

PENNEAST NORTHAMPTON COUNTY JOINT PERMIT APPLICATION

APS ID# 893363, AUTH ID# 1111983

DEP Application No. E48-435

RESPONSE TO PADEP 7/3/19 TECHNICAL DEFICIENCY LETTER

Comment Number	PADEP Comment	PennEast Response
NO-1	Please provide the stream bank stabilization method on the Erosion and Sediment (E&S) Control Plan's information ribbon. The stream bank stabilization method should be included for each stream that will be crossed by the pipeline and/or access roadway. Please revise accordingly. [25 Pa. Code §105.13(g)]	Figure 21 in the JPA Section H-1: E&S Details demonstrates PennEast's proposed stream bank stabilization approach. Briefly, this includes restoring the natural grade, using native material for streambed restoration, and NAG SC150/C125 erosion control blanket from top of bank outward (100 feet in special protection watersheds and 50 feet in non-special protection watersheds). Since this stream bank stabilization method is being proposed at all open cut stream locations, stream bank stabilization method was not provided as a band on the alignment sheets. However, bore pit and HDD locations (trenchless stream crossings) are shown on the JPA Section H-1: E&S alignment sheets and in these locations no restoration will be required.
NO-2	Please revise the Stream Bank Stabilization Detail on the Erosion and Sediment (E&S) Control Plans to clearly show that natural streambed material will be placed within the streambed only. The detail shows natural streambed material extending up the banks of the stream. [25 Pa. Code § 105.311]	Figure 21 in the JPA Section H-1: E&S Details has been revised accordingly.
NO-3	If there is a potential that riprap bank stabilization may be required, please provide a Riprap Bank Stabilization Detail on the Erosion and Sediment (E&S) Control Plans. [25 Pa. Code §105.13(g)]	Riprap bank stabilization is not proposed in order to foster the vegetative growth within and along the stream. In addition, the use of riprap may increase the thermal impacts to a watercourse compared to vegetative regrowth which may shade the water. Therefore, a riprap bank stabilization detail has not been provided. Refer to Figure 21 in the JPA Section H-1: E&S Details for the proposed stream bed and bank stabilization methods.

Comment Number	PADEP Comment	PennEast Response
NO-4	It appears that there are streams and wetlands that do not have erosion and sediment control best management practices (BMPs) proposed to protect the stream or wetland from sediment deposition during construction of the pipeline. Please check each crossing and provide adequate erosion and sediment control BMPs. Please revise the plans accordingly. [25 Pa. Code §105.13(g)]	In JPA Section M: Erosion and Sediment Control Plan, streams and wetlands have been revised to provide adequate E&S BMPs. Sediment barriers have been placed adjacent to all streams and wetlands.
NO-5	It appears there are several wetlands and watercourses with inconsistencies in respect to the municipality where the resource is located on both the Aquatic Resources Impact Table (ARIT) and the Site-Specific Mapping. Please provide consistent municipality locations for watercourses and wetlands. Please revise all corresponding documentation accordingly (i.e. 050417_GM_1001_I_MI has Kidder Township which is not located within Northampton County). [25 Pa. Code §105.21(a)(1)]	PennEast has revised the ARIT in JPA Section A-1 and the site-specific drawings in JPA Section H-2 to reference the municipality where the impact would occur.
NO-6	The ARIT calls out segments of wetlands on separate rows (e.g., 062218_WA_001_PEM – 1 and 062218_WA_001_PEM - 2), but Site-Specific Mapping and E&S Plans do not make clear or specify which projection of a wetland corresponds to the ARIT row. Please clarify. [25 Pa. Code §105.21(a)(1)]	The JPA Section H-2: Site-Specific Mapping and JPA Section H-1: E&S Plans have been revised to include a callout for features with that are crossed by the Project in more than one location.
NO-7	Per the instructions of 3150-PM-BWEW0557, please provide both the length and width measurements of resource crossings on the ARIT. [DEP Document No. 3150-PM-BWEW0557 and 25 Pa. Code §105.21(a)(1)]	Wetland, watercourse, and floodway lengths and widths are provided on the revised Aquatic Resource Impact Table (ARIT) in JPA Section A-1.

Comment Number	PADEP Comment	PennEast Response
NO-8	In the ARIT, please identify Class A Wild Trout Streams in the Wild Trout column. [25 Pa. Code §105.21(a)(1)]	Class A Trout streams were included in the Wild Trout column but incorrectly labelled as Approved Trout Streams in the ARIT (JPA Section A-1). This has been corrected in the ARIT; the number "1" in the Wild Trout Stream column represents Class A Trout Streams, as indicated in the footnote.
NO-9	Stream 122016_LZ_1001_P_MI is considered to be a Trout Natural Reproduction waters, and therefore all wetlands hydrologically connected are EV. Please verify if wetlands 042418_WA_001_PEM, 122016_LZ_1002_PEM, and 042418_WA_001_PSS meet this criterion. [25 Pa. Code §105.17(1)(iii)]	<p>25 PA Code 105.17(iii) states that "wetlands located in or along the floodplain of the reach of a wild trout stream or waters listed as exceptional value under Chapter 93 and the floodplain of streams tributary thereto..." are classified as exceptional value. Wetlands 042418_WA_001_PEM, 122016_LZ_1002_PEM, and 042418_WA_001_PSS are not located in the floodplain of 122016_LZ_1001_P_MI, a tributary to a wild trout stream. There were no other tributaries delineated within the 400-foot wide survey corridor in this area, and none are visible on aerial photography. Wetland 122016_LZ_1002_PEM does not extend outside of the survey corridor, and Wetland 042418_WA_001 (with both PEM and PPS components) extends outside of the survey corridor only to the northeast. A house exists approximately 225 feet to the northeast of wetland 042418_WA_001, and there are no apparent wild trout waters or tributaries thereto between the wetland and the house. Therefore, none of these wetlands are located in the floodplain of a wild trout water or their tributaries.</p> <p>Wetlands 042418_WA_001_PEM, 122016_LZ_1002_PEM, and 042418_WA_001_PSS also do not meet any other criteria defined in 25 PA Code 105.17.</p>

Comment Number	PADEP Comment	PennEast Response
NO-10	Please provide consistent stationing throughout the pipeline. As an example, the stationing on the Site-Specific Mapping has the stationing starting over at the locations of the resource, while the Erosion and Sediment Control Plans have the stationing continuing along the pipeline. Please revise accordingly. [25 Pa. Code §105.13(g)]	The JPA Section H-2: Site-Specific Mapping has been revised to include stationing that matches the JPA Section H-1: E&S Plans.

