PENNEAST ESCGP APPLICATION
RESPONSE TO PADEP 7/3/19 TECHNICAL DEFICIENCY LETTER

Comment Number	PADEP Comment	PennEast Response
1	**§102.5 Permit Requirements.**	-
1.a.	Please make the following revisions to the Notice of Intent (NOI):	-
1.a.i.	Section E, Project Information, Questions 10 and 11. Please provide a reference to the section of the application which addresses impaired waters for Question 10 and geological conditions for Question 11.	Questions 10 and 11 have been updated in the NOI (ESCGP Section 1-1) to reference the sections of the application which address impaired waters and geological conditions, respectively.
1.a.ii.	Section F, Erosion and Sediment Control Plan, Item e. This box should be checked yes since not all discharges from the project will be directly to surface waters. The E&S and PCSM plans should include the demonstration that the discharge will not cause erosion, damage or a nuisance to off-site properties (i.e., site restoration maintaining existing drainage patterns and discharge points). Similar information and revisions should be made to Section H, Item d.	This box should be checked "no", as each PCSM report has an Offsite Discharge Plan showing the path to a waterway. In addition, as also detailed in the PCSM reports (ESCGP Section 3-3), post construction peak flows have been reduced to be below pre-construction rates. Therefore, no additional offsite erosion or nuisance to offsite properties would occur. As demonstrated for the pipeline construction, clean water diversion systems were designed in side slope areas and the calculations and associated nomographs demonstrate no offsite erosion will occur.
1.a.iii.	NOI Section F.b.: Erosion and Sedimentation Control - Clarification is requested on the use of alternative E&S BMPs as indicated on pg. 7 of the NOI. This does not appear to be consistent with the NOI E&S plan summary provided in Section F.	PennEast is not proposing any new alternative BMPs; however, PennEast is utilizing existing approved alternative BMPs that are not necessarily located in the E&S Manual. The NOI has been updated to list these approved alternatives separately. These include the following (PADEP alternative E&S and PCSM BMPs version 1.4 dated May 15, 2019): • Stacking compost socks to equal larger diameter compost socks • Foam trench breakers

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		• Sock diversions • Staked compost sock ring surrounding pumped water filter bag • Sump and compost filter sock at waterbar outlet on utility lines • Compost filter sock J-hook
1.a.iv.	NOI Section F.e.: Offsite Discharge Analysis - Please clarify the response provided on pg. 8 of NOI as the response is not consistent with the PCSM discharges proposed for the Hellertown Launcher and the TCO &UGI-LEH Interconnects.	This box should be checked "no", as each PCSM report has an Offsite Discharge Plan showing the path to a waterway. In addition, as also detailed in the PCSM reports, post construction peak flows have been reduced to be below pre construction rates. Therefore, no additional offsite erosion or nuisance to offsite properties would occur. Section 5 of the PCSM reports (ESCGP Section 3-3) for both Hellertown Launcher and TCO & UGI-LEH Interconnects was revised to demonstrate that the offsite discharge is less than pre construction.
1.a.v.	NOI Section H.1. PCSM Plan: Act 167 Verification - Please clarify the LVPC Act 167 Stormwater Management plan adopted on or after January 2005 that is being followed. PCSM should be designed to be watershed specific.	MLV 6 and MLV 7 are exempt from LVPC act 167 because they are below 10,000 SF and this is mentioned in each report in section 3.1 (b). Hellertown launcher does not require meeting the release rate imposed by the release rate maps because it reduces the volume of all the storms with an infiltration BMP. TCO/UGI has been adjusted to account for the release rate map shown in the Act 167 for this area.
1.a.vi.	NOI Section H.g. Critical Stages - Critical stages proposed appear inconsistent with plan view.	The critical stages listed in NOI Section H.g. for each facility have been reviewed and revised as necessary to be consistent with the PCSM and E&S BMP Installation sequences.
1.a.vii	NOI Section I Antidegradation Analysis: Part 1 Non-discharge Alternatives Evaluation - The sections referenced in the NOI did not provide an explanation of why non-discharge BMPs are not utilized.	For the linear portion, the E&S Narrative and Site Restoration Narrative sections referenced in the NOI address why the non-discharge alternatives were used or were not used.

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		For the facility sites, the NOI was revised to reference Section 3.1 of the PCSM reports. Section 3.1 PCSM Plan General Requirements (b)(1); 3.1.1 Fifteen factors of the PCSM Plan (f)(14); and 3.1.2 PCSM Plan Stormwater Analysis (h)(3) in the PCSM Report for each site have been updated to explain how each project has eliminated the net change in stormwater volume, rate and quality for stormwater events up to and including the 2-year/24-hour storm. It also explains how each aboveground facility site will use various structural and non-structural BMPs to meet the water quality and quantity requirements. Since peak runoffs will be attenuated and discharged overland towards a water body, the Project falls under the definition of a non-discharge alternative and is in compliance with anti-degradation requirements.
1.b.	Proof of Receipt of municipal notifications should be provided with the permit application: Hellertown Borough notification letter was not sent/no proof of receipt PCSM Worksheet #1 indicates Hellertown Borough is to be impacted during construction of the Hellertown Launcher.	The Project is not located in Hellertown Borough, so there was no need to send a municipal notification to the Borough. The PCSM Report for the TCO&UGI-LEH Interconnect erroneously stated that the interconnect was in Hellertown Borough. The report (ESCGP Section 3-3, File 024-01) has been corrected to show that the interconnect is in Lower Saucon Township. PennEast mailed a municipal notification to Lower Saucon Township on December 17, 2018, and proof of receipt was included in the December 2018 ESCGP Application.
1.c.	A complete PNHP search should be provided with the permit application: Disturbed search area is inconsistent with the NOI.	PennEast initiated consultation with the US Fish and Wildlife Service, National Marine Fisheries Service, Pennsylvania Fish and Boat Commission, Pennsylvania Department of Conservation and Natural Resources, and Pennsylvania Game Commission in 2014 through the Large Project PNDI review process. PennEast requested that agencies provide feedback on species that may be

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		present and surveys that may be required within 400 feet of the Project alignment. With each subsequent Project realignment, PennEast provided an update, USGS mapping, and shapefiles to facilitate agency review. The last Project update, which included all Project workspace including the construction ROW, access roads, and staging areas, was provided in April 2018 and covers the Project workspace that PennEast included in its December 2018 ESCGP Application. PennEast submitted additional consultation letters to each agency in October 2019 for a pipeline realignment and workspace change requested by the PADCNR ROW Administration Office.
1.d.	General - Fully completed, properly signed and notarized Notice of Intent Form (1 original and 2 copies):	-
1.d.i	Section F.b.: Erosion and Sedimentation Control: E&S Plan BMP design - Clarification is requested on the use of alternative E&S BMPs as indicated on pg. 7 of the NOI. This does not appear to be consistent with NOI E&S plan summary provided in Section F.	PennEast is not proposing any new alternative BMPs, however PennEast is utilizing existing approved alternative BMPs that are not necessarily located in the manual. The NOI has been updated to list these approved alternatives separately. These include the following (PADEP alternative E&S and PCSM BMPs version 1.4 dated May 15, 2019): • Stacking compost socks to equal larger diameter compost socks • Foam trench breakers • Sock diversions • Staked compost sock ring surrounding pumped water filter bag • Sump and compost filter sock at waterbar outlet on

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		utility lines • Compost filter sock J-hook
1.d.ii	Section F.e.: Offsite Discharge Analysis - Please clarify the response provided on pg. 8 of NOI as the response is not consistent with the PCSM discharges proposed for the Hellertown Launcher, TCO &UGI-LEH Interconnects, Mainline Block Valve #6, and Mainline Block Valve #7.	This box should be checked "no", as each PCSM report has an Offsite Discharge Plan showing the path to a waterway. In addition, as also detailed in the PCSM reports, post construction peak flows have been reduced to be below pre construction rates. Therefore, no additional offsite erosion or nuisance to offsite properties would occur. Section 5 of the PCSM reports (ESCGP Section 3-3) for Hellertown Launcher, TCO & UGI-LEH Interconnects, Mainline Block Valve #6, and Mainline Block Valve #7 was revised to demonstrate that the offsite discharge is less than pre construction.
1.d.iii	Section H.g.: Critical Stages: All Critical stages proposed appear inconsistent with plan view.	The critical stages listed in NOI Section H.g. (ESCGP Section 1-1) for each facility have been reviewed and revised as necessary to be consistent with the PCSM and E&S BMP Installation sequences.
1.d.iv	Section I., Part 1: Antidegradation Analysis: Non-discharge Alternatives Evaluation: The sections referenced in the NOI did not provide an explanation of why non-discharge BMPs are not utilized.	For the linear portion, the E&S Narrative and Site Restoration Narrative sections referenced in the NOI address why the non-discharge alternatives were used or were not used. For the facility sites, the NOI was revised to reference Section 3.1 of the PCSM reports. Section 3.1 PCSM Plan General Requirements (b)(1); 3.1.1 Fifteen factors of the PCSM Plan (f)(14); and 3.1.2 PCSM Plan Stormwater Analysis (h)(3) in the PCSM Report for each site have been updated to explain how each Project site has eliminated the net change in stormwater volume, rate and quality for stormwater events up to and including the 2-year/24-hour storm. It also explains how each Project site will use various structural and non-structural BMPs to

