Requirement: (e) *The Department shall not approve creation, restoration, or enhancement in an area that the Department has determined is currently of high ecological value, for example if the area contains a mature, well developed, ecologically desirable natural community; or a forested habitat.*

Compliance: Areas proposed for mitigation activities have been subject to human disturbance and do not presently have high ecological value.

Requirement: (f) *The Department shall not approve creation, restoration, or enhancement in an area that the Department has determined is a significant cultural or historic resource, as identified in accordance with N.J.A.C. 7:7A-19.5.*

Compliance: Details regarding the potential effect of the proposed mitigation activities on cultural resources are provided in the Conceptual Mitigation Plan.

Requirement: (g) *The Department shall require a habitat assessment if the Department deems such an assessment necessary to determine if an area is suitable for mitigation through enhancement. Any habitat assessment shall be performed in accordance with a scientific protocol approved by the Department.*

Compliance: Discussion of habitats at the proposed mitigation sites can be found in the Conceptual Wetland & Riparian Zone Mitigation Proposal.

Requirement: (h) *The Department shall not approve mitigation that would:*

1. *Destroy, jeopardize, or adversely modify a present or documented habitat for threatened or endangered species; or*
2. *In any way jeopardize the continued existence of any local population of a threatened or endangered species*

Compliance: The Conceptual Wetland & Riparian Zone Mitigation Proposal contains an evaluation of the possible presence of threatened or endangered species habitats at each proposed mitigation site. Proposed mitigation activities are not located in present or documented habitat and would not jeopardize the continued existence of any local population of a threatened or endangered species.

Requirement: (i) *The Department shall not approve mitigation in an area where the proposed mitigation poses an ecological risk. For purposes of this section, ecological risk means that the mitigation may result in the reintroduction of contamination to ecological communities, the exposure of humans to contamination, or the contamination of the mitigation site by subsequent exposure to new areas of contamination requiring remediation. The mitigator shall properly characterize and assess the mitigation area in accordance with the Technical Requirements for Site Remediation at N.J.A.C. 7:26E-1.16 and 4.9 to determine ecological risk.*

1. *If the Department determines based on the characterization and assessment that the mitigation activities at the proposed site do not pose an ecological risk, the Department shall complete its review of the proposed mitigation site to determine whether the proposed mitigation satisfies the requirements of this subchapter.*
2. *If the Department determines based on the characterization and assessment that the proposed mitigation activities at the proposed site do pose an ecological risk, the mitigator shall not be permitted to use the site for mitigation unless the mitigator remediates the site pursuant to the Technical Requirements for Site Remediation at N.J.A.C. 7:26E-4.8, 5.1, and 5.2. The Department shall allow the mitigator to proceed with the mitigation project only after it demonstrates that the remediation and/or mitigation activities will fully address the ecological risk and that the proposed mitigation satisfies the requirements of this subchapter.*

Compliance: Environmental screening has been conducted at each proposed mitigation site and mitigation at these sites is not anticipated to result in the reintroduction of contamination to ecological communities, the exposure of humans to contamination, or the contamination of the

mitigation site by subsequent exposure to new areas of contamination requiring remediation. Additional information is provided with the Conceptual Wetland & Riparian Zone Mitigation Proposal.

Requirement: *(j) Properties where a substantial amount of soil must be removed in order to achieve suitable wetland hydrology are not acceptable mitigation sites.*

Compliance: Establishing suitable hydrology at the proposed mitigation sites does not require significant soil removal.

1.9 N.J.A.C 7:7A-11.6 Basic Requirements for Mitigation Proposals

Requirement: *(a) A mitigation proposal required under this chapter shall be submitted at least 90 calendar days prior to the commencement of regulated activities authorized by a permit.*

Compliance: PennEast has submitted a mitigation proposal as part of this application.