Comment Number	PADEP Comment	PennEast Response
NO-11	<p>It appears that there are wetland, watercourse and floodway permanent impact area values on the Aquatic Resource Impact Table, Subfacility Tables, and Site-Specific Mapping of zero (0.00). The Erosion and Sediment Control Plans show that there will be matting or other impacts located within the following wetlands, watercourses, and floodways of the following resources:</p> <ul style="list-style-type: none"> a. 062218_WA_1000_P_MI b. 080917_WA_1001_I_MI c. 071917_MB_1001_I_MI d. 052218_WA_1001_E_MI e. 052218_WA_1003_P_MI f. 102715WA_1002_P_MI g. 051415_JC_1001_I_MI h. 012116_GM_1001_E_IN i. 010615_JC_1002_E_MI j. 031918_WA_1003_I_MI k. 031918_WA_1000_P_MI l. 051415_JC_1005_P_IN m. 012016_GM_1001_I_MI n. 012016_GM_1003_I_MI o. 102715_WA_1001_I_MI p. 102715_WA_1002_I_MI q. 042117_GM_1003_P_MI r. 042418_WA_003_P_MI s. 042418_WA_1002_I_MI-2 t. 122016_LZ_1001_P_MI u. 111314_JC_1003_E_MI v. 042418_WA_001_PEM w. 061416_GM_1001_P_IN <p>Please revise the area to a minimum of 0.001 for consistency. [25 Pa. Code §§ 105.13(g) and 105.21(a)(1)]</p>	<p>As noted in the footnotes of the December 2018 ARIT, Subfacility Table, and Site-Specific Mapping notes, a value of 0.00 denoted impact acreages less than 0.005 acres, and a dash (“-”) denoted no impacts to the wetland, watercourse, or floodway, as applicable. PennEast has edited the JPA Section A-1: ARIT, affected JPA Section L: EA tables, and the JPA Section H-2: Site-Specific Drawings to reflect impacts to the nearest one thousandth of an acre. In instances where impact acreages are less than 0.0004 acres, impacts are rounded to 0.001 acre.</p>

Comment Number	PADEP Comment	PennEast Response
NO-12	There are several stream crossings that have a waterbody crossing method as DX-NF. However, the E&S Typical Details Sheets do not include a waterbody crossing method DX-NF. Please include this waterbody crossing method to the E&S Typical Details Sheets. [25 Pa. Code §105.13(g)]	Figure 20A "Typical Stream Dry Crossing if no Flow" has been added to the JPA Section H-1: E&S details.
NO-13	There are several stream crossings that have a waterbody crossing method as BX. However, the E&S Typical Details Sheets do not include a waterbody crossing method BX. Please include this waterbody crossing method to the E&S Typical Details Sheet. [25 Pa. Code §§105.13(g) and 105.21(a)(1)]	Figure 35 "Typical Bored Stream Crossing" has been added to the JPA Section H-1: E&S details.
NO-14	The proposed temporary equipment bridge (Flexi-float or portable) crossing does not have any measures to prevent sediment from falling off the sides of the equipment crossing into the stream. Please provide a minimum of a 6-inch high side rail wrapped with geotextile. [25 Pa. Code §105.13(g)]	The flexi-float or portable temporary equipment bridge (Figure 23) has been removed from the JPA Section H-1: E&S Details.

Comment Number	PADEP Comment	PennEast Response
NO-15	<p>Provide plans or a detail for the restoration of stream beds at open cut stream crossings. This should include replacement of native stream bed material, reestablishment of the thalweg, and assurance that no significant changes in bed grade occur. [25 Pa. Code §§ 105.13(e)(1)(i)(G), 105.13(e)(1)(ix), 105.1(definition of Mitigation), 105.13(e)(1)(x), 105.15(a)(1), 105.14(b)(4), 105.16(d), and 105.242(c)]</p>	<p>Figure 21 in the JPA Section H-1: E&S Details demonstrates PennEast's proposed stream bank stabilization approach. Briefly, this includes restoring the natural grade, using native material for streambed restoration, and NAG SC150/C125 erosion control blanket from top of bank outward (100 feet in special protection watersheds and 50 feet in non-special protection watersheds).</p> <p>The reestablishment of the thalweg would be part of restoring the natural grade and the native streambed.</p> <p>PennEast intends to assure that no significant changes in the bed grade occur by visually comparing pre- and post-construction conditions. The EI will take pre-construction photos at each of the crossing areas to document the existing conditions and will visually compare the stream bed dimensions and flow patterns to confirm that pre-construction contours have been restored to the extent practicable. The EI will prepare and maintain a record of pre- and post- construction conditions of each stream crossing. The JPA Section M: Erosion and Sediment Control Plan Narrative and JPA Section H-1: E&S General Notes have been revised to include this language.</p>
NO-16	<p>It is the recommendation of the Department that procedures that take into account the weather forecast and current conditions be implemented prior to stream crossing installations. Such procedures should include a sign-off sheet that documents the Environmental Inspector, Foreman, and any other responsible individual agree that the crossing should be constructed during that specific time frame. [25 Pa. Code §105.13(g)]</p>	<p>Prior to commencement of construction activities for a stream crossing installation, an assessment of current weather conditions, weather forecast, and flows of the stream channel for crossing feasibility will be conducted. This determination will be captured in a document requiring sign-off from the Environmental Inspector, Contractor, and PennEast representative that a crossing can be achieved in the projected timeframe. The JPA Section M: Erosion and Sediment Control Plan Narrative and JPA Section H-1: E&S General Notes have been revised to include this language.</p>

Comment Number	PADEP Comment	PennEast Response
NO-17	Please evaluate the need for in-stream supports on temporary equipment crossings of streams. If, upon evaluation, it is determined that supports are required, please provide details and a summary of impacts associated with the in-stream supports. [25 Pa. Code §105.161(a)]	<p>In all instances where an equipment crossing is noted in the ARIT and on plan drawings, PennEast intends to construct a temporary air bridge using equipment mats, or a functional equivalent, as shown on Figure 22 in the JPA Section H-1: E&S Details. Generally, the equipment bridge will span from bank to bank. However, in some cases, a mid-span support may be necessary to support a longer crossing, heavier equipment, and/or due to surrounding steep terrain. Mid-span support would generally be provided by a temporary culvert pipe, which will be sized to convey stream flow and allow for aquatic organism passage. Temporary equipment bridges and associated culverts, where applicable, will be inspected weekly and after runoff events. Accumulated sediment or debris will be removed within 24 hours of inspection so that stream flow is maintained throughout the duration of its use. The temporary impact acreages are quantified in the ARIT.</p> <p>Figure 22 in the E&S Construction Typical (JPA Section H-1) has been revised to include provisions for instream support.</p>
NO-18	It appears that you are proposing to replace several culverts along existing access roads. Please provide hydrologic and hydraulic calculations for the proposed culvert replacements. Also, please be advised that the invert of the culvert must be depressed a minimum of 6-inches below streambed elevation for drainage areas less than one square mile and 12-inches below streambed elevation for drainage areas greater than one square mile. [25 Pa. Code § 105.161]	PennEast does not propose any culvert replacements along existing access roads in Northampton County. PennEast has added Table 1.2.3 to the Project Description Narrative Section 1.2.1.2 (JPA Section J) to describe where culverts exist along access roads and whether any improvements are anticipated. Existing culverts within Northampton County will not be affected by the Project.