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		meet the water quality and quantity requirements. Since peak runoffs will be attenuated and discharged overland towards a water body, the Project site falls under the definition of a non-discharge alternative and is in compliance with anti-degradation requirements.
2	**§102.4(b)(5)(i) The existing topographic features of the project site and the immediate surrounding area.**	-
2.a.	For plan clarity, all closed contours should be labeled (top of page 398 in the E&S Manual).	The E&S Manual states the following: "... (it is recommended that closed contours be labeled as well)." It appears this is only a recommendation, not a requirement. In order to avoid cluttering the plans, minor contours (2') and major contours (10') are displayed using different line types with only the major contours labeled. For consistency, 2' closed contours would not be labeled.
3	**§102.4(b)(5)(vi) A narrative description of the location and type of perimeter and onsite BMPs used before, during and after the earth disturbance activity.**	-
3.a.	Table 1.1.2 of the project Narrative (Access Roads for the Project) identifies that improvements are needed to AR-048CN in Monroe County. In addition, the Access Road detail on Drawing 000-03-03-035.2 indicates a road width of 9-10 feet and a disturbed area of 30 feet in width. The E&S plans should identify the extent of the improvements required for the access road and include E&S BMPs during construction and requirements for restoration of the access roads upon project completion.	Table 1.2-2 in the Project Narrative has been revised (ESCGP Section 1-4). Footnotes have been added to clarify the extent of the improvements proposed at each access road. As shown on the revised table and on the E&S Access Road Details (ESCGP Section 2-2), temporary improvements will be required at temporary access roads that are sited outside of existing roadways. For these locations, E&S BMPs have been shown on the E&S Access Road Details. At all access roads, selective tree limb cutting and placement of temporary stone during construction may be needed within the permitted LOD. Access Road AR-048CN is an existing roadway and for this instance, as stated above, selective tree limb cutting, and placement of temporary stone may be required during

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		construction. Following construction, the road will be restored to existing conditions.
3.b.	Section 2.1.1 of the Geologic Mitigation Plan notes certain project areas are susceptible to landslides, particularly the area between MP 40.7R2 and MP53.2R3 (within Monroe County). The same section also notes "the majority of locations were evaluated to be of low risk…. not requiring specific design changes to E&S measures." What measures should be taken for areas "not in the majority"? It is unclear whether these areas and special measures are shown on the plans. Please clarify and identify these areas and what measures should be undertaken during construction.	As indicated in Section 2.2 of the Geologic Mitigation Plan (ESCGP Section 2-1, Appendix 4), Slope Hazard Mitigation Measures, a geotechnical engineer/geologist will be out on-site during tree removal and early construction activities to identify issues i.e. seeps, tension cracking, and scarping. If identified, one of the following applicable designs will be applied: • soil nailing • underdrain installation • reduction of gradient • buttressing • replacement with imported well-draining stone/soil See revised Geohazard Mitigation Plan (ESCGP Section 2-1, Appendix 4) for additional information, which includes details on different mitigation measures.
3.c.	Table 11.3, 11.4, and 11.5 in the E&S General Notes mentions use of Crown Vetch in seeding mixtures. DEP does not recommend use of Crown Vetch. PennEast should remove these seed mixture options and consider using native upland seed mixtures as an alternative.	Tables 11.3, 11.4, and 11.5 in the E&S General Notes (ESCGP Section 2-2) have been replaced with revised seed mixes, which do not include the use of crown vetch.
3.d	The temporary equipment bridge detail has the wooden side boards being 6 inches high. As per the Erosion and Sediment Control Manual, the side rails should be a minimum of 12 inches in height. Please revise the detail accordingly.	The temporary equipment bridge detail (ESCGP Section 2-2) has been revised to show wooden side boards 12 inches in height.
3.e	The Erosion and Sediment Control Plans indicate that, "Seeding is not required in cultivated croplands unless requested by the landowner." Please revise the	During a PADEP coordination meeting on July 17, 2019, PennEast relayed that farmers often don't want the Project to introduce non-crop plant species onto their

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	temporary stabilization methods, stating that temporary stabilization may be required on the cultivated croplands within the right-of-way should construction cease for 4 consecutive days or longer.	fields. In situations where landowners do not want PennEast to use temporary seed mix, PennEast recommends using mulch to provide temporary stabilization. PADEP advised the site must be temporarily stabilized within 4 days of the cessation of construction activities, and mulch is an acceptable stabilization method. Section 10.1.4 of E&SCP Narrative has been added to discuss temporary and permanent stabilization in agricultural areas (ESCGP Section 2-1).
4	**§102.4(b)(5)(vii) A sequence of BMP installation and removal in relation to the scheduling of earth disturbance activities, prior to, during and after earth disturbance activities that ensure the proper functioning of all BMPs.**	-
4.a.	Please make the following changes to the sequence of construction provided on Drawing 000-01-01-003D:	-
4.a.i.	Site Clearing and Grubbing Section: The grubbing activity in Step 1 should not occur until after Step 4 (installation of temporary E&S control measures).	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence has been revised to incorporate all comments and provide clarity throughout.
4.a.ii.	Site Clearing and Grubbing Section: Installation of temporary access roads (step 2) should include the installation of E&S BMPs associated with the access roads.	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence on the E&S Notes sheet (ESCGP Section 2-2) has been revised to incorporate all comments and provide clarity throughout.
4.a.iii	Site Grading Section: Step 4 should include the stripping of topsoil in non-forested areas.	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence on the E&S Notes sheet (ESCGP Section 2-2) has been revised to incorporate all comments and provide clarity throughout.

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4.a.iv	Pipeline Construction Section: The pipeline construction sequence should specify the disposal/spreading or stockpiling of material from the trenching operation.	The Project Construction Sequence Upland Locations section has been updated (ESCGP Section 2-2) to include the following text: "Stockpile suitable subsoil material adjacent to topsoil stockpile and ensure no mixing."
4.a.v	Streams, Wetlands and other Waterbody Utility Crossings that will be Open Cut: Step 1 states that no work shall be done in inclement weather.	This is correct.
4.a.vi	Streams, Wetlands and other Waterbody Utility Crossings that will be Open Cut: This sequence section should include the trenching activities, segregation of streambank materials, installation of concrete encasement or flotation devices (if required), backfilling the pipe, redistribution of streambed materials, and restoration requirements.	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence on the E&S Notes sheet (ESCGP Section 2-2) has been revised to incorporate all comments and provide clarity throughout.
4.a.vii	Wetland Crossings: This sequence section should include the trenching activities, segregation of wetland materials, and installation of concrete encasement or flotation devices (if required).	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence on the E&S Notes sheet (ESCGP Section 2-2) has been revised to incorporate all comments and provide clarity throughout.
4.a.viii	Conventional Bores: Step 3 should include the stockpiling of material from the pit excavation in the Work Area.	Step 3 has been revised (ESCGP Section 2-2) to include this language.
4.a.ix	As stated in the permit, “Project related impacts to agricultural areas along the pipeline route would be limited to the Project construction period and the time required for vegetative regrowth after construction is completed.” Please discuss in further detail how the agriculture land handover will be conducted. Please address which BMPs will be required to remain until crop cover is sufficient for erosion control, Ag E&S methods are reached, or project NOT is signed; how sensitive resources will be protected; how proper vegetation establishment will be assured (i.e., which BMPs will remain and who will maintain them or what if the farmer now wants to plant in	Section 10.1.4, "Landowner Requested Temporary and Permanent Stabilization" has been added to the E&S Narrative (ESCGP Section 2-1).

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	new flat land which otherwise should be reestablished back into woody vegetation); and how PennEast will manage land if the farmer is not able to plant directly after construction (i.e., time of year prevents planting).	
5	**§102.4(b)(5)(viii) Supporting calculations and measurements.**	-
5.a.	A design calculation example should be provided for the slope pipe and level spreader design. The design should utilize the worst-case scenario and include anticipated discharge velocities below the level spreader. It appears the discharge velocity through the holes was not taken into account. For example, the discharge pipe from swale DS 50.66_6 specifies a five-foot pipe length with 6 holes (3/8" size) at a 1.94" spacing. A five-foot pipe will have 30 rows of holes, or 180 total holes, which results in a discharge velocity in excess of 10 fps. Please revisit the level spreader design to meet the allowable velocity requirements outlined in the E&S Manual, page 141.	E&S Manual page 141 states requirements for sizing a channel. Temporary channel designs have been included in the E&S Narrative Appendix 2 (ESCGP Section 2-1). The clean water temporary diversion channels have all been designed using the shear stress method, as indicated in Standard E&S Worksheet #11. The requirements for temporary level spreader design can be found in Appendix G of the E&S Manual. Within Appendix G, there are tables that state the allowable velocities downslope of the level spreaders for channelized flow which have allowable velocity for grass, gravel, and mulch. The Clean Water Diversion Maps (also included in Appendix 2) show the downslope conditions at the point sheet flow returns to concentrated flow. The downslope conditions detailed on the maps are the percent slope and the existing cover type. Figure 5.1 (Nomograph to Determine Shallow Concentrated Flow Velocity) of the E&S Manual has been included to demonstrate the allowable velocity for downslope covers for channelized flow has not been exceeded per Table G.1 (Allowable Velocities for Downslope Covers for Channelized Flow). In all cases, there is no exceedance of allowable velocities downslope of the proposed level spreaders.