Requirement: *(c) A mitigation proposal shall include all information necessary for the Department to determine if the requirements of this subchapter are met.*

Compliance: Attachment N, PennEast's Conceptual Wetland & Riparian Zone Mitigation Proposal, provides preliminary information anticipated to be necessary for NJDEP to determine if the requirements of N.J.A.C. 7:7A, Subchapter 11 are met. Additional detail and supplemental information will be provided as the mitigation plan is finalized.

Requirement: *(d) The applicant shall provide notification in accordance with N.J.A.C. 7:7A-17 for all mitigation proposals to be carried out at a location that is not the location of the permit activity that include creation, enhancement, or restoration (except restoration for a temporary disturbance).*

Compliance: Notice of proposed mitigation activities has been provided in accordance with N.J.A.C. 7:7A, Subchapter 17.

Requirement: *(e) The information required to be submitted in a mitigation proposal for restoration, creation, and/or enhancement, uplands preservation, and land donation is set forth in the appropriate mitigation proposal checklist, available from the Department's website at the address set forth at N.J.A.C. 7:7A-1.4 and described at (h) and (i) below.*

Compliance: Attachment N, PennEast's Conceptual Wetland & Riparian Zone Mitigation Proposal, provides the information required for a mitigation proposal as set forth in NJDEP's mitigation proposal checklists.

Requirement: *(g) A mitigation proposal for the purchase of bank credits shall consist of a description of the type and quantity of wetland resource disturbance for which mitigation is being proposed, a copy of the permit (if issued) authorizing the disturbance being mitigated, and identification of the mitigation bank from which appropriate credits will be purchased.*

Compliance: The use of mitigation bank credits is not proposed, therefore this requirement is not applicable.

Requirement: (h) The mitigation proposal checklists identified at (e) above require the following information:

- 1. Basic information regarding the applicant, the specific impacts for which the mitigation is intended to compensate, and a copy of the permit (if issued) or enforcement document that is the source of the mitigation requirement;**
- 2. Information to enable the Department to determine the loss of functions and values caused by the disturbance for which the mitigation is required, including scientific information such as scientific literature, models or other studies concerning wetlands, soils, vegetation, hydrology, wildlife habitat and any other factors relevant to the functions and values of the site of the disturbance for which mitigation is required; previous Department approvals or correspondence regarding the disturbance; maps, photographs; soil or vegetation samples; delineations and/or other visual materials relating to the site of the disturbance;**
- 3. Information demonstrating that the proposed mitigation alternative complies with N.J.A.C. 7:7A-11.9 or 11.10, as applicable, including information on the feasibility or practicability of other mitigation alternatives;**
- 4. The names and addresses of all consultants, engineers, and other persons providing technical assistance in preparing the mitigation proposal;**
- 5. Any letters, contracts, agreements, conservation restrictions, or other draft or executed documents necessary to ensure compliance with this subchapter;**
- 6. Any information necessary to ensure compliance with the Federal rules governing the Department's assumption of the Federal 404 program at 40 CFR 233.30;**
- 7. A certification of truth and accuracy in accordance with N.J.A.C. 7:7A-16.2(j);**
- 8. Consent from the owner of the proposed mitigation area allowing the Department to enter the property in a reasonable manner and at reasonable times to inspect the proposed mitigation area;**
- 9. The following material necessary to explain and illustrate the existing and proposed conditions at the mitigation site:**
 - i. Visual materials, such as maps, site plans, planting plans, surveys, topography, diagrams, delineations, and/or photographs;**
 - ii. A narrative describing the existing conditions and proposed mitigation, as well as supporting soil or vegetation samples; and**
 - iii. A preventive maintenance plan detailing how invasive or noxious vegetation will be controlled, and how predation of the mitigation plantings will be prevented;**
- 10. A specific breakdown of each resource for which mitigation is being proposed (for example, 0.01 acres of forested wetlands or 0.4 acres of scrub shrub wetlands) and the type and quantity of proposed mitigation for each resource;**
- 11. Information and/or certifications regarding the presence or absence of endangered and/or threatened wildlife and plant species habitat, or other features on the proposed mitigation area that are relevant to determining compliance with this chapter.**
- 12. A certification that the proposed mitigation will not adversely affect historic resources that are listed or are eligible for listing on the New Jersey or National Register of Historic Places;**
- 13. Information regarding whether the proposed mitigation activities, including any restriction or transfer of the mitigation area, require approval by other Federal, interstate, State and local agencies, and information on any approvals or denials received;**
- 14. Information regarding relevant features of other properties in the vicinity of the mitigation area, such as whether nearby properties are publicly owned, or contain preserved open space or significant natural resources;**