Comment Number	PADEP Comment	PennEast Response
NO-19	<p>The Erosion and Sediment Control Plan Alignment Sheets do not include the temporary equipment crossing method for the stream crossings. Please provide the type of temporary equipment bridge crossing method for each stream that is proposed to be crossed by a temporary equipment bridge. Revise the plans and other applicable components of the application appropriately. Please show the proposed erosion and sediment control BMPs on the Erosion and Sediment Control Plan Alignment Sheets. [25 Pa. Code §105.13(g)]</p>	<p>In all instances, PennEast intends to construct a temporary air bridge using wooden equipment mats, or a functional equivalent, as shown on Figure 22 in the JPA Section H-1: E&S Details. Generally, the equipment bridge will span from bank to bank. However, in some cases, a mid-span support may be utilized at dry crossing locations. Watercourses that are crossed by a trenchless method that have access provided by a timber bridge across the feature that require mid span supports have been identified on the JPA Section H-2: site specific and JPA Section H-1: E&S drawing packages.</p> <p>Figure 22 has been revised to include provisions for instream support.</p>
NO-20	<p>Tables 11.3, 11.4 and 11.5 in the E&S General Notes mention use of crown vetch in seeding mixtures. DEP does not recommend use of crown vetch. Remove these seed mixture options and consider using native upland seed mixtures as an alternative. [25 Pa. Code §§ 105.13(e) and 105.21(a)(1)]</p>	<p>Tables 11.3, 11.4, and 11.5 in the JPA Section H-1: E&S General Notes have been replaced with revised seed mixes, which do not include the use of crown vetch.</p>
NO-21	<p>You appear to be proposing to construct permanent waterbars upslope of wetlands. These permanent waterbars should not divert surface water from the wetland as this may cause a secondary impact to the downgradient wetlands. Please provide information elaborating on the potentially affected wetland(s) hydrology and whether the proposed permanent waterbars will cause secondary impacts to those wetland(s). [25 Pa. Code §§ 105.18a(b)(1-3) and 105.14(b)(4)]</p>	<p>The PennEast pipeline nominal construction corridor width is 100 feet. The placement of any waterbars within a 100-foot span will nominally impact the flow path of stormwater within a wetland's contributing drainage area. All waterbars proposed were designed to meet the maximum 2% slope across the right-of-way as required by the E&S Manual and the FERC Plan and Procedures. The intent of this requirement is to minimize the discharge from a waterbar to mitigate against accelerated erosion.</p>

Comment Number	PADEP Comment	PennEast Response
NO-22	<p>You appear to be proposing to have permanent water bars discharge within the riparian buffer of streams. The locations of the permanent waterbars should not create an outlet where the banks of the stream have the potential to erode. The permanent waterbars should outlet to mimic the existing conditions and provide sheet flow to then discharge into a surface water. Also, the permanent waterbars should be located outside of the riparian buffer, as practical. [25 Pa. Code §105.14(b)(4)]</p>	<p>Trench plug and waterbar spacing typically begin at low points, which are usually adjacent to wetlands and streams. Trench plugs are required on either side of a wetland and watercourse, and waterbar spacing begins upslope of the trench plug. All waterbars proposed were designed to meet the maximum 2% slope across the right-of-way as required by the E&S Manual and the FERC Plan and Procedures. The intent of this requirement is to minimize the discharge from a waterbar to mitigate against accelerated erosion. Therefore, the Project design does mimic the existing conditions to mitigate against accelerated erosion adjacent to watercourses.</p> <p>Based on the spacing requirements for waterbars listed in the E&S Manual Chapter 13, depending on the slope of existing grade, the placement of all permanent waterbars outside of riparian zones is not feasible.</p>
NO-23	<p>Please show on the Erosion and Sediment Control Plan Alignment Sheets the locations of public and private water supplies. [25 Pa. Code §§105.13(e)(1)(ii) and 105.14(b)(5)]</p>	<p>PennEast has prepared separate maps that show the locations of public and private water supplies within the distances from HDDs specified by the PADEP. Within Northampton County, this includes public water supply wells within 0.5 mile of the Lehigh River and Interstate 78 HDD bore paths, private water supplies within 1,000 feet of the Lehigh River and Interstate 78 HDD bore paths, and surface water intakes within 1 mile downstream of the Lehigh River Crossing. This privileged information is provided in JPA Section L-2: EA Module 2, Appendix NO-L-2I.</p>
NO-24	<p>The Department does not recommend stockpiling soil or subsoil within the wetland. Evaluate the ability to stockpile soils outside wetland boundaries throughout project when possible. [25 Pa. Code §105.13(e)]</p>	<p>PennEast intends to stockpile soil or subsoil outside of the wetland boundaries to the extent practicable based on considerations of nearby topography, access, and availability of adjacent ATWS.</p>

Comment Number	PADEP Comment	PennEast Response
NO-25	Please clarify what soil is used below the 12-inches in the following statement found in the construction sequencing (File H-1_03) "BACKFILL PIPE TRENCH. BACKFILL THE TOP 12-INCHES OF THE EXCAVATED TRENCH WITH THE STOCKPILED WETLAND SOIL TO MATCH ORIGINAL SURFACE GRADES." [25 Pa. Code §105.13(e)]	Below the 12-inches of segregated topsoil, the pipe trench will be backfilled with previously excavated subsoil to supplement the bedding material. In addition, trench plugs are proposed every 100 feet in a wetland for wetland crossings exceeding 100 feet in length.
NO-26	Please explain the necessity of the 150' workspace at wetland crossings 062218_WA_001_PFO and 062218_WA_001_PEM, near mile marker 56.0. Please reduce workspace. In addition, there is a bore pit located in this wetland. Consider moving the bore pit out of this wetland or consider horizontal directional drilling (HDD) at this location. Also, the Site-Specific Mapping does not note the bore pit depths and locations, please correct as necessary throughout application. [25 Pa. Code §§105.13(e) and 105.21(a)(1)]	<p>The workspace impacting wetlands 062218_WA_001_PFO and 062218_WA_001_PEM near mile marker 56.0 has been reduced to be 120 feet in width.</p> <p>The additional temporary workspace in the wetland is required to safely facilitate the bored crossing of Mountain View Drive. An HDD of the wetlands adjacent to Mountain View Drive is not practicable due to being located in a valley with steep slopes on both sides of the wetland.</p>
NO-27	Wetlands 110217_WA_008_PEM and 062415_BT_1002_PEM are very close to the bore pits. Please verify that the wetlands will not be impacted by the bore pit or consider moving the bore pit further away from this wetland. [25 Pa. Code §§105.13(e) and 105.21(a)(1)]	<p>Wetland 1102717_WA_008_PEM crosses the pipeline trench in the vicinity of a bore pit. PennEast will minimize the dimensions of the bore pit to the extent practicable while providing sufficient bore pit size to safely install the pipeline under the roadway and adjacent wetland area.</p> <p>The bore pit in the vicinity of Wetland 062415_BT_1002_PEM will be arranged such that the wetland is not impacted by the bore pit location.</p>

Comment Number	PADEP Comment	PennEast Response
NO-28	Provide further details for the crossings of wetlands 052918_WA_008_PUB and 052918_WA_007_PUB regarding their depth and what BMPs will be used to protect the resource. The Site-Specific Mapping shows bore pits, but the ARIT states an open cut in this area, please verify. Please verify that a wetland mat will be sufficient to cross this wetland or whether a bridge would be more appropriate. [25 Pa. Code §§105.13(e) and 105.21(a)(1)]	<p>As shown on the JPA Section H-2: Site Specifics, wetland 052918_WA_008_PUB will be crossed via bore. Wetland 052918_WA_007_PUB is not crossed by the pipeline and will only be impacted by the workspace. The JPA Section A-1: ARIT has been revised as part of this submission.</p> <p>Conditions when surveyed in May 2018 indicated approximately 3 feet of water depth in 052918_WA_008_PUB and 052918_WA_007_PUB. 052918_WA_008_PUB is receiving overflow from 052918_WA_007_PUB, which is receiving water from 052918_WA_003_PEM/PFO via culvert under the access road. The timber mats have been revised to a temporary bridge. The other proposed BMPs being used to protect the wetland include trench plugs on either side of the bore and sediment barriers.</p>
NO-29	On aerial photography, there appears to be a surface water conveyance between mile markers 57.2 and 57.3. and at mile markers 74.4 and 74.7. Please verify whether conveyances exist and if they should be included in the ARIT. [25 Pa. Code §§105.13(e) and 105.21(a)(1)]	PennEast revisited the study corridor at MP 57.2 - 57.3, 74.4, and 74.7 in July 2019. PennEast confirmed that there are no wetlands or watercourses between MPs 52.7 and 57.3 or near MP 74.4. A new PEM wetland, Wetland 072319_MU_1003_PEM, was delineated within a swale in an agricultural field near MP 74.7. A report documenting the field observations, photographs of current conditions, and upland and wetland data forms are included in a Wetland Delineation Report Addendum (JPA Section L-2B).