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		Regarding level spreader sizing, the following method was used to determine the proposed diameter and length. The peak flow rate from Standard E&S Worksheet #10 was used to determine the flow entering the slope pipe. The capacity of the slope pipe was checked to verify that it could handle the peak flow from Worksheet #10. The level spreader was designed according to Appendix G in the E&S Manual and Page 248 of the Stormwater BMP Manual. As shown on page 248, "a level spreader pipe shall safely discharge in a distributed manner at the same rate of inflow." Therefore, the equation on page 248 of the Stormwater BMP Manual was utilized to calculate the flow per linear foot of level spreader based on effective head (the difference between the elevation at the top of the slope pipe and the elevation of the level spreader minus head losses), area of perforations per foot of level spreader pipe, acceleration due to gravity, and the coefficient of discharge for the perforation hole. The peak flow rate from Worksheet #10 was then divided by the flow rate per linear foot of level spreader to determine the required length to pass the peak flow. The length of the level spreader was then rounded up to the nearest 5-foot interval for ease of installation by the contractor and to be more conservative. The flow leaving the level spreader discharges directly into AASHTO #1 stone, as shown on Figure 34C in the E&S details. Once it enters the stone, the void space in the stone causes the velocity to go to zero leaving the level spreader. The sheet flow from the level spreader then continues downstream where it eventually returns to shallow concentrated flow. As detailed above, nomographs were used to verify that

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		no offsite erosion occurs downstream of the level spreader.
5.b	The diversion swale calculations (using diversion socks) indicate a freeboard of 0.33 feet (4”) in accordance with the manufacturer’s recommendation. The E&S Manual requires a minimum of 6 inches of freeboard for swales. In addition, over time the socks will flatten or compress as the filler material compacts. Please revise the swale calculations and size of the socks utilized for the diversions to provide the freeboard in accordance with the E&S Manual.	Worksheet #11 has been revised for all temporary channels to accommodate a 6" freeboard, per E&S Manual requirements. The worksheets are located in the E&S Narrative, Appendix 2 (ESCGP Section 2-1).
5.c.	NAG design printouts should be provided to verify the design and matting stability for each type of erosion control matting specified for the clean water diversion channels and slope areas. Please utilize the worst-case scenario (combination of maximum slope and design flow) for each blanket type.	NAG protective liner specifications have been provided in Appendix 3 of the E&S Narrative (ESCGP Section 2-1). Each liner type details allowable shear stress and Manning's n based on flow depth and were incorporated into the channel Worksheet #11 calculations. For each temporary channel design, the bed slope was reviewed to determine if there is a minimum and maximum slope. If the bed slope was consistent across the channel, Note 7 on Worksheet #11 was added to state "There is no significant percent slope change along the entire temporary channel, therefore the channel capacity and shear stress have been calculated based on the single bed slope value." For instances where the bed slope varied across the temporary channel, both the minimum and maximum bed slopes were used to calculate an acceptable diversion sock and liner to accommodate both conditions. For these worksheets, two columns are shown calculating channel height and liner type. Note 7 on Worksheet #11 was added to state "For this temporary channel, the percent slope changes

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		along the diversion sock, therefore it was designed in two segments." The calculations above demonstrate that the shear stress and capacity were checked for both scenarios and the more conservative lining and diversion sock diameter were selected and implemented into the design. The table above shows both scenarios, and the column in bold is the more conservative design used to satisfy both scenarios.
6	**§102.4(b)(5)(iv) The volume and rate of runoff from the project site and its upstream watershed area.**	-
6.a.	Maximum during construction drainage areas to the proposed inlet protection should be provided on the E&S plan drawing to support the BMP design, (e.g. inlet drainage area table, etc.) Where filter-bag inlet protection is exceeded by the maximum calculated drainage area, alternative BMPs should be provided. (For example, see page 123 of the E&SPC Manual.)	The proposed storm inlets shown on the plans are intended for PCSM purposes only. To ensure these structures are not used in the temporary condition, the proposed rim elevation will be set 1-foot above the temporary construction grade to prevent silt laden runoff from entering the structures. The BMP installation sequence is listed on the PCSM and E&S plan sets for each site (ESCGP Sections 3-3 and 2-3, respectively) to ensure the Contractor does not bring grade above the 1-foot mark. Once the site has been stabilized and inspected by the engineer, grading will be brought to final elevations. Filter bags are shown as an additional precautionary measure to keep the structures free from debris, but not intended to see storm water flow.
7	**§102.4(b)(5)(ix) Plan drawings.**	-
7.a	Additional information should be provided for the level spreader detail, including dimensions for the rock envelope around the pipe, perforation requirements, and the anchorage of the pipe and stone on slope areas (if required). In addition, please address how the pipe will be	As shown on Figure 34C of the E&S Details (ESCGP Section 2-2), the perforated pipe is to be covered with 4 inches of AASHTO #1 stone and 2 inches of AASHTO #1 stone bedding. Additional dimensions are shown on the detail.

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	removed and reset during trenching and pipe installation operations when the slope pipe conflicts with these operations.	The slope pipe will connect to the level spreader perforated pipe by zip ties. Therefore, during dry weather construction, the slope pipe would be stored within the construction workspace but not connected to the perforated pipe allowing for trenching operations and vehicular traffic. Prior to wet weather events and at the end of each work day, the slope pipes will be reattached to the perforated pipe and the diversion sock and will be zip tied to ensure proper conveyance.
7.b	Notes should be added to the slope pipe, level spreader and waterbar details that these items should be field adjusted to maximize runoff discharges to natural drainage courses. Please make similar changes to the Site Restoration Plans.	Figures 34C (Level Spreader Detail) in the E&S details and Figure 9 (Waterbar Installation and Maintenance) in the E&S details and Site Restoration details have been revised (ESCGP Sections 2-2 and 3-2) to include this language. The slope pipe connects to the level spreader and will not be discharging runoff; hence the note was not added to the slope pipe detail.
7.c	Please add a note below the Wetland Seed Mix and Riparian Buffer Mix Tables on Drawing 000-01-01-003C that changes to the specified seed mixes are subject to approval by PA DEP and/or the local Conservation District. Please make similar changes to the Site Restoration Plans.	The requested note has been added to the footnotes of both the Wetland Seed Mix Table and Riparian Buffer Mix Table on the E&S Plan General Notes and Site Restoration Plan General Notes (ESCGP Sections 2-2 and 3-2).
7.d	Figures 1F ((Typical Open Cut Waterbody Crossing) and Figure 1G (Typical Dam and Pump Waterbody Crossing) include Note 3 which states that straw bales may be used in lieu of compost filter socks around topsoil stockpiles from the crossing operation. This note should be revised to specify that straw bales may be used only in non-special protection watersheds. Please provide similar notes on all other details that only apply to non-special protection waters.	Figures 1F (Typical Open Cut Waterbody Crossing) and 1G (Typical Dam and Pump Waterbody Crossing) (ESCGP Section 2-2) have been revised to specify the use of staked straw bales in lieu of compost filter socks in non-special protection watersheds only.

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7.e	The Access Road Cross Section detail (Figure 1I) includes a note to “Coordinate with the County Conservation District if access road widening is needed”. Please revise this note to read “If roadway widening is required, contact and coordinate with the appropriate County Conservation District to determine permitting requirements prior to widening the roads. Upon project completion, access roads will be restored to original conditions unless appropriately sized PCSM BMPs are provided”.	Figure 1I (ESCGP Section 2-2) has been renamed to include the word "temporary." The title now reads "Temporary Access Road Cross Section." The purpose of this change is to demonstrate that for temporary access roads, used only during construction, the intent is not to put down any impervious cover to remain post restoration. PennEast intends to selectively cut tree limbs for canopies that overhang the temporary access road LOD. In addition, gravel may be placed within the temporary access road LOD to mitigate against potential rutting and in wet areas to further stabilize the road during construction. The temporary gravel will be removed following construction and the road will be restored to original condition. Any permanent access roads required for the Project are already being permitted as part of the PCSM submission to PADEP and county conservation districts. Based on this premise, the note has been reworded to state the following: "The installation of temporary access roads may require selective tree limb clearing and placement of temporary stone. Upon Project completion, access roads will be restored to original conditions."
7.f	The typical Turnout detail should include notes regarding the design of these features as noted on page 33 of the E&S Manual, specifically to discharge to natural drainage courses or vegetative buffers, and the use of compost socks and sumps at the discharge points.	As requested, notes from page 33 of the E&S Manual regarding the discharge to natural drainage courses or vegetative buffers, and the use of compost socks and sumps at the discharge points have been added to Figure 4 (Typical Turnout Detail) in the E&S Details (ESCGP Section 2-2).
7.g	The project does not have a Site Restoration Plan as required by 25 Pa Code §102.8(n). Please provide a Site Restoration Plan for the project.	A Site Restoration Plan was provided in PennEast's December 2018 ESCGP Application. The narrative was provided in Section 3-1 and the drawings were provided

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		in Section 3-2. Each has been revised and replaced in response to agency comments in October 2019.
7.h	Please show on the Soil Erosion and Sediment Control Plans the proposed pipeline and cover above the pipeline for the project.	The E&S Manual does not require a profile for E&S plans. PennEast has included the profile for added clarity of BMP spacing for waterbars, trench plugs, etc. However, the PADEP/USACE site-specific plans (JPA Section H-2) show 5' minimum cover over the pipeline at wetland and waterbodies. HDD Exhibits also show pipe depth. The pipeline in all other areas will have a minimum cover of 3 to 4 feet.
7.i	Please provide the type of stream bank stabilization proposed on the Erosion and Sediment Control Plan/Site Restoration Plans.	Figure 21 in the E&S Details (ESCGP Section 2-2) 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).
7.j	**Temporary Clean Water Slope Pipe:**	-
7.j.i	Several temporary clean water slope pipes are proposed throughout the project. What is the condition of the area downslope of the proposed slope pipes?	To clarify, the temporary slope pipes all connect to perforated pipe surrounded by stone (i.e. level spreaders) which discharge sheet flow to the off-ROW, undisturbed areas. Downslope conditions of the level spreaders have been detailed in the Clean Water Diversion Mapbook included in E&S Narrative Appendix 2 (ESCGP Section 2-1). The maps detail the downslope conditions at the point sheet flow returns to concentrated flow. The downslope conditions detailed on the maps are the percent slope and the existing cover type. Figure 5.1 (Nomograph to Determine Shallow Concentrated Flow Velocity) of the E&S Manual has been included to demonstrate the allowable velocity for downslope covers for channelized