15. *Schedules describing in detail the sequence of mitigation activities and estimated dates for completion for each mitigation activity. For example, this might include approximate dates for completing each legal transaction involved in a land donation, or this might include site preparation and planting dates for a wetlands creation project;*
16. *Cost estimates to perform the mitigation and maintain the mitigation area after construction and/or transfer is completed;*
17. *A preliminary characterization and assessment of the site in accordance with N.J.A.C. 7:7A-11.4(h) to enable the Department to determine if contamination is present and if the proposed mitigation activities pose an ecological risk;*
18. *A description of post-construction activities, including schedules for monitoring, maintenance, and reporting; and*
19. *Contingency measures that will be followed if the mitigation project fails or shows indications of failing.*

Compliance: PennEast’s Conceptual Wetland & Riparian Zone Mitigation Proposal provides preliminary information intended to address the requirements of N.J.A.C. 7:7A-11.6(h). Additional detail and supplemental information will be provided as the mitigation plan is finalized.

Requirement: *(i) In addition to the information required by the mitigation proposal checklist as set forth at (h) above, a proposal to create, restore, or enhance wetlands shall also include a projected water budget for the proposed mitigation site. The water budget shall:*

1. *Detail the sources of water for the mitigation project, as well as the water losses;*
2. *Document that an ample supply of water is available to create, enhance, or restore wetland conditions, as applicable;*
3. *Contain sufficient data to show that the mitigation project will, indefinitely into the future, have sustained wetland hydrology; and*
4. *Include the following regional information for the proposed and existing site conditions:*
 - i. *The tidal range (low, high, and spring high tide) over the course of a month (where applicable);*
 - ii. *The elevation of the existing reference wetland system in the vicinity of the project site;*
 - iii. *The salinity range of adjacent waters (where applicable); and*
 - iv. *A detailed discussion relating to the created substrate of the proposed mitigation site.*

Compliance: PennEast’s Conceptual Wetland & Riparian Zone Mitigation Proposal provides preliminary information intended to address the requirements of N.J.A.C. 7:7A-11.6(i). Additional detail and supplemental information will be provided as the mitigation plan is finalized.

1.10 N.J.A.C. 7:7A-11.8 Mitigation for a Temporary Disturbance

Requirement: *(a) Mitigation for a temporary disturbance shall be performed as follows:*

1. *For a disturbance of non-forested freshwater wetlands or of State open waters, restoration of the area temporarily disturbed; or*
2. *For a disturbance of forested freshwater wetlands, either:*
 - i. *Restoration of the area temporarily disturbed to a forested wetland; or*
 - ii. *Restoration of the area temporarily disturbed to a non-forested wetland, and in addition, one acre of mitigation in accordance with this subchapter for each acre of disturbance.*

Compliance: PennEast’s Conceptual Mitigation Proposal presents a comprehensive mitigation plan that includes restoration of temporarily disturbances. Discussion of proposed temporary disturbance and actions to restore temporary disturbance is provide in detail in the Conceptual Mitigation Plan.