Comment Number	PADEP Comment	PennEast Response
NO-30	The Pennsylvania Fish and Boat Commission (PFBC) has provided a concern regarding right-of-way (ROW) slope failure on the western bank of Hokendauqua Creek (Stream 051215_JC_1002_P_IN). Please discuss how construction will minimize the risk of slope failure along this stream. [25 Pa. Code §105.13(e) and 105.313(c)]	PennEast believes there is a low risk of slope failure on the western bank of Hokendauqua Creek. However, PennEast will minimize the risk of slope failure in the vicinity of this watercourse during construction by implementing standard E&S BMPs. The Geohazard Hazard Mitigation Plan presented in the ESCGP Application (ESCGP Section 2-1, Appendix 4) will also be implemented during construction of the western slope, and any need for measures beyond the standard E&S BMPs will be considered during construction and restoration of the slope.
NO-31	Provide adequate provisions for shut-off in the event of pipeline break or rupture. Provide locations and descriptions of how this action will be completed if a break or rupture occurs. [25 Pa. Code § 105.301(9)]	Shut-off provisions were provided in Section 1.1.2.5 of the December 2018 JPA Project Description Narrative (JPA Section J). As indicated in the text and as required by USDOT Title 49 CFR Part 192, valves must be installed along the pipeline at specified intervals to sectionalize the pipeline. The class location of the pipeline, which is based on the population density near the pipeline, determines the maximum MLV spacing along the pipeline. These valves can be used to shut off the flow of natural gas in the event of an emergency or for planned maintenance and repairs. The MLV locations were provided in Table 1.1-5 of the JPA Section J: Project Description Narrative.

Comment Number	PADEP Comment	PennEast Response
NO-32	The Cultural Resource Summary indicates further comments will be received from Pennsylvania State Historic Preservation Office (SHPO) for several historical sites in 2019. Please verify if the proper documentation has been received, provide the status of the anticipated addendum report and Determination of Effects report, and update the application where applicable. [25 Pa. Code §§105.13(e), 105.14(b)(5), 105.21(a)(1), and 105.24]	The Cultural Resources Summary (JPA Section D) has been updated to include the results of consultation with the Pennsylvania State Historic Preservation Office (PASHPO) since the December 2018 JPA submittal. Correspondence with and reports submitted to the PASHPO can be found in Sections D-1 and D-2. The Determination of Effect Report (PA Effects Report) for architectural history was received by the PASHPO on 5/6/19. The PASHPO responded on 6/5/19 requesting additional information related to Project impacts on resources in Bucks and Luzerne counties. Additional information was provided as an addendum to the PA Effects Report on 7/22/19, and PASHPO concurred with PennEast's recommendations on the Revised PA Route. PennEast submitted an Archaeology Phase I Addendum 5 for workspace changes on 10/1/19, on which PASHPO review is pending.
NO-33	Please update any table in the Environmental Assessment (EA) which may relate to changes to the ARIT [25 Pa. Code §105.21(a)(1)].	The Environmental Assessment documents have been updated to reflect the changes made to the JPA Section A-1: ARIT.

Comment Number	PADEP Comment	PennEast Response
NO-34	Please include in the EA Module 2 plans to minimize impacts to recreational opportunities on the Palmer-Bethlehem TWP Bike Lane. [25 Pa. Code §§ 105.13(e)(1)(x) and 105.15(a)]	<p>The Project crosses the Palmer-Bethlehem Township Bikeway in two locations. The first crossing is at approximate MP 70.7R3, south of Hope Road, on Bethlehem Township property. PennEast has committed to accommodating bike and foot traffic during Project construction. The bike path will be well-marked to notify trail users that they are approaching an active construction site. Safety fencing will be installed along the edges of the trail to direct trail users to safely cross the construction workspace. Trail users may be temporarily detoured to the adjacent Hope Road to bypass the workspace during trenching, pipeline lowering, and backfilling. These activities will be completed in as condensed of a timeframe as practicable to minimize recreational impacts.</p> <p>The second crossing of the Palmer-Bethlehem Township Bikeway is at approximate MP 70.9 on Bethlehem Township property. PennEast will HDD under the bike path, Route 33, the Lehigh River, and the Lehigh Canal; therefore, trail use will not be obstructed during Project construction.</p> <p>PennEast has revised EA Module 2 (JPA Section L-2) and EA Module 3 (JPA Module L-3) to discuss PennEast's plans to minimize recreational impacts at this location.</p>

Comment Number	PADEP Comment	PennEast Response
NO-35	<p>EA Module 2, Section S2.A.4 references Appendix NO-L-2C as the location map “that identifies regulated waters of the Commonwealth, natural areas, wildlife sanctuaries, natural landmarks, political boundaries, publicly available service areas for public water supplies, and historic landmarks within 1 mile of the Project and State Parks and prime farmland within 100 feet of the Project....”. Appendix CA-L-2C is not a map. It is the table of prime farmland referenced in EA Module 2, S2.A.5. Please provide the location map for EA Module S2.A.4 or verify if I_LocationMap_2400 is the correct document and correct language in the EA. [25 Pa. Code §§ 105.13(e) and 105.21(a)(1)]</p>	<p>The location map reference in the JPA Section L-2: EA Module 2, Section S2.A.4 has been updated from Appendix NO-L-2C to JPA Section NO- I.</p>

Comment Number	PADEP Comment	PennEast Response
NO-36	Discuss how sensitive resources will be protected and proper vegetation establishment will be assured before agriculture land is handed over to landowner. [25 Pa. Code §105.13(e)]	<p>Upon completion of final grading, the contractor will stabilize disturbed areas within 4 days of the cessation of construction activities. In most areas, this will include seeding with a permanent seed mix and mulching. Wetland and riparian seed mixes will be used where noted on the Wetland and Riparian Reforestation Plan. Erosion control blankets will be installed along steep slopes and near watercourse crossings in accordance with the E&SCP. Restoration will be monitored for the overall Project until permanent stabilization is achieved, the PADEP determines that permit conditions have been met, and the PADEP terminates the permit.</p> <p>In cultivated croplands, landowners may request that PennEast not seed the Project area with the Project's seed mixes to prevent the introduction of new plant species to their fields. Landowners may plant crops soon after Project construction is complete, which could be substantially before the entire Project has reached stabilization. Alternately, a cover crop may be used to stabilize the soil. In these instances, PennEast will coordinate with the PADEP and Northampton County Conservation District to complete post-construction inspections of agricultural lands. Perimeter BMPs will be removed to allow the farmer access to the Project area, but BMPs along the edges of wetlands or watercourses would be left in place to provide continuous protection of sensitive resources. PennEast would request agency approval to release these areas from the permit's permanent stabilization requirements to allow for continued crop production.</p> <p>PennEast has provided clarification in the E&SCP (JPA Section M).</p>