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		flow has not been exceeded per Table G.1 (Allowable Velocities for Downslope Covers for Channelized Flow). In all cases, there is no exceedance of allowable velocities downslope of the proposed level spreaders.
7.j.ii	As submitted, the detail on the plan drawings for the temporary slope pipe does not match the detail on page 155 of the E&S Manual. Please clarify.	The detail provided on page 155 of the E&S Manual shows a temporary slope pipe being used for a different application than that which PennEast is proposing. In the E&S Manual, the temporary slope pipe is being used to transfer water from a top-of-slope berm to a sediment basin, trap, or collection channel. As shown on the revised version of the detail (ESCGP Section 2-2), PennEast does not intend to use earthen berms and bury the slope pipe. Stormwater runoff (i.e. clean water) will be pushed to the opening of the temporary slope pipe by means of a clean water diversion sock and will outlet to a level spreader. Transverse berms will not be needed, as temporary slope pipes have all been placed at the lowest point of the tributary drainage area.
7.j.iii	In several locations, (Ex. station 1252+00, 1264+00) the outlet of the temporary slope pipe is close to the outlet of an adjacent waterbar. Will the discharge from the waterbar compromise the discharge from the level spreader that is part of the temporary slope pipe? Is there a need for additional BMPs? Will these outlets properly discharge due to the close proximity to each other?	In these instances (ex. Station 1252+00, 1264+00), the level spreader will be placed in the opposite direction of the waterbar, allowing both the waterbar and clean water diversion to discharge as intended. There is not a need for any additional BMPs, as the BMPs shown will minimize accelerated erosion along the pipeline ROW.
7.k.	**Permanent/Temporary Waterbar (with sump and compost filter sock end treatment)**	-
7.k.i	According to the waterbar detail, the sump and filter sock is to be removed once the site is stabilized. Due to the fact that several of these waterbars are proposed in steep slope areas, will there be a need for a dissipater after construction is completed?	It is not anticipated that there will be a need for a dissipater after construction is completed. PennEast is proposing all waterbars at a 2% slope or less. The spacing of the waterbars is dependent on the steepness of the slope and was determined in accordance with the E&S

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		Manual. In steeper areas, there is tighter spacing and therefore less water to manage.
7.k.ii	Show the location of the sump and filter sock on the plan drawings for each proposed waterbar.	As indicated on Figure 9 (Waterbar Installation and Maintenance) in the E&S Details (ESCGP Section 2-2), the sump and filter sock will be installed in locations where discharge to a well vegetated stable area is not possible, as directed by the environmental inspector.
7.k.iii	A waterbar is proposed to outlet directly to the south side of the Lehigh River, rather than a vegetated filter area, at the Luzerne County/Carbon County line. Should there be additional/different BMPs (i.e., silt sock) proposed in this area instead of the waterbar?	This area has been reviewed and revised to shift the waterbar further upslope with additional sediment barriers adjacent to the waterbody.
7.k.iv	Several waterbars are proposed in very steep slope areas. Is there a need for a protective lining in the conveyance portion of those waterbars in these steep slope areas that are close to a watercourse?	As indicated on Figure 9 (Waterbar Installation and Maintenance) in the E&S Details (ESCGP Section 2-2), waterbars are to be installed with erosion control blanket on the swale side on slopes greater than 30 percent. In addition, PennEast is proposing erosion control blanket in steep slope areas (>3H:1V) throughout the entire Project.
7.l.	**Compost Filter Sock:**	-
7.l.i	Overall, the proposed compost filter sock icon is hard to identify on the plan drawings. Please revise to make it easier to identify.	The linetype for all compost filter socks was thickened. In addition, the color scheme was revised for more clarity. All pipeline E&S drawings have been reprinted and included as part of this submittal (ESCGP Section 2-2). The facility E&S plans CFS linetype indicates the size of the CFS and has a separate legend (ESCGP Section 2-3). The reason for a different linetype between the linear packages and the facility packages had to do with the scale of the drawings.
7.m.	**Wetland Crossing/Timber Mats:**	-
7.m.i.	There are areas where a wetland crossing is anticipated but do not show the use of timber mats or any other BMP	1423+00: HDD Area

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	(i.e. station 1423+00, 1445+00, 1604+00, 1730+00). What BMPs is PennEast proposing to use to minimize wetland impact in these areas?	1445+00: HDD Area As indicated on the plans, the LOD does not go through HDD areas. The drawings reference the HDD entry/exit locations for clarity on where HDDs are occurring. In addition, the reference block indicates which drawing the full HDD plan and profile can be seen. 1604+00: Wetland will be disturbed by the pipeline trench. The travel lane is on the opposite side of the wetland and equipment will not be driving over this feature. Compost filter socks are proposed around the wetland for protection prior to disturbance and during restoration. 1730+00: The travel lane is on the west side of the workspace (opposite side of wetland), therefore equipment will not be driving over this feature. In addition, the wetland encompasses a stream. The stream will be restored within 24 hours and will not require further protection once restored.
7.m.ii	Station 1568+00 shows an anticipated stream crossing, however, there is no callout on the plans that shows how this stream will be crossed. Please clarify.	Please note there is no delineated stream in this location. Surveys were conducted in a 400-foot corridor centered on the pipeline (in properties where access was granted). Public data was utilized outside of that 400-foot corridor. PA-NHD-403 is public data but was not identified within the proposed ROW.
7.m.iii	Several stream crossings are proposed throughout the project. It is recommended to add notation referencing the typical construction detail on how the stream crossing will be installed.	On the E&S Alignment Sheets (ESCGP Section 2-2), there is a band titled "Waterbody Crossing Method" indicating the waterbody ID and primary, secondary, and tertiary crossing methods for the waterbody (i.e. BX = conventional bore crossing, CD = cofferdam crossing,

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		etc.). On the Legends sheet (000-01-01-002), there is a "Waterbody Crossing Method Legend" indicating which crossing method applies to which detail.
7.m.iv	Station 2165+00 shows a stream located in the LOD area. Is there enough room to avoid impact to this stream?	PennEast has minimized workspace and minimized or avoided environmental impacts wherever possible. It is not possible to avoid impact to this stream at this stage of the Project.
8	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPs including permanent stabilization specifications and locations.**	-
8.a	Section 9.3 of the E&S narrative notes that the access roads will be restored in accordance with the landowner agreements. Access roads should be restored to original conditions upon project completion or additional PCSM BMPs may be required in order to manage changes in runoff rate, volume and water quality. Please identify any access roads which will not be restored to original changes in runoff rate, volume and water quality.	PennEast only proposes permanent access roads for facilities, which have been addressed in facility PCSM design. All other roads are proposed as temporary and will be restored to original conditions upon Project completion. Section 9.2 of the E&S narrative has been updated to reflect this (ESCGP Section 2-1).
8.b.	Section 9.6 of the E&S Narrative notes that "Property will be restored as close to original conditions as practical unless otherwise specified by the landowner". Please add a statement to the E&S narrative and a prominent note to the plans that any restoration activities which entail a post construction change in land use shall be evaluated for post construction stormwater impacts, approved by PA DEP and/or the appropriate conservation district, and may require the installation of PCSM BMPs to manage stormwater rate, volume and water quality impacts.	As requested, the note has been added to Section 9.6 of the E&S Narrative as well as General Notes sheet 000-01-01-003A (ESCGP Sections 2-1 and 2-2).
9	**§102.22(a) Permanent stabilization. Upon final completion of an earth disturbance activity or any stage or phase of an activity, the site shall immediately have**	-

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	topsoil restored, replaced, or amended, seeded, mulched or otherwise permanently stabilized and protected from accelerated erosion and sedimentation.	
9.a.	The Site Restoration Narrative notes that the pipeline areas will be restored to existing conditions or to meadow in good condition. However, the various seed mixtures on the Site Restoration Plans contain non-meadow species and there are multiple options for the seed mix restoration seed mixes. Please be more specific in the seed mix which should be used to achieve a meadow in good condition post development land use.	Both the E&S and Site Restoration General Notes have been revised to include updated seed mixes (ESCGP Sections 2-2 and 3-2). The seed mixes are more specific and accomplish restoring existing conditions or meadow in good condition.
Luzerne County		
LU-1	**102.2 (a) & (b) "Scope and purpose."**	-
LU-1.a	Proposed BMPs are not shown on the PCSM plan for the Springville Interconnect and Mainline Valve 2 projects. Please correct the PCSM plan to show the proposed BMPs.	Proposed infiltration berms, stormwater swales, piping and basins are shown on drawing number 021-03-06-001 for the Springville Interconnect and proposed underground infiltration trench and swale are shown on drawing 030-03-06-001 for MLV 2 (ESCGP Section 3-3).
LU-1.b	Infiltration calculations are not provided for the Mainline Valve 1 and Springville Interconnect volume BMPs. Please provide the infiltration calculations.	The infiltration testing results are found in Table 5 (pg. 14) and Trench Drain down time in Table 10 (pg. 20) and Basin Dewatering time calculations in Appendix C of PCSM report 353754-MM-E-E-108 for MLV 1 (ESCGP Section 3-3). The infiltration testing results are found in Table 5 (pg. 16) and Trench Drain down time in Table 11 (pg. 24) and Basin Dewatering time calculations in Appendix C of PCSM report 353754-MM-EN-CO-010 for Springville interconnect (ESCGP Section 3-3).
LU-1.c	The proposed infiltration trench for the Mainline Valve 1 project is not shown on the Erosion and Sediment Control Plans. Please correct the plans to show the proposed infiltration trench.	To clarify, the Mainline Block Valve 1 has a site-specific E&S drawing set (ESCGP Section 2-3). As part of this, we include the infiltration trench and details. The mainline pipeline installation will occur before the installation of the Mainline Block Valve 1. Therefore, the infiltration