Requirement: (b) The transition area for a temporary disturbance shall be as follows:

- 1. If the mitigation is restoration performed on the site of the disturbance, the transition area shall be that which was required for the wetland prior to the temporary disturbance; and*
- 2. If additional mitigation is performed under (a)2ii above, the width of the transition area on the mitigation area shall be the width required at N.J.A.C. 7:7A-11.12(c), as applicable.*

Compliance: Restored areas of wetland disturbance will have NJDEP regulated transition areas in accordance with this rule.

1.11 N.J.A.C. 7:7A-11.10 Mitigation Hierarchy for a Larger Disturbance

Requirement: (b) A larger disturbance is a disturbance not listed at N.J.A.C. 7:7A-11.9(b).

Compliance: The Project will result in a disturbance of 1.5 acres or more of freshwater wetlands or State open waters and will not be limited to ordinary resource value wetlands. Therefore, the Project is not a smaller disturbance and the requirements outlined in N.J.A.C. 7:7A-11.10 are applicable.

Requirement: (c) Mitigation for a larger disturbance shall be performed through restoration, creation, or enhancement onsite or, if that is not feasible, then offsite in the same watershed management area as the disturbance or through the purchase of credits from a mitigation bank with a service area that includes the area of disturbance. In determining the feasibility of onsite or offsite mitigation for a larger disturbance, the Department shall consider the following factors regarding the proposed mitigation area:

- 1. Size. Generally, the larger a mitigation area is, the greater its potential environmental benefit. A mitigation area that is associated with a large existing wetland complex is more likely to be environmentally beneficial;*
- 2. Location in relation to other preserved open space. A mitigation area adjacent to public land or other preserved areas is more likely to be environmentally beneficial;*
- 3. Habitat value. A mitigation area that will provide valuable habitat for critical wildlife species or threatened or endangered species is more likely to be environmentally beneficial;*
- 4. Interaction with nearby resources. A mitigation project is more likely to be environmentally beneficial if it complements existing nearby resources. For example a mitigation project that adds riparian wetlands habitat adjacent to an existing stream enhances the environmental value of both the riparian area and the stream; and*
- 5. Availability of parcels for offsite mitigation that meet the requirements of (f) below.*

Compliance: PennEast’s proposed mitigation activities are consistent with the priorities established at NJAC 7:7A-11.10(c) to the maximum extent practicable. The plan proposes relatively large mitigation sites that are proximate to preserved lands, incorporates habitat enhancements, and involves enhancements to streams.

1.12 N.J.A.C. 7:7A-11.12 Requirements for Restoration, Creation, or Enhancement

Requirement: (b) *If creation or restoration is the mitigation alternative, wetlands shall be created or restored at a creation or restoration to lost or disturbed ratio of 2:1, unless the applicant demonstrates in accordance with (b)1 below that creation or restoration at a ratio of less than 2:1 will provide equal ecological functions and values. The mitigation project shall be designed to include a wetlands transition area pursuant to (c) below. The wetlands transition area shall not be counted in the acreage of mitigation provided by the wetlands creation or restoration.*

1. *A mitigator may create or restore wetlands at a ratio of less than 2:1 if the mitigator demonstrates through the use of productivity models or other similar studies that restoring or creating a lesser area of wetlands will result in replacement wetlands of equal ecological value to those lost or disturbed. However, in no case shall the Department approve a ratio of less than 1:1. In order to demonstrate equal ecological value, the mitigator shall survey and provide written documentation regarding, at a minimum, existing soil, vegetation, water quality functions; flood storage capacity; soil erosion and sediment control functions; and wildlife habitat conditions and detail how the mitigation proposal will replace the ecological values of the wetlands lost or disturbed.*

Compliance: Although the proposed mitigation projects are not mitigation banks, it is helpful to use the concept of mitigation credits to relate project impacts and mitigation activities. The Conceptual Mitigation Proposal proposes a specific number of mitigation credits to be generated by each creation and enhancement activity at each mitigation site.

As detailed in Attachment N, the Conceptual Mitigation Proposal proposes a sufficient area of wetland restoration, creation, and enhancement to assure that proposed mitigation will provide sufficient replacement wetland resources of equal ecological value to those lost or disturbed.