Comment Number	PADEP Comment	PennEast Response
NO-37	In the EA Module 2, the application indicates bog turtle surveys still need to be conducted in Spring 2019. Please provide the report and update the application where applicable. [25 Pa. Code §§105.13, 105.21(a)(1), and 105.24]	Consultation regarding this species is complete through the USFWS, and PennEast has submitted a state-level Biological Assessment to the PFBC for review (JPA Section G: Pennsylvania Natural Diversity Inventory). Surveys were completed in the summer 2019, and final survey reports were submitted to the USFWS at in September 2019.
NO-38	The EA Module 2, Section S2.C, indicates that the Bog turtle surveys are scheduled in the spring of 2019 suggesting consultation with PFBC is not resolved due to a minor change process, coordination with Pennsylvania Game Commission (PGC) is ongoing, and that the U.S. Fish and Wildlife Service (USFWS) recommends the Federal Energy Regulatory Commission (FERC) re-initiate consultation. Please provide final reports and clearances from applicable agencies and revise this section. [25 Pa. Code § 105.21(a)(1)]	Consultation with the USFWS and PGC is complete. The USFWS issued an amended BO on July 29, 2019 which finalized consultation with that agency. The PGC issued their final consultation letter on January 9, 2019. This letter gave two options for remaining ESFB habitat - either survey or mitigate per PGC requirements. PennEast has completed surveys, and no mitigation will be required. The survey report has been submitted to the PGC for their records. Consultation with the PFBC is complete on all items except the bog turtle site in Northampton County. PennEast has submitted a site-specific Biological Assessment to the PFBC for that location, and the PFBC is reviewing that document to develop a Special Take Permit for the project. Refer to JPA Section G: Pennsylvania Natural Diversity Inventory for consultation histories and records.
NO-39	Please supply the consultation update letter from the USFWS regarding the modified 2017 Biological Opinion and discuss any changes to avoidance and minimization plans. [25 Pa. Code §§105.13(e), 105.14(b)(4),105.21(a)(1), and 105.24]	This letter is included in the updated JPA Section G: Pennsylvania Natural Diversity Inventory. Requirements remain the same under the updated BO for the federal species of concern. PennEast has voluntarily committed to additional measures in a state-level Biological Assessment at one bog turtle site, which is currently being reviewed by the PFBC.

Comment Number	PADEP Comment	PennEast Response
NO-40	EA Module 2, Section S2.D.1, states, "Following restoration, a 50-foot-wide permanent right-of-way (ROW) will be maintained for the life of the pipeline. No trees will be permitted to grow within that width." Module 3 and 4 discuss a 30-foot corridor for tree cutting. Please clarify and revise application as needed. [25 Pa. Code §§ 105.21(a)(1)]	PennEast has revised JPA Section L-2: EA Module 2 to clarify that a 30-foot operational ROW will be maintained for the life of the Project.
NO-41	In the EA Module 3, Section S3A, provide a final summary of total impacts for each table (Tables L3-1 through 4). [25 Pa. Code §105.21(a)(1)]	Total impact rows have been added to each table in JPA Section L-3: Module 3 (JPA Section L-3).
NO-42	Please provide the invasive species plan (ISMP) referenced in Module 3 of the EA. Clarify and indicate if this plan will be used during the monitoring periods on the ROW and compensatory mitigation sites. [25 Pa. Code §105.13(e)]	The ISMP, included in this response as JPA Section L-3: EA Module 3 Appendix NO-L-3I, has been prepared to provide BMPs that should be implemented within the workspace required to construct the pipeline and has not been prepared to address offsite mitigation sites. Invasive species management for the compensatory mitigation sites is addressed in Section 6.1.4 of the Compensatory Wetland Mitigation Plan (JPA Section L-4B).

Comment Number	PADEP Comment	PennEast Response
NO-43	<p>In reference to the following statements in the EA Module 3, “Selectively clearing, by hand methods, a 30-foot wide operational easement to improve line of sight between pipeline markers where HDDs are proposed” and “Wetland systems comprised of forested communities will be allowed to revert back to their original site condition (excluding locations maintained for line of sight),” please specify how much tree clearing will be done in the floodway and wetland for both the project construction and operation and maintenance (O&M) for the HDD crossings. Please note clearing of trees in PFO wetlands will be considered conversion and require mitigation. [25 Pa. Code 105.302(6)]</p>	<p>Minor hand clearing between HDD entry and exit points is expected to include branch and low sapling/shrub clearing to maintain line of sight in between pipeline marker posts, typically the width of a walking trail. This would include branches at a height of eye level to the ground (to prevent a safety hazard to operation personnel) and cutting sapling/shrubs near the surface to avoid tripping hazards. By accommodating safety considerations for operation personnel, PennEast will eventually end up with a line of sight for placement of marker posts. It is common industry practice to place these posts at intervals of between 200 and 300 feet. Spacing could be closer to accommodate changes in topography and/or when mature trees are encountered. There will be no cutting of mature trees for line of sight or marker posts. Section S3.D.2(iii) of EA Module 3 (JPA Section L-3) has been revised to include this clarification.</p>
NO-44	<p>Per the EA instructions S3C10 and EA Appendix V (3150-PM-BWEW0017), please provide the key details for each subfacility. In addition, after consultation with the Bureau of Waterways Engineering and Wetlands, WETRE will not be a required subfacility on the pipeline, it may be required for offsite mitigation locations. Please use PIPE, which should include O&M; FLACT for floodway impacts not associated with pipe, such as access roads; and TMPWI for wetland disturbance areas during construction. WTDIM may be used at the compressor station, where fill in wetlands will occur. At this time, WTIIM will not be required if the disturbance is captured in TMPWI. Neither WTIIM nor TMPWI is required for horizontal directional drilling (HDD) bored pipe impacts. [25 Pa. Code § 105.21(a)(1)]</p>	<p>The subfacility tables in JPA Section L-3: EA Module 3, Appendix L3-A have been revised as requested.</p>

Comment Number	PADEP Comment	PennEast Response
NO-45	Wetland 092614_GO_002_PFO data form does not contain soil data, stating "soils TBD". Provide complete and accurate datasheets. [25 Pa. Code §105.21(a)(1)]	The wetland data sheet for Wetland 092614_GO_002_PFO has been revised to include soils data. The revised data sheet is included in a revised Wetland Delineation Report Appendix C (JPA Section L-2B Appendix C-4).
NO-46	Wetland 042117_GM_1003_PFO is not on the ARIT but is stated on the Wetland Function-Value Evaluation Form (L-2F). Please verify if you meant 042117_GM_1001_PFO instead on the Wetland Function-Value Evaluation Form or provide the Function-Value sheets for 042117_GM_1001_PFO. [25 Pa. Code § 105.21(a)(1)]	The wetland Function and Value form was mislabeled and has been updated to correctly reflect 042117_GM_1003_PFO for the Wetland I.D. (JPA Section L-2F).
NO-47	Based on aerial photographs and photographs provided in the application, wetlands 052218_WA_003_PEM and 051415_JC_1001_PEM appear to have significant canopy cover. Overhanging strata can impact the function of wetland systems even without having roots directly within wetland. Please reevaluate whether these wetlands should be considered forested or scrub shrub and how tree removal around this wetland may affect wetland functions. [25 Pa. Code §105.18(b)(1)]	PennEast re-evaluated the classification of these PEM wetlands and determined that each was accurately classified in its December 2018 JPA. Attachment NO-47 provides a justification for each wetland listed in PADEP's Technical Deficiency Comment.