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		trench is not shown on the linear E&S drawings, as it will not have been installed at that time.
LU-1.d	The construction sequence is not provided for Mainline Valve 1 project. Please provide the construction sequence.	The sequence of construction can be found on page 10 of the PCSM Report 353754-E-E-108 and on drawing number 029-03-07-004 of the MLV 1 PCSM plan set (ESCGP Section 3-3).
LU-1.e	Proposed infiltration berms 3 and 4 within the Wyoming Interconnect site do not appear to be installed along existing level grade. Please revise.	The infiltration berm #3 and #4 approximate the contour line shape (see Drawing NO.020-03-06-001). Berm #4 follows the approximate contour as the higher contours follow this pattern and there may be a local high point on the 1,278' contour that cause the irregular shape. All berms are intended to be constructed on grade.
LU-1.f	There appears to be a concentrated flow (proposed channel 1) above proposed infiltration berm 4. Please revise.	Infiltration berm #4 has a level spreader designed to disperse the flow. Both features annotated on Drawing NO. 020-03-06-001 and detailed on Drawing NO. 020-03-07-004 (ESCGP Section 3-3).
LU-2	**§102.4 (b)(5)(iii) Characteristics of the earth disturbance activity.**	-
LU-2.a	The location of proposed access road AR01 detail sheet has not been provided. Please provide access road AR01 detail sheet.	The detail sheet for AR-001 was included as Drawing No. 000-03-03-001 in the December 2018 E&S Drawings (ESCGP Section 2-2).
LU-3	**§102.4 (b)(5)(iv) Volume and rate of runoff.**	-
LU-3a	Springville Interconnect and Auburn/Leidy Interconnect sites: The plan map(s) show sediment trap/stormwater basin and diversion berm discharging to an area that is not identified as a surface water. If this is a non-surface water discharge, provide a discharge analysis that meets the standards of Item 4 on page 2 and Item 15 on page 161 of the E&SPC Manual. §102.11(a)(1)	During a PADEP coordination meeting on July 17, 2019, the PADEP clarified that drainage ditches on the side of the road could be considered surface waters. As a part of the PCSM plan, we have provided discharge calcs to show there will be no erosion on the discharge, as well as off-site discharge plans. No changes have been made to the PCSM Reports or plans due to this comment.
LU-3b	The maximum drainage area(s) during construction for all BMPs (ex. sediment traps) have not been outlined and labeled on the plan drawing.	The maximum drainage areas are depicted on the BMP Drainage Area Map included as part of Appendix B of each facility's E&S Narrative (ESCGP Section 3-3).

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		For the Springville Interconnect, the drainage area for the sediment trap will be the same as the drainage area for the sediment basin, as the sediment basin will be used as a temporary sediment trap during construction. The drainage map has been revised to clarify. For the Auburn/Leidy Interconnect, the BMP Drainage Area Map includes the compost sock sediment trap drainage areas. The map has been revised to include the temporary barrel/riser sediment trap's drainage area.
LU-4	**§102.4 (b)(5)(vii) Sequence of BMP installation and removal.**	-
LU-4.a	The construction sequence does not address soil segregation, in agricultural and forested areas.	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence on the E&S Notes sheet (ESCGP Section 2-2) has been revised to incorporate all comments and provide clarity throughout. The revised "Rough Grading and Stockpiling" section of the sequence indicates when topsoil segregation will be performed. Additionally, as part of the pipeline construction "Upland Locations" section Note 2, we discuss the stockpiling of topsoil and subsoil.
LU-4.b	The construction sequence does not provide erosion controls for spoils between approximate stations 13-25, 127-135, 173-176, 196-188, 210-217, 229-237, and 263-267.	The construction sequence is included on the E&S General Notes (ESCGP Section 2-2). On the alignment sheet stations listed below, the E&S design as displayed on the plan and profile alignment sheets details the proposed site specific BMPs. 13-25: (Alignment 000-03-01-001) Springville Interconnect will be installed in tandem with the mainline

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		pipeline installation. The E&S for this facility and the mainline through this location is detailed in the facility E&S package (ESCGP Section 2-3). 127-135: (Alignment 000-03-01-005/-006) This area was reviewed, and the contours were found to be perpendicular to the workspace. The proposed waterbars in this location will handle the stormwater runoff. 173-176: (Alignment 000-03-01-007) Additional compost filter sock was added along the west edge of the LOD. 196-188: (Alignment 000-03-01-008) Additional compost filter sock was added along the north edge of the LOD. 210-217: (Alignment 000-03-01-008/-009) This area was reviewed and the contours were found to be perpendicular to the workspace, with the lowest point at the center of the LOD. The proposed waterbars in this location will handle the stormwater runoff. 229-237: (Alignment 000-03-01-009) Additional compost filter sock was added along the edge of the LOD between stations 229+00 and 234+00. Between stations 234+00 and 237+00, the contours are perpendicular to the workspace with the exception of the unnamed road. The proposed waterbars in this location will handle the stormwater runoff. 263-267: (Alignment 000-03-01-010) Additional compost filter sock was added along the east edge of the LOD between stations 263+00 and 265+00. Between stations

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		265+00 and 267+00, the contours are perpendicular to the workspace. The proposed waterbars in this location will handle the stormwater runoff.
LU-4.c	The construction sequence does not provide adequate erosion controls from Lower Demunds Road to Gypsy Lane.	The construction sequence is included on the E&S General Notes (ESCGP Section 2-2). On the alignment sheet locations indicated, the E&S design as displayed on the plan and profile alignment sheets details the proposed site specific BMPs. In regards to the E&S design from Lower Demunds Road to Gypsy Lane, the erosion control blankets are shown in steep slope areas (slopes 3H:1V or greater), waterbars are spaced according to the E&S Manual and maintain a 2% slope, trench plugs are spaced according to the E&S Manual, sediment barriers are placed along the ROW to reduce sediment laden runoff from leaving the disturbed area, rock construction entrances are proposed at entry/exit locations from the ROW, temporary equipment bridges are proposed across streams to minimize impact to streams from construction traffic, and a waterbody is being bored to minimize impact to stream bed and banks. PennEast requests clarification of what E&S measures have been left out of the design.
LU-4.d	The construction sequence does not provide adequate erosion controls at river crossings and associated staging areas.	The construction sequence is included on the E&S General Notes (ESCGP Section 2-2). On the alignment sheet locations indicated, the E&S design as displayed on the plan and profile alignment sheets details the proposed site specific BMPs. The controls at waterbody crossings typically include a temporary equipment bridge to allow for construction

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		traffic, erosion control blankets on either side of the waterbody to re-stabilize the banks and the area upslope, trench plugs adjacent to the stream edges to maintain the stream conveyance post construction. In addition, the Waterbody Crossing Method band indicates the proposed crossing method which is further illustrated in the corresponding E&S typical details. Staging areas/additional temporary workspace are locations that will have surface disturbance. In these locations, as shown on the plans, sediment barriers, erosion control blankets (as needed), waterbars, etc. are being proposed. PennEast requests clarification of what E&S measures have been left out of the design.
LU-4.e	The construction sequence does not provide adequate erosion controls on the downslope side of proposed trenching between approximate stations 530-536, 576-588, 617-625, 748-752, 761-777, 799-793, 808-818, and 893-909.	The construction sequence is included on the E&S General Notes (ESCGP Section 2-2). On the alignment sheet locations indicated, the E&S design as displayed on the plan and profile alignment sheets details the proposed site specific BMPs. 530-536: Compost filter sock has been added along the downslope side of the LOD from station 530+00 to 536+00. 576-588: Compost filter sock has been added along the downslope side of the LOD from station 580+00 to 581+00 and from station 585+00 to 588+00. Compost filter sock was already laid out between stations 576+00 and 580+00 and between stations 581+00 and 585+00. No additional compost filter sock was added in these

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		locations. 617-625: The route in this location has been adjusted for this resubmittal. The E&S design has been revised accordingly. 748-752: Compost filter sock has been added along the downslope side of the LOD from station 748+00 to 752+00. 761-777: Compost filter sock has been added along the downslope side of the LOD from station 761+00 to 777+00. 799-793: Compost filter sock has been added along the downslope side of the LOD from station 793+00 to 799+00. 808-818: Compost filter sock has been added along the downslope side of the LOD from station 808+00 to 818+00. 893-909: Compost filter sock has been added along the downslope side of the LOD from station 893+00 to 898+00. The contours are perpendicular to the workspace between stations 898+00 and 905+00. Therefore, the proposed waterbars will handle the stormwater runoff in this location and no additional compost filter sock was added.
LU-4.f	Please indicate the BMPs to be installed prior to general clearing and grubbing (Step 1) (see bottom of page 8 of the E&SPC Manual). §102.11(a)(1)	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence has been revised

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		(ESCGP Section 2-2) to incorporate all comments and provide clarity throughout.
LU-4.g	Please explain what CWS stands for.	All instances of "CWS" have been revised to "CWA," previously defined in the Construction Sequence as Construction Work Area.
LU-4.h	Please explain the purpose of a Site Grading construction sequence.	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence has been revised (ESCGP Section 2-2) to incorporate all comments and provide clarity throughout. The "Site Grading" portion of the construction sequence has been revised to "Rough Grading and Stockpiling" for clarity. This section of the construction sequence outlines the stripping and stockpiling of topsoil that will take place after site clearing, followed by the rough grading of the construction workspace as needed. The rough grading of the site is temporary and will be restored to original contours following construction.
LU-4.i	The construction sequence should specify additional erosion controls for dewatering of trenches along steep slopes to avoid re concentration of sediment laden runoff, sediment to adjacent waterways and discharge onto downslope disturbed areas.	The following notes can be found on the Pumped Water Filter Bag detail (Figure 29) in the E&S Details (ESCGP Section 2-2): "BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER

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		THE BAG TO REDUCE SLOPE STEEPNESS." "COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE." "FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED." As specified on the detail, compost filter socks will be installed to avoid sediment to adjacent waterways in any instance regardless of slope. Additionally, placement of filter bags in well-vegetated areas is specified with additional measures listed for instances where this is not possible. If re-concentration of sediment laden runoff or discharge to downslope disturbed areas occurs, it would be identified during the daily inspections and the additional erosion controls listed would be installed.
LU-4.j	The Springville Interconnect sequence does not provide adequate erosion controls downslope of all disturbed areas, as well as below the sediment trap. Please revise.	Additional compost filter socks have been added along the downslope side of the disturbed areas and sediment trap, from the driveway on the west to the driveway on the east (ESCGP Section 2-3 and ESCGP Section 3-3).
LU-4.k	The Springville Interconnect sequence Step 7 calls to install the proposed sediment trap and infiltration basin at the same time. Please revise the sequence of construction to correctly instruct the contractor when to install the infiltration basin. The infiltration basin should be installed	The Springville Interconnect sequence Step 7 has been revised (ESCGP Section 2-3 and ESCGP Section 3-3) to indicate that the temporary sediment trap will be installed at this stage. The sediment trap will be converted to an infiltration basin once permanent