Requirement: (c) *A mitigation area involving restoration or creation shall include a transition area. The transition area shall not be counted in calculating the acreage of mitigation required. For example, if a person must create one acre of wetlands, the mitigation area shall include one acre of created wetlands and, in addition, a transition area around the created wetlands. The width of the transition area around a wetland resulting from mitigation shall be determined as follows:*

1. *If the mitigation area includes or will include exceptional resource value wetlands, the transition area shall be 150 feet wide;*
2. *If mitigation is restoration under N.J.A.C. 7:7A-11.8(b)1 of an area temporarily disturbed, the transition area shall be that which was required for the wetland prior to the temporary disturbance; and*
3. *For all mitigation not listed at (c)1 or 2 above, the transition area shall be 50 feet wide.*

Compliance: The Conceptual Wetland & Riparian Zone Mitigation Proposal details a number of different creation and enhancement activities at several mitigation sites. The mitigation plan proposes a specific number of mitigation credits to be generated by each of these creation and enhancement activities.

Requirement: (d) *If enhancement is the mitigation alternative, the Department shall determine, on a case-by-case basis, the amount of enhancement required to ensure that the mitigation results in wetlands of equal or better functions and values to those lost.*

Compliance: Transition areas for enhanced wetlands will be established by NJDEP in accordance with this rule.

Requirement: *(e) Within 60 calendar days after construction of a creation, restoration, or enhancement wetlands mitigation project is completed, the mitigator shall submit a construction completion report to the Department. The Department may establish a different timeframe for the submittal of the construction completion report if it determines that doing so would better facilitate assessing the progress and success of the mitigation. The construction completion report shall include:*

- 1. An as-built plan of the completed mitigation area, showing grading, plantings (including species, size, and densities), and any structures included in the approved mitigation proposal;*
- 2. Photographs of the completed mitigation; and*
- 3. An explanation for any deviation from the approved mitigation proposal.*

Compliance: In accordance with this rule, PennEast will provide a completion report to NJDEP in accordance with a schedule to be established by NJDEP.

Requirement: *(f) In addition to the construction completion report required under (e) above, the mitigator shall submit a post-construction monitoring report to the Department each year for five years after completion of construction, unless a different timeframe for submittal is specified in the approved mitigation proposal. The Department may modify the frequency and/or duration of required reporting if it determines that such modification is necessary to ensure the success of the mitigation. Post-construction monitoring shall begin the first full growing season after the mitigation project is completed.*

Compliance: In accordance with this rule, PennEast will provide post-construction monitoring reports to NJDEP in accordance with a schedule to be established by NJDEP.

Requirement: *(h) The standards by which the wetlands mitigation project shall be determined to be successful are set forth at (h)1 through 5 below. The mitigator shall submit a post-construction monitoring report as required at (g) above demonstrating that these standards have been met. The standards are:*

- 1. The goals of the approved mitigation proposal (including the required transition area) have been achieved;*
- 2. The mitigation site is a wetland, as documented through monitoring well data, stream gauge data, relevant tidal data (when appropriate), photographs, and field observation notes collected throughout the monitoring period;*
- 3. The wetland community comprised of the planted vegetation or targeted hydrophytes as detailed in the approved mitigation proposal and permit conditions has been achieved, or, if not yet achieved, all site indicators suggest that the site is on a positive trajectory to meeting the desired wetland plant community;*
- 4. The mitigation provided meets all applicable requirements of this subchapter; and*
- 5. The mitigator has executed and recorded a conservation restriction for the mitigation area that meets the requirements of N.J.A.C. 7:7A-12.*

Compliance: PennEast is confident that proposed mitigation will be successful when evaluated against these criteria. Post-construction monitoring reports to NJDEP will provide information to address the success criteria established at N.J.A.C. 7:7A-11.12(h).