Comment Number	PADEP Comment	PennEast Response
NO-48	<p>The Cumulative Impacts analysis notes 1.46 acres of permanent PFO/PSS wetland impacts from the 30-foot maintained ROW. Please note, for the purposes of mitigation, all cleared PFO and grubbed PSS wetlands must be calculated and mitigated for, regardless of location on or off permanent ROW. Please revise application accordingly, including mitigation documents. [25 Pa. Code §§105.14(b)(13) and 105.20a(a)]</p>	<p>The intent of the Cumulative Impacts Analysis was to assess the cumulative impacts of the project and other existing and potential projects, including direct and secondary impacts that are permanent in nature, as required by 25 PA Code Sections 105.13(e)(1)(x), 105.18(a)(6) and 105.18a(b)(6) and as described in PADEP's Guidance Document for the Comprehensive Environmental Assessment of Proposed Project Impacts for Chapter 105 Water Obstruction and Encroachment Permit Applications. PennEast proposes offsite compensatory mitigation for permanent impacts, which include the permanent conversion of wetland cover types, periodic impacts from maintenance activities, and wetland fill). PennEast proposes to mitigate temporary wetlands impacts with onsite restoration and reforestation as described in the Mitigation Plan (EA Module 4, JPA Section L-4).</p>

<p>NO-49</p>	<p>Please include in the HDD Inadvertent Returns and Contingency Plan and the Erosion and Sediment Plans provisions to contact the Department immediately by email, phone, or electronically delivered letter if a loss of pressure or an inadvertent return occurs during the horizontal directional drilling operations. Drilling operations should not continue until a Professional Engineer (PE) or Professional Geologist (PG) has performed an inspection of the drilling site and drill alignment. The PE or PG should then notify the Department in writing that the drilling can commence without the risk of an inadvertent return.</p> <p>Should an inadvertent return occur during drilling operations, a Re-evaluation Report should be submitted to the Department by the PE or PG examining the drilling alignment and ensuring that another inadvertent return is unlikely. The Department will need to review this submitted information and approve the restarting of drilling operations. [25 Pa. Code § 105.302(6)]</p>	<p>PennEast does not consider a pressure drop on its own to warrant a PADEP notification per the following rationale. A downhole pressure drop in itself is not a strong indicator of an occurrence of an inadvertent drilling fluid return, as downhole drilling fluid pressures fluctuate regularly as the drill bit is advanced through the subsurface materials. Downhole drilling fluid pressure fluctuations are common and arise from the interaction of the downhole tooling and cuttings as the cuttings work or move past the downhole drilling assembly. As the cuttings move past the downhole drilling assembly, the downhole drilling fluid pressure can increase in response to a buildup of cuttings behind the drill bit. These types of drilling fluid pressure increase events are short lived and typically do not result in any appreciable loss of drilling fluid returns or an inadvertent drilling fluid return as they occur momentarily during the drilling process. Often, when the required drilling fluid pressure increases, the drill rig operator ceases forward progress and the drilling assembly is pulled back through the bore to swab it and clear any blockage or deposit of cuttings that has accumulated behind the drill bit. As a slug of cuttings is cleared during this swabbing event, the observed downhole drilling fluid pressures decrease back down to the anticipated drilling fluid pressure magnitudes associated with the advancement of pilot bore. It is not anticipated that these types of events meet the requirements to notify any agencies or regulatory entities. Again, these types of pressure increase events are common to the HDD drilling process and the loss of drilling fluid pressure associated with the clearing of these events does not necessarily relate to an inadvertent drilling fluid return, especially when full drilling fluid returns are occurring back to the drill rig.</p> <p>Close monitoring of the downhole drilling fluid pressures during pilot bore drilling operations and reacting quickly to the buildup</p>
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Comment Number	PADEP Comment	PennEast Response
		<p>of unanticipated drilling fluid pressures is key to preventing the migration of drilling fluids up through the subsurface/geotechnical materials that can result in an inadvertent return. Reacting quickly to higher than anticipated drilling fluid pressures will reduce the probability of an inadvertent drilling fluid return. In the event a large unaccounted-for drilling fluid pressure loss occurs, accompanied by significant losses in drilling fluid return volumes at the drill rig entry location that swabbing does not restore drilling fluid flow, the HDD Contractor will enact the HDD Inadvertent Return and Contingency Plan (JPA Section L-3C) and the appropriate notifications will be provided.</p> <p>Section 6.9 of the HDD Inadvertent Return and Contingency Plan has been revised to state, "Following an inadvertent release of drilling fluid, and after containment is achieved, drilling operations may continue if the root cause of the return is determined and a plan is developed to reduce or eliminate the risk of reoccurrence (re-evaluation report). This will take place under the supervision of a PE or PG, who will inspect and report back to PADEP. Construction activities will not restart without prior approval from PADEP and PennEast."</p>

Comment Number	PADEP Comment	PennEast Response
NO-50	An analysis of well production zones was not evaluated. Please provide this analysis. [25 Pa. Code §105.14]	PennEast has contacted potential public water suppliers within 0.5 mile of HDDs to request feedback on whether any public water supply wells are within that buffer, and, if so, for information that can be used to conduct a well production zone analysis. To date, no public water supply wells have been confirmed within 0.5 mile of HDDs, but one PaGWIS well suggests that there is a well that is used for "recreation" within the 0.5-mile buffer. PennEast has contacted this landowner to request additional information that could be used to support a well production zone analysis. PennEast will continue with outreach efforts described in response to NO-51 and in the revised JPA Section L-2: EA Module 2 and Section L-3: EA Module 3. If any public water supply wells are identified, PennEast will conduct a well production zone analysis.
NO-51	Due to karst geology identified along the HDD, all private water supply wells located within 1,000-feet of the bore path should be identified. Public water supply wells should be identified within 0.5-mile radius of the bore path. A physical investigation of the area should be conducted due to online resources being unreliable for listing public and private water supply well locations. [25 Pa. Code §§105.13(e)(1)(ii) and 105.14(b)(5)]	<p>As described in December 2018 JPA Section L-2: EA Module 2 Section S2.A.5, PennEast used a combination of the PaGWIS database, consultations with public water suppliers, and outreach to landowners to determine the location of groundwater wells within 150 feet of the workspace and 500 feet of the workspace in karst areas and near HDDs. In response to PADEP comments, PennEast has expanded the search radius surrounding the Lehigh River and I-78 HDDs to 1,000 feet for private water supplies and 0.5 mile for public water supplies within Pennsylvania.</p> <p>PennEast revised Section S2.A.5 of EA Module 2 (JPA Section L-2) and Section S3.B.1(vi) of EA Module 3 (JPA Section L-3) to provide a more detailed explanation of the data collection methods, discuss the expanded search radii near HDDs, present the information PennEast has collected to date in this continuous research effort, and explain the monitoring and notification programs PennEast will implement.</p>