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	once permanent stabilization is established. Please revise accordingly.	stabilization has been established, as indicated by Step 15.
LU-4.l	Provide instructions for removal/conversion of the proposed sediment trap within Springville Interconnect and Auburn/Leidy sites to a stormwater management facility. See the bottom of page 10 in the E&SPC Manual for guidance. §102.11(a)(1)	The BMP installation sequence for Springville Interconnect has been revised (ESCGP Section 2-3 and ESCGP Section 3-3) to provide further details regarding the conversion of the proposed sediment trap to an infiltration basin in accordance with page 10 of the E&SCP Manual. The sediment trap at the Auburn & Leidy Interconnects site will be breached as part of final site grading and stabilization, as described in the BMP installation sequence. Additional detail was added regarding the installation/removal of the cleanout stake, removal of the sediment trap outlet basin, inspection of the site stabilization prior to removal of temporary BMPs, and the removal of sediment from the compost filter sock sediment traps.
LU-4.m	Describe how PCSM BMPs within the Springville and Wyoming Interconnect sites will be protected from sedimentation until construction is completed and the site stabilized (see bottom of pages 10 and 262 in the E&SPC Manual). §102.11(a)(1)	The E&S BMPs have been designed to protect the PCSM BMPs from sedimentation during construction. As specified in the BMP installation sequence, the temporary measures installed by the contractor during grading shall remain in place until final stabilization has a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist sliding and other movements. The BMP installation sequence has been revised (ESCGP Section 2-3 and ESCGP Section 3-3) to instruct the owner or operator to contact the county conservation district and PADEP for inspection of permanent stabilization prior to removal/conversion of E&S control BMPs.

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LU-4.n	The Springville Interconnect sequence should specify which erosion controls are to be removed, upon permanent stabilization.	The Springville Interconnect sequence has been revised (ESCGP Section 2-3 and ESCGP Section 3-3) to specify which erosion controls are to be removed upon permanent stabilization.
LU-5	**§102.4 (b)(5)(viii) Supporting calculations and measurements.**	-
LU-5.a	Provide peak flow calculations for diversion berms. See Chapter 5 in E&SPC Manual for guidance on runoff calculations. Standard E&S Worksheets #9 and #10 are recommended for the Rational Equation. An acceptable alternative is the use of the standard multipliers at the top of Standard E&S Worksheet #11. §102.11(a)(1)	To clarify, calculations are shown in the E&S Narrative Appendix 2. The calculations include Standard E&S Worksheets #9, #10, and #11 for each temporary channel designed as part of the clean water diversion system. As shown in these calculations and in accordance with the E&S Manual, a 2-year/1-hour design storm was used in non-HQ/EV watersheds and a 5-year/1-hour design storm was used in HQ/EV watersheds for a temporary channel. Please note that this is Chapter 6 of the E&S Manual.
LU-5.b	Wherever temporary channel linings are proposed, specific calculations to demonstrate flow capacity and stability during its use should be provided. Separate calculations should be provided for the vegetated condition.	NAG protective liner specifications have been provided in Appendix 3 of the E&S Narrative. Each liner type details allowable shear stress and Manning's n based on flow depth and were incorporated into the channel Worksheet #11 calculations. For each temporary channel design, the bed slope was reviewed to determine if there is a minimum and maximum slope. If the bed slope was consistent across the channel, Note 7 on Worksheet #11 was added to state "There is no significant percent slope change along the entire temporary channel, therefore the channel capacity and shear stress have been calculated based on the single bed slope value." For instances where the bed slope varied across the temporary channel, both the minimum and maximum bed slopes were used to calculate an acceptable diversion sock and liner to

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		accommodate both conditions. For these worksheets, two columns are shown calculating channel height and liner type. Note 7 on Worksheet #11 was added to state "For this temporary channel, the percent slope changes along the diversion sock, therefore it was designed in two segments." The calculations above demonstrate that the shear stress and capacity were checked for both scenarios and the more conservative lining and diversion sock diameter were selected and implemented into the design. The table above shows both scenarios, and the column in bold is the more conservative design used to satisfy both scenarios. The Worksheet #11 includes calculations for vegetated condition if required to meet the allowable shear stress.
LU-5.b	Provide calculations to show that compost sediment traps provide the required 2,000 cubic feet per acre storage capacity. §102.11(a)(1) Standard E&S Worksheet #14 is recommended for this purpose.	No compost sock sediment traps are proposed for the linear E&S. The only facility where compost sock sediment traps are proposed is the Auburn & Leidy Interconnects site. Standard E&S Worksheet #14 has been added to the E&S Narrative Appendix C for this facility.
LU-6	**§102.4 (b)(5)(ix) Plan drawings.**	**-**
LU-6.a	It appears that a stabilized construction entrance is needed at the start of pipe trenching on sheet 0301001. See pages 13 through 17 in the E&SPC Manual for guidance regarding stabilized construction entrances. §102.11(a)(1)	A continuation of Access Road AR-001 is shown on access road drawing 000-03-03-001, as indicated by the "Reference Drawings" block on alignment sheet 000-03-01-001. A stabilized construction entrance is proposed at the end of the access road where the access road meets the paved road, as shown on access road drawing 000-03-03-001 (ESCGP Section 2-2).
LU-6.b	Please specify with a line on sheet 0301001 where work in Luzerne County ends.	The entire construction workspace on alignment sheet 000-03-01-001 is located within Luzerne County. A continuation of Access Road AR-001 is shown on access

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		road drawing 000-03-03-001, as indicated by the "Reference Drawings" block on alignment sheet 000-03-01-001. The work in Luzerne County ends on alignment sheet 000-03-01-047, as indicated by the county line shown and labeled in plain view, as well as the "Stationing" band.
LU-6.c	A spot check found maximum slope lengths were exceeded at Waterbody 092414_GO_1001_P and Waterbody 071416_GM_1002_E_IN, on sheet 001 and approximately at station 511. All maximum slope lengths should conform to those provided in Figure 4.2 of the E&SPC Manual. §102.11(a)(1)	Compost filter sock was added to either side of waterbody 092414_GO_1001_P_IM and has been sized according to Figure 4.2 of the E&S Manual. Waterbody 071416_GM_1002_E_IN at station 511+00 has compost filter socks along the edge of the right-of-way upslope. The upslope length for each compost filter sock was properly sized according to Figure 4.2 of the E&S Manual and has not been revised.
LU-6.d	There is a potential for sediment laden runoff to be discharged off-site from between sock sections. Please revise.	As stated in the E&S Manual Chapter 4, filter socks "should be placed parallel to contour with both ends of the sock extended upslope at a 45-degree angle to the rest of the sock to prevent end-arounds." As shown on the plans, multiple sediment barriers were placed along the edge of the downslope ROW to between and parallel to the 2-foot contour lines to ensure adequate E&S control.
LU-6.e	The E&S plan shows an insufficient spacing for temporary waterbars throughout the project. Please revise.	Waterbars were spaced in accordance with the E&S Manual Chapter 3 Table 3.1 (Maximum Waterbar Spacing). This is also consistent with the spacing for waterbars provided in E&S Manual Chapter 13 Table 13.2 (Maximum Spacing for Permanent Waterbars on a Utility Line Right-of-way).
LU-6.f	Proposed access roads 9 or 9A could not be located on plan sheet 000-03-03-007. Please verify location of all roads on E&S plans.	Access Roads AR-009 and AR-009A are displayed and labeled on sheet 000-03-03-007. Additionally, the centerline of each access road is stationed and has a

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		lat/long coordinate at the rock construction entrance at the beginning of the access road.
LU-6.g	The typical temporary access road detail shows a depth for existing road and a labeling for existing ground. Please explain whether earth disturbance is proposed for widening and provide erosion controls for the temporary access roads.	The intent of the access road detail titled "Typical Temporary Access Road Cross-Section Detail" is to show existing road surface type and existing road width, as well as our certificated LOD width. Note 2 has been added to further clarify the intent and that the depth is unknown. As stated in the E&S General Notes, "The installation of temporary access roads may require selective tree limb clearing and placement of temporary stone." Refer to Figure 1I (Access Road Cross Section) for selective tree limb clearing along access roads with tree canopy overhang.
LU-6.h	Erosion and sediment control BMP verbiage and proposed erosion controls shown on detail sheet 000-03-08-001 are inconsistent with the erosion and sediment control plan sheets for the same area showing the proposed line. Please address the inconsistency.	Typical Construction ROW Detail 000-03-08-001 shows typical workspace configurations and describes BMPs for various scenarios. However, these figures are meant to be representative of typical scenarios. Site specific E&S controls have been designed and displayed on the plan sheets. The E&S controls shown on each plan sheet would be the actual design to be installed in the field. In addition, text on Figures 1E and 1F have been revised per other agency comments (ESCGP Section 2-2).
LU-6.i	The Access Road Cross Section detail (Figure 1I) includes a note to “Coordinate with the County Conservation District if access road widening is needed”. Please revise this note to read “If roadway widening is required, contact and coordinate with the appropriate County Conservation District to determine permitting requirements prior to widening the roads. Upon project completion, access roads will be restored to original conditions unless appropriately sized PCSM BMPs are provided.”	Figure 1I has been renamed to include the word "temporary." The title now reads "Temporary Access Road Cross Section." The purpose of this change is to demonstrate that for temporary access roads, used only during construction, the intent is not to put down any impervious cover to remain post restoration. PennEast intends to selectively cut tree limbs for canopies that overhang the temporary access road LOD. In addition, gravel may be placed within the temporary access road