2.0 REFERENCES

- Concentric Energy Advisors. (2015, March). *Estimated Energy Market Savings from Additional Pipeline Infrastructure Serving Eastern Pennsylvania and New Jersey*, prepared for Penneast Pipeline Company, LLC. Retrieved from <https://penneastpipeline.com/ConcentricEconomicStudy/>
- Econsult Solutions, Inc. & Drexel University's School of Economics. (2015, February 9). *PennEast Pipeline Project Economic Impact Analysis*, prepared for PennEast Pipeline Company, LLC. Retrieved from <https://penneastpipeline.com/economic-impact-analysis/>
- Federal Energy Regulatory Commission (FERC). (2018). Order Issuing Certificates re PennEast Pipeline Company, LLC under CP15-558. January 19. Available online at: <https://www.ferc.gov/CalendarFiles/20180119195524-CP15-558-000.pdf>
- New Jersey Board of Public Utilities (NJBPU). (2011, December 6). *New Jersey Energy Master Plan*, p. 85-86. Retrieved from http://www.nj.gov/emp/docs/pdf/2011_Final_Energy_Master_Plan.pdf
- NJBPU and New Jersey Department of Environmental Protection (NJDEP). (2011). *Strategies to minimize adverse impacts to wildlife from management activities on power line rights-of-way in New Jersey*. Retrieved from http://www.state.nj.us/dep/landuse/download/lur_034.pdf
- PennEast Pipeline Company, LLC (PennEast). (2015). Attachment 4: Blasting Plan – Revision B, submitted in Response to Environmental Information Request Dated November 24, 2015 under CP15-558. Available online at: <https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14071375>
- PennEast. (2016). Attachment 6-1: Revised Well Monitoring Plan, submitted in Responses to April 29, 2016 Environmental Information Request of PennEast Pipeline Company, LLC under CP15-558. Available online at: <https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14249880>
- PennEast. (2016) *Agricultural Impact Minimization Plan*. Retrieved from https://penneastpipeline.com/wp-content/uploads/2017/01/2016_Ag_Mitigation_Plan_11-22-16_630pm.pdf
- Serfes, Michael E. (2016, May 6). *Final Report of U.S. UPA Method 1627 Kinetic and HDD Leach Test Results and Implications for Arsenic Mobilization Related to the Proposed PennEast Pipeline*, prepared for Hatch Mott MacDonald, Inc. for PennEast Pipeline.
- Ziesing, Grace H., Joseph Kwiatek, Eileen Hood, Robert Kingsley, and Brian Albright. (2015). *Phase I Archaeological Survey Report, PennEast Pipeline Project, Hunterdon and Mercer Counties, New Jersey*. Prepared for PennEast Pipeline Company, LLC. URS Corporation, Burlington, NJ.
- Ziesing, Grace H., Joseph Kwiatek, Jesse O. Walker, and Elisabeth LaVigne. (2016). *Phase I Archaeological Survey Report, PennEast Pipeline Project, Hunterdon and Mercer Counties, New Jersey. Addendum 1: Survey Results, August 2015 through June 2016*. Prepared for PennEast Pipeline Company, LLC. URS Corporation, Burlington, NJ.
- Ziesing, Grace H., Joseph Kwiatek, and Elisabeth LaVigne. (2019a). *Phase I Archaeological Survey Report, PennEast Pipeline Project, Hunterdon and Mercer Counties, New Jersey. Addendum 2: Survey*

Results, July 2016 through July 2018. Prepared for PennEast Pipeline Company, LLC. AECOM, Burlington, NJ.

Ziesing, Grace H., Joseph Kwiatek, and Elisabeth LaVigne. (2019b). *Phase I Archaeological Survey Report, PennEast Pipeline Project, Hunterdon and Mercer Counties, New Jersey. Addendum 3: Survey Results, August 2018 through June 2019.* Prepared for PennEast Pipeline Company, LLC. AECOM, Burlington, NJ.