Comment Number	PADEP Comment	PennEast Response
NO-52	<p>The Department recommends that any private or public water supplies within the requested search radii be sampled pre- and post- construction for water quality, yield, and turbidity parameters for horizontally directionally drilled pipeline section. Additional supply wells outside of the search radius that are determined to be at high risk for impact (e.g. along a fault line) should also be included. [25 Pa. Code §105.14]</p>	<p>PennEast has committed to offer pre- and post-construction testing of private and public water supply wells within 150 feet of Project workspace and within 500 feet of the Project workspace in karst terrain. The monitoring radius will be expanded to 450 feet at HDDs and to 1,000 feet at HDDs in karst areas. The water quality testing procedures and parameters are included in PennEast’s Well Monitoring Plan (JPA Section L-3G). This plan has been revised to include the expanded well buffer of 1,000 feet for HDDs in karst areas. In addition, the Lehigh River and Interstate 78 HDDs cross known fault traces. PennEast will commit to monitoring high-risk private water supply wells within a ½ mile buffer of the Lehigh River and Interstate 78 HDD crossings.</p>
NO-53	<p>Surface water intakes for public and private water supplies within 1-mile downstream of the crossing of the Lehigh River should be identified. [25 Pa. Code §105.14]</p>	<p>As described in December 2018 JPA Section L-2: EA Module 2 Section S2.A.5, PennEast reviewed the PADCNr PaGWIS and consulted with public water suppliers to identify surface water intakes 1 mile upstream or 10 miles downstream of Project workspace. Through PennEast’s screening of public water supply service areas within proximity of the Project at the distances described above, no public water suppliers were required to be contacted in Northampton County.</p> <p>Since the December 2018 JPA, PennEast reviewed the PADEP’s Water Resources data (Published 07/2019), which is available on PADEP’s eMAP PA online tool and through PASDA. No surface water intakes were identified within 1 mile downstream of the HDD crossing of the Lehigh River.</p>

Comment Number	PADEP Comment	PennEast Response
NO-54	In the Alternative Analysis section 11.2.3, please further describe which “specific conditions [would] render a dry crossing infeasible” and the course of action to be followed if a dry crossing is infeasible. [25 Pa. Code §§ 105.13(e) and 105.21(a)(1)]	The proposed primary, secondary, and tertiary methods for watercourse crossings are provided in the JPA Section M: Erosion and Sediment Control Plan narrative and alignment sheets. PennEast proposes to cross watercourses in a dry condition. Primary considerations that could impact the feasibility of a dry crossing include a channel configuration, bank stability, substrate permeability, excessive stream flow (rain events or groundwater baseflow), or the installation and construction of the dry crossing adversely affecting the bed or banks of the watercourse. Should these considerations temporarily render a primary dry crossing method infeasible, PennEast would defer to the secondary/tertiary methods proposed. In the event a dry crossing cannot be accomplished within the allowable construction window, consultation with PADEP will take place to discuss alternative options.
NO-55	In the Alternative Analysis Table: Riverine Resources (S4), some streams specifically state they can be crossed within 24 or 48 hours. Please state the expected crossing time for each resource. Based on previous projects, unexpected circumstances can arise during stream crossings which result in an extended crossing time. Please state if any streams are expected to exceed the recommended crossing time of 24-48 hours (respectively). Discuss the plan of action if the proposed crossing timeline is exceeded and state the proposed timeline in both the AA table and construction narrative. [25 Pa. Code § 105.21(a)(1)]	PennEast is providing revised JPA Section S-4: Alternative Analysis Table: Riverine Resources with an estimated construction duration for each watercourse where applicable. The proposed primary, secondary, and tertiary methods for watercourse crossings are provided in the E&S narrative and alignment sheets. PennEast proposes to cross in a dry condition in accordance with the 24 hour and 48-hour timeframes for a majority of the minor and intermediate watercourses except where noted. In the event PennEast anticipates a crossing taking longer than proposed, consultation with PADEP will take place to discuss alternative options. A refined crossing timeline will be presented at this time.
NO-56	Wetland 092614_GO_002_PFO-1 is noted twice in the Alternative Analysis Table: Riverine Resources (S4). Please verify if a wetland justification is missing or mislabeled and correct the table as appropriate. [25 Pa. Code §105.21(a)(1)]	The duplicative wetland ID in the December 2018 JPA Alternatives Analysis Site-Specific Crossing Table (JPA Section S-4) was incorrect. The second mention of Wetland ID 092614_GO_002_PFO – 1 has been replaced with 042815_JC_1001_PFO -1 in the revised table.

Comment Number	PADEP Comment	PennEast Response
NO-57	<p>In the Alternative Analysis Table, 080917_WA_002_PEM – 1 and 080917_WA_002_PEM – 2 indicate workspace around the wetland is reduced to 50-feet; however, the Site-Specific Mapping and E&S Plans do not show a reduction at both locations. Please verify the language in the Alternative Analysis table is consistent with the plans throughout the project. [25 Pa. Code §105.21(a)(1)]</p>	<p>The Project crosses Wetland 080917_WA_002_PEM in three locations, crossing IDs 080917_WA_002_PEM – 1, 080917_WA_002_PEM – 2, and 080917_WA_002_PEM – 3. The workspace has been reduced to 75 feet wide at the first crossing. At the second and third crossings of this wetland, tree clearing would occur within a 50-foot wide workspace, but earth disturbance activities will be reduced to 30 feet within the wetland. PennEast has updated JPA Section S-4 to include this clarification.</p>
NO-58	<p>Throughout the permit (including EA-Module 4 and the Alternative Analysis), wetland and watercourse restoration monitoring timelines are not consistent stating in some places two years and in other places three years of monitoring (respectively). In any event, the proposed monitoring timelines are inconsistent with the Department’s guidance for Wetlands Replacement/Monitoring, Department document 363-0300-001, which states wetland replacement must be monitored for a period of not less than five years. Please revise the monitoring timelines to reflect a 5-year monitoring period. [25 Pa. Code §105.21(a)(1)]</p>	<p>PennEast has revised the monitoring requirements in the Post-Construction Wetland and Watercourse Monitoring Plan (JPA Section L-4C), EA Module 3 (JPA Section L-3), EA Module 4 (JPA Section L-4), and the Alternatives Analysis (JPA Section S) to consistently state that impacted wetlands and watercourses will be monitored for a period of five years, or until restoration is considered successful and agreed upon by the USACE and PADEP. The exception to this revision is in Section 3.3 of the Monitoring Plan that explains the FERC reporting requirements.</p>

Comment Number	PADEP Comment	PennEast Response
NO-59	<p>The Wetland and Riparian Reforestation Plan does not clearly show what the intentions are with respect to which wetlands and riparian areas get seeded and which wetlands and riparian areas get reforested. Please provide a Reforestation Plan that clearly demonstrates the vegetation type proposed for each site that will be restored. Please include the resource ID and designation on the plans as well as the planting schematics, including width of plantings in riparian buffers based on water course designation (typical vs. EV/HQ, according to §102.14 requirements, where applicable). [25 Pa. Code §§ 105.13(e) and 105.16(d)]</p>	<p>PennEast edited the symbology of seeding and planting areas of the Wetland and Riparian Reforestation Plan (JPA Section L-4A) to clarify the restoration treatment for each impacted area. The revised plan also includes resource ID labels, watershed boundaries with designated/existing use labels, and the width of riparian buffers that will be seeded and/or reforested. Minor workspace and delineation changes that were incorporated in the Project design since the December 2018 JPA, and minor edits to a few of the planting areas have also been addressed in this revised plan. The note and detail sheets were updated to include planting schematics and a table that details the acreage of seeding and planting for each resource ID.</p>