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		LOD to mitigate against potential rutting and in wet areas to further stabilize the road during construction. The temporary gravel will be removed following construction and the road will be restored to original condition. Any permanent access roads required for the Project are already being permitted as part of the PCSM submission to PADEP and county conservation districts. Based on this premise, the note has been reworded to state the following: "The installation of temporary access roads may require selective tree limb clearing and placement of temporary stone. Upon Project completion, access roads will be restored to original conditions."
LU-6.j	The effective height of the proposed stacked 32-inch compost filter sock is inadequate. Please revise to properly size the compost filter sock.	The stacked 32-inch compost filter sock, as shown in Figure 5C in the E&S details, is proposed as an alternative to a single 32-inch compost filter sock. The stacked compost filter socks are proposed as a sediment barrier, not a compost sock sediment trap which has freeboard requirements. Therefore, the stacking height is sufficient.
LU-6.k	The compost sock diversion does not specify the type of filter media. Please revise to specify the type of filter media.	The E&S Narrative has been revised to include Appendix 3B, "Filtrexx Runoff Diversion Media Specifications" (ESCGP Section 2-1).
LU-6.l	The Department may approve alternative BMPs (not contained in E&SCP Manual or using a different design method or standards than those described in the E&SCP Manual) that maintain and protect existing water quality and existing and designated uses, this appears to be the case with Durasoxx. However, the burden of proof that the proposed BMPs are appropriate for the intended use lies with the plan designer. Sufficient supporting documentation (calculations, manufacturer's specs, etc.) should be included with the application to allow the	Specifications for Filtrexx's Siltsoxx mesh fabric (Durasoxx) have been included as Appendix 3A in the E&S Narrative. This is a mesh for a compost filter sock with higher tensile strength for use in areas with a large upslope length or high percent slope. As shown in Filtrexx's Siltsoxx specifications, the multi-filament polypropylene (Durasoxx) is equivalent to the heavy-duty multi-filament polypropylene (HDMFPP) as shown in Table 4.1 in the E&S Manual.

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	reviewer to make an informed decision. For more information regarding new products and procedures, see Chapter 12.	PennEast is not requesting an approved alternative BMP, as this is already an acceptable product per the E&S Manual.
LU-6.m	**Springville Interconnect:**	-
LU-6.m.i	Provide a typical detail for each type of channel and diversion berm proposed (Item 9, page 5 of the E&SPC Manual) §102.11(a)(1).	It is PennEast's intention to provide typical details for each type of channel and diversion berm. As such, Figure 49 and Figure 50 have been provided for each type of channel and diversion berm on site. Figure 49 is a detail for vegetated Swales 1 and 2, and Figure 50 is a detail for riprap Swales 3 and 4. The diversion berm is a graded area as shown by the proposed contours to divert runoff from the offsite drainage area around the site. No additional details are required, as this is just standard proposed grading of the site.
LU-6.m.ii	Rock filters can only be used within proposed channels while the temporary liner is being installed. Please revise.	The Springville Interconnect BMP installation sequence has been revised to include the removal of the rock filters upon installation of the riprap in Swales 3 and 4 (ESCGP Section 2-3).
LU-6.m.iii	Provide a typical detail for a proposed stilling basin.	The detail for the proposed stilling basin has been provided as part of the PCSM details on sheet 021-03-07-011 (ESCGP Section 2-3).
LU-6.n	Please provide the location of sediment trap clean out stakes on the E&S plans.	Clean out stake locations have been added to the Erosion & Sediment Control Plan (021-03-03-002) (ESCGP Section 2-3).
Carbon County		
CA-1	**§102.4(b)(5)(ix) Plan Drawings**	**-**
CA-1.a.	**Kidder Compressor Station:**	-
CA-1.a.i	As proposed, there is a large area between Industrial Drive and the Temporary Swale in the LOD. Should there be any earth disturbance within this area, please include the proposed grading and any work that is to be done. Also,	The proposed staging area LOD has been revised since the December 2018 application. The staging area will be used for various purposes including but not limited to parking, equipment storage, contractor trailer, etc. Any gravel placement to be used for parking will be

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	please show any erosion and sediment control BMPs necessary to prevent a sediment pollution event.	temporary during construction only. Following construction, the gravel will be removed, contours restored (proposed temporary swale removed), and the area will be revegetated. E&S control BMPs are already proposed for this area. The proposed BMPs include a temporary swale with rock filters to the north of the staging area to divert runoff around the disturbed area, compost filter socks adjacent to the proposed road to prevent sediment laden runoff from entering the diversion swale, and erosion control blanket on all graded slopes with 3H:1V or greater (ESCGP Section 2-3).
CA-1.a.ii	As submitted, there are several staging areas called out throughout the plan. Should there be any earth disturbance within this area, please include the proposed grading and any work that is to be done. Also, please show any erosion and sediment control BMPs necessary to prevent a sediment pollution event.	There are several staging area callouts on the plan, but each references the same staging area (PE-STA-B-09). This staging area is the same location referenced in comment CA-1.a.i. Please refer to above response.
CA-1.a.iii	As per the construction sequence, there is a temporary parking area called out. Please indicate where this temporary parking area is located on the existing plan drawings or revise the plan drawings to include this area.	The temporary parking area is the same area as the staging area (PE-STA-B-09). The proposed staging area LOD has been revised since the original application. The staging area will be used for various purposes including but not limited to parking, equipment storage, contractor trailer, etc. Any gravel placement to be used for parking will be temporary. Following construction, the gravel will be removed, contours restored (proposed temporary swale removed), and the area will be revegetated.
CA-1.a.iv	Please clarify how the water will be bypassed during the box culvert installation.	The stream flow will be bypassed using cofferdams and pumping measures during the box culvert installation. The Kidder Compressor construction sequence has been

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		revised to clarify the proposed measures (ESCGP Section 2-3).
CA-1.b.	**Kidder Side Valve:**	-
CA-1.b.i	As proposed, there is an existing wall to be removed. Is the wall only to be removed in the LOD area? Please clarify.	The existing wall on the west side will be removed within the permanent easement only. The existing wall on the right side was labeled incorrectly, as it does not enter the permanent easement. This label has been removed for clarity.
CA-1.c	**Towamensing Side Valve:**	-
CA-1.c.i	As per the plan, the LOD area is very wide. Should there be any earth disturbance within this area, please include the proposed grading and any work that is to be done. Also, please show any erosion and sediment control BMPs necessary to prevent a sediment pollution event.	As referenced in the legend, the thick grey dashed LOD line in this area is for the mainline pipeline construction as well. The E&S control BMPs necessary for the larger LOD area are shown on both this facility drawing and in the mainline erosion and sediment control drawing package. These BMPs are to remain in place and be maintained for the construction of the MLV site. The only permanent grading to be performed at the site has been depicted on the plan. All other rough grading work performed within the LOD as part of the mainline construction will be returned to original contours.
CA-1.d	**Other Concerns:**	-
CA-1.d.i	Please provide a separate sequence handout for each compressor/side valve project.	A sequence of construction has been provided for each aboveground facility location along the Project. The sequence of construction is provided in the General Notes of each E&S facility package (ESCGP Section 2-3) as well as in the PCSM Details sheets in the PCSM facility package (ESCGP Section 3-3). Below are the various proposed aboveground facilities within Carbon County: -Kidder Compressor Station -Mainline Block Valve 3 -Mainline Block Valve 4

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		In addition, the pipeline sequence of construction is referenced within the E&S General Notes of the pipeline E&S drawing package (ESCGP Section 2-2).
CA-1.d.ii	Please provide a more specific location map for each compressor/side valve project. Example: Towamensing side valve is located off Stagecoach Road East has been shown on the Location Map and is acceptable. The location maps for the compressor station and side valve project should be provided with the same details as the Towamensing side valve location map.	An E&S drawing package and PCSM drawing package have been provided for all 3 aboveground facilities in Carbon County. These facilities, in order of milepost, are called Kidder Compressor Station, Mainline Block Valve 3, and Mainline Block Valve 4. Multiple overview maps, location maps, and site plans have been provided for each facility (ESCGP Sections 2-3 and 3-3). Within those maps and drawings, lat/longs have been provided to locate each facility. In addition, in each site plan the public road where the proposed permanent access road connects is shown. For ease of locating, we've provided in this response the adjacent public roadway referenced on the plans: - Kidder Compressor Station: PA Route 940 - Mainline Block Valve 3: S.R. 534 -Mainline Block Valve 4: Stagecoach Road East
CA-2	**§102.6(b)(3) Permit fees.**	-
CA-2.a	The fee for service of the next submittal is $9,837.50, payable to “Carbon Conservation District”.	PennEast has included a fee check for $9,837.50 in this submittal (ESCGP Section 1-3).
Monroe County		
MO-1	**§102.4(b)(5)(ix) Plan Drawings**	-
MO-1.a	The PA Fish and Boat letter dated May 17, 2018 recommends conservation measures for rattlesnakes located along the pipeline section in Monroe County. These measures should be provided on the plans,	PennEast has committed to conservation measures for timber rattlesnakes as well as several other species along the Project alignment. Conservation measures are memorialized in consultation letters, minimization plans, and a Biological Opinion, depending on the species and

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	including instructions on how workers should proceed should rattlesnakes be encountered on the project.	reviewing agency's requirements. PennEast's contractors and Environmental Inspectors will receive detailed instructions regarding how to implement these conservation measures through compliance materials, pre-construction environmental training, and construction oversight. Per its FERC Certificate conditions, the agreed upon conservation measures for state and federal species will be submitted to the FERC for final review before PennEast requests permission to proceed with construction. In addition to PennEast's Environmental Inspectors, regulatory agencies, and FERC inspectors will have oversight to ensure compliance with conservation measures. Due to the volume of information that is necessary to relay to PennEast's contractors on such a large and complex project including regulatory requirements, landowner requirements, and PennEast's construction plans, it is not feasible to put all of the information on one plan set and maintain legibility. PennEast commits to providing contractors with detailed information regarding timber rattlesnake conservation measures through other established methods.
MO-1.b	The waterbars shown on the plan sheets from Station 2699+70 to 2724+70 (Monroe County) should be reversed in direction to discharge runoff away from the work area. Please make similar changes to the Site Restoration Plans.	The waterbars on the plan sheets from station 2699+70 to 2724+70 have been adjusted and reversed in direction to discharge runoff away from the work area, with the exception of the first two (ESCGP Section 2-2). The first two waterbars were left as is to avoid diverting runoff directly back into the disturbed work area. The Site Restoration Plans (ESCGP Section 3-2) have also been revised to reflect these changes.
MO-2	**§102.6(b)(3) Permit fees.**	**-**