Comment Number	PADEP Comment	PennEast Response
NO-60	<p>In the Wetland and Riparian Reforestation Plan, consider replanting shrubs up to the 10-foot wide buffer (between 15 and 5 feet from center of pipeline) in exceptional value watersheds, where trees would otherwise not be permitted or consider replanting shrubs across the entire ROW, where tree roots would otherwise not be permitted, as stated in the EA Module 3 “A 10-foot wide operational easement centered on the pipeline will be maintained in an herbaceous or scrub/shrub vegetative state in emergent or scrub-shrub wetlands.” [25 Pa. Code §§105.16(d) and 105.18a(b)(3)(ii)(B)]</p>	<p>PennEast is required by FERC and PHMSA to maintain an open line of sight over the pipeline corridor for ongoing visual inspection of the ROW corridor against intrusion or damage. This inspection is typically done by drone or aircraft. In addition, to protect the integrity of the pipeline coating from damage from tree roots, the ROW must be maintained 15 feet on either side of the pipeline (30 feet total width). Although the 30-foot ROW will not be mowed annually (only a 10-foot wide operational easement may be mowed annually), PennEast may mow it as frequently as every 3 years. Trees and shrubs may naturally colonize the maintained ROW, and PennEast will remove trees with roots that grow to a size that have the potential to obscure visual assessment and/or to damage the pipe. Planting shrubs within the 30-foot ROW that will be mowed regularly would not be practicable from an operations perspective. PennEast proposes to plant trees and shrubs outside of the 30-foot maintained ROW to enhance restoration of the Project area. In areas where reforestation plantings are impracticable (i.e. within the 30-foot maintained ROW within forested riparian buffers, PFO, and PSS wetlands), PennEast has proposed offsite compensatory wetland enhancement to mitigate the impacts associated with changes in wetland cover types.</p>
NO-61	<p>In the Wetland and Riparian Reforestation Plan, it appears that riparian planting may be advantageous at mile marker 53.2R3 and consistent with similar locations, consider expanding plantings in this riparian buffer. [25 Pa. Code §§105.13(e) and 105.16(d)]</p>	<p>PennEast has added riparian buffer plantings to replace the trees within the existing tree line between open fields near MP 53.2R3, as shown in the revised JPA Section L-4A.</p>
NO-62	<p>Please include in the EA Module 4, Section S4.C, the total acres to be mitigated for and the total acres WHM Solutions will uplift/enhance. [25 Pa. Code §§105.20a(a) and 105.21(a)(1)]</p>	<p>PennEast has revised Section S4.C of EA Module 4 (JPA Section L-4) to include the total acreage of permanent wetland impacts and the acreage of compensatory mitigation proposed.</p>

Comment Number	PADEP Comment	PennEast Response
NO-63	<p>The Department requests function and value mitigation at a rate of 2:1 for conversion impacts to “other” PFO wetlands, 2.5:1 for conversion impacts to EV PFO wetlands; 1.5:1 for conversion impacts to “other” PSS wetlands, and 1.75:1 for conversion impacts to EV PSS wetlands. [25 Pa. Code §§105.14(b)(13) and 105.20a(a)(2)]</p>	<p>PennEast has revised the Compensatory Mitigation Plan (JPA Section L-4B) to provide additional mitigation for wetland cover type conversion impacts. PennEast proposes to implement the requested 2.5:1 ratio for the conversion of EV, PFO wetlands to PEM wetlands within the 10-foot wide annually-maintained ROW and a 1.75:1 ratio for the conversion of EV, PSS wetlands to PEM wetlands within the 10-foot wide annually-maintained ROW. PennEast proposes to adhere to the previously proposed 2:1 ratio for PFO and 1.5:1 ratio for PSS for all other wetland conversion impacts. As described in the response to comment BU-42, PennEast will only mow the entire 30-foot maintained ROW every 3 years, or less often as needed, to facilitate visual assessments and to protect the integrity of the pipeline coating. This reduced mowing frequency will result in PSS wetlands within 20 feet of the 30-foot wide operational ROW, with the remaining 10 feet typically as PEM wetlands. Per FERC’s Plan and Procedures, mowing will take place either at the end of or outside of the growing season (between August 2 and April 14). PennEast has committed to a more restrictive mowing schedule of September 11 to March 31 to avoid the nesting seasons of migratory bird species. PennEast believes that a 2:1 mitigation ratio for the conversion of PFO to PSS wetlands and a 1.5:1 ratio for the relatively infrequent maintenance of PSS wetlands within this 20-foot wide corridor adequately mitigates the impacts.</p>

Comment Number	PADEP Comment	PennEast Response
NO-64	Please submit final documents in the Compensatory Wetland Mitigation Plans that are not labelled "Draft." [25 Pa. Code §§105.20a(a) and 105.21(a)(1)]	The documents that were labeled "Draft" in the December 2018 JPA were draft Declaration of Restrictive Covenants that WHM Consulting, Inc. would finalize and file with the county courthouse upon issuance of a PADEP and USACE permit. As the review of the compensatory mitigation plan is still underway and the project has not been approved, it would be premature to put a deed restriction on a property at this time. PennEast commits to finalizing the document and filing the deed restriction before wetland impacts would occur.
NO-65	The off-site Compensatory Wetland Mitigation Plan Performance Standards provide for a contingency of 30% canopy cover prior to the end of monitoring." Department guidance, Design Criteria - Wetlands Replacement/Monitoring, DEP Doc. No. 363-0300-001, suggests 85% survival of planted species and a monitoring period of not less than five years. The contingency regarding "30% canopy cover prior to end of monitoring" will not be acceptable. Please revise the off-site Compensatory Wetland Mitigation Plan Performance Standards to be consistent with the Department guidance. [25 Pa. Code §§105.20a(a), 105.21(a)(1), and 105.13(e)]	The contingency for 30% canopy cover prior to end of monitoring has been removed from the performance standards. The revised Compensatory Wetland Mitigation Plan is provided in JPA Section L-4B.
NO-66	Regarding the EA Module 4 and Post-Construction Wetland and Watercourse Monitoring Plan, Department guidance, Design Criteria - Wetlands Replacement/Monitoring, DEP Doc. No. 363-0300-001, requires 85% cover of hydrophytic species. Please revise performance standards accordingly. [25 Pa. Code §§105.20a(a), 105.21(a)(1), and 105.13(e)]	PennEast revised the performance standards in Section 2.1 of the Post-Construction Wetland and Watercourse Monitoring Plan (JPA Section L-4C) to include a criterion that revegetated areas will have 100% cover, with at least 85% cover of hydrophytic species (FAC, FACW, and/or OBL) at the end of two growing seasons. Additionally, PennEast edited the report components and included statements that PennEast may request an early release of monitoring requirements for wetlands and watercourses that meet performance criteria.

Comment Number	PADEP Comment	PennEast Response
NO-67	The Post-Construction Wetland and Watercourse Monitoring Plan states that you intend to only monitor wetlands 0.1 acres or greater in size. All restored wetland impacts need to be monitored regardless of size. Please revise application to reflect that all restored wetlands will be monitored. [25 Pa. Code §105.21(b)]	PennEast revised Section 3.1 of the Post-Construction Wetland and Watercourse Monitoring Plan (JPA Section L-4C) to state that impacted wetlands will be monitored.
NO-68	In the Compensatory Wetland Mitigation Plan, consider providing a method to clearly and permanently demarcate easement boundaries. [25 Pa. Code § 105.13(e)]	A “Boundary Demarcation” section has been added to the Compensatory Wetland Mitigation Plan (JPA Section L-4B) which outlines the boundary of the recorded conservation area to be demarcated in the field with either fiberglass sign/posts marked “Conservation Area”, with metal t-posts, or with large boulders. Once trees and shrubs are established within the mitigation area, the woody vegetation shall also serve as the demarcation of the conservation area.