Comment Number	PADEP Comment	PennEast Response
MO-2.a	The fee for service the next submittal is $1,125.00, payable to “Monroe County Conservation District”.	PennEast has included a fee check for $1,125.00 in this submittal (ESCGP Section 1-3).
Northampton County		
NO-1	**§102.4(b)(5)(i) The existing topographic features of the project site and the immediate surrounding area.**	-
NO-1.a	**Hellertown Launcher**	-
NO-1.a.i	Indicate the type and extent of vegetative cover on the plan drawing.	All areas within the LOD but outside of the proposed facility areas will be topsoiled and seeded. Labels have been added to the Soil Erosion & Sediment Control Plan (024A-03-03-002) for clarity. Please refer to drawing 024A-03-02-003 for the recommended seeding mixtures (ESCGP Section 2-3).
NO-1.a.ii	Please provide a mapping symbols legend that conforms to the standards on page 397 of the E&SPC Manual. The legend should define the symbol depicted in plan view on the floor of the sediment trap.	The hatching pattern depicted in plan view on the floor of the sediment trap has been revised to match the "minimum compaction area" symbol represented in the legend as originally intended (ESGCP Section 2-2).
NO-1.b	**Mainline Block Valve #6**	-
NO-1.b.i	Indicate the type and extent of vegetative cover on the plan drawing.	All areas within the LOD but outside of the proposed facility areas will be topsoiled and seeded. Labels have been added to the Soil Erosion & Sediment Control Plan (033-03-03-002) for clarity. Please refer to drawing 033-03-02-003 for the recommended seeding mixtures (ESCGP Section 2-3).
NO-1.b.ii	Please provide a complete/ consistent mapping symbols legend or identifying labels. E.g., the brown line with small squares could not be identified. That was the case for several other mapping symbols.	Previously, the brown line with small squares was intended to represent proposed safety fencing to protect the infiltration area outside of the proposed fence line. As part of this resubmission, the proposed fence line has been revised to encompass the entire infiltration area (ESCGP Section 2-3). The safety fencing is no longer needed and has been removed.

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NO-2	**§102.4(b)(5)(iii) The characteristics of the earth disturbance activity, including the past, present, and proposed land uses and the proposed alteration to the project site.**	-
NO-2.a	All features of the E&S plan drawings should be readily identifiable. Please revise the E&S plan to conform to the standards in Appendix D (page 397 of the E&SPC Manual first paragraph). (For example, compost filter socks are not readily distinguishable in plan view and the color variations between sock diameters are indistinguishable). Please label the socks with their proposed size in plan view for identification purposes.	As stated in Appendix D of the E&S Manual, "Symbols used should be readily distinguishable from each other, and clutter should be avoided." Therefore, as shown in the legend of the E&S pipeline package, each sediment barrier (compost filter sock) size is represented by a different color. The purpose of showing it this way is to reduce additional text that will cause clutter on the plans. In addition, the linetype for all compost filter socks was thickened. In addition, the color scheme was revised for more clarity. All E&S drawings have been reprinted and included as part of this submittal (ESCGP Section 2-2).
NO-2.b	Describe how the access roads for construction will be stabilized and provide permanent contours for those access roads that are to remain.	PennEast only proposes permanent access roads for facilities, which have been addressed in facility PCSM design (i.e. the proposed grading of permanent access road AR-200N is depicted on the PCSM plan for the TCO & UGI-LEH Interconnects facility site, ESCGP Section 3-3). Most temporary access roads (TARs) utilized for the Project are already existing access roads (as shown on the access road details). In these cases, the road is already stabilized. If temporary widening is required, PennEast is proposing to selective tree limb cut and add stone during construction. The stone will be removed following construction and the road will be restored to original conditions.
NO-2.b.i	The E&S Plan notes indicate that temporary access roads may be left in place at request of the property owner. The	Previously, Section 9.2 of the E&S Narrative stated that "TARs for construction will be restored in accordance

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	note should be revised to indicate that a permit amendment would be required if access roads are left in place.	with landowner agreements." All temporary access roads will be restored to original conditions upon Project completion. Section 9.2 of the E&S narrative has been updated to reflect this (ESCGP Section 2-1).
NO-2.c	**Hellertown Launcher**	-
NO-2.c.i	Describe the actual land uses for the past 50 years or longer if known, at the project site, as described in Item 3 on page 2 of the E&SPC Manual, as well as identification of any potential pollutants that might be located at the project site.	This information was reviewed and provided in the site's PCSM Report (ESCGP Section 3-3). PennEast reviewed aerial imagery from 1955, which depicted the Hellertown Launcher & Mainline Launcher / Receiver site as an open grassed field. There are no known potential pollutants located at the Project site.
NO-3	**§102.4(b)(5)(iv) The volume and rate of runoff from the project site and its upstream watershed area.**	-
NO-3.a	Maximum drainage areas to the proposed inlet protection during construction should be provided on the E&S plan drawing to support BMP design, (e.g., inlet drainage area table). Where the capacity of filter-bag inlet is exceeded by the maximum allowable drainage area, alternative BMPs should be provided. (re: page 123 of the E&SPC Manual.)	The proposed storm inlets shown on the plans are intended for PCSM purposes only. To ensure these structures are not used in the temporary condition, the proposed rim elevation will be set 1-foot above the temporary construction grade to prevent silt laden runoff from entering the structures. The BMP installation sequence is listed on the PCSM and E&S plan sets for each site (ESCGP Sections 3-3 and 2-3, respectively) to ensure the Contractor does not bring grade above the 1-foot mark. Once the site has been stabilized and inspected by the engineer, grading will be brought to final elevations. Filter bags are shown as an additional precautionary measure to keep the structures free from debris, but not intended to see storm water flow.
NO-3.b	**Hellertown Launcher**	-
NO-3.b.i	Please provide a drainage area map (including topography) that clearly identifies each proposed swale and sediment trap. The swales and trap locations should be shown on the drainage area mapping and identified watersheds	The BMP drainage area map in the E&S Narrative Appendix B (Drainage Area Maps) has been updated to include topography, proposed swale and sediment trap locations, and maximum contributing drainage areas

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	should be the maximum contributing drainage area tributary to the BMP.	tributary to the swales and sediment trap (ESCGP Section 2-3).
NO-3.b.ii	The plan drawing shows the sediment trap discharging to an area that is not identified as a surface water. If this is a non-surface water discharge, provide a discharge analysis that meets the standards of Item 4 on page 2, and Item 15 on page 161 of the E&SPC Manual. (reference Item 9 below)	As discussed at the PADEP coordination meeting on July 17, 2019, the sediment trap discharges to an existing roadside ditch (not a non-surface water discharge). Following construction, the temporary outlet basin will be replaced with a permanent level spreader. The PCSM plan (ESCGP Section 3-3) has discharge calculations to demonstrate that no erosion will occur offsite.
NO-3.c	**Mainline Block Valve #6**	-
NO-3.c.i	Maximum drainage areas during construction to proposed Swale 1 should be provided on the E&S plan drawing to support BMP design, (re: page 123 of the E&SPC Manual.)	Supporting calculations for the PCSM BMPs have been provided in the PCSM Report (ESCGP Section 3-3). For the maximum drainage area during construction to proposed Swale 1, please refer to Appendix E "Existing Conditions Stormwater Management Map."
NO-3-d	**TCO & UGI-LEH Interconnects**	-
NO-3.d.i	Please provide a drainage area map (including topography) that clearly identifies each proposed swale and sediment trap. The swale and trap locations should be shown on the drainage area mapping and identified watersheds should be the maximum contributing tributary to the BMP.	The BMP drainage area map in the E&S Narrative Appendix B (Drainage Area Maps) has been updated to include topography, proposed swale and sediment trap locations, and maximum contributing drainage areas tributary to the swales and sediment trap (ESCGP Section 2-3).
NO-3.d.ii	The plan drawing(s) show outfall HW-1 discharging to an area that is not identified as a surface water. If this is a non-surface water discharge, provide a discharge analysis that meets the standards of Item 4 on page 2, and Item 15 on page 161 of the E&SPC Manual. (reference Item 9 below)	As discussed at the PADEP coordination meeting on July 17, 2019, the outfall HW-1 discharges to an existing roadside ditch (not a non-surface water discharge). The PCSM plan has discharge calculations to show that no erosion will occur offsite (ESGCP Section 3-3).
NO-4	**§102.4(b)(5)(v) The location of all surface waters of this Commonwealth which may receive runoff within or from the project site and their classification pursuant to Chapter 93.**	-

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NO-4.a	The Chapter 93 designated use appears to be incomplete for all watersheds identified in Northampton County. At a minimum, the migratory fishery designation was missed. Please review the Chapter 93 designated uses for the watersheds in Northampton County and provide a complete listing of all designated uses.	The Chapter 93 designated uses were updated to include migratory fishery designation. If a stream has an existing use, the existing use has been used in place of the designated use. The Chapter 93 designated uses can be found in the E&S General Notes and on the E&S Alignment sheets in the Watershed Classification band (ESCGP Section 2-2).
NO-4.b.	**Hellertown Launcher**	-
NO-4.b.i	The designated use of the Lehigh River is incorrect in the E&S Narrative and Drawing (sheet 2) and NOI. Please provide the correct designated use.	The site drains to an unnamed tributary of Lehigh River, which has a Chapter 93 designated use of CWF, MF. PennEast has updated Section 2.3 and Section 10 of the Hellertown Launcher E&S Report and Environmental Notes on the Hellertown Launcher E&S Drawings (ESCGP Section 2-3) to clarify that the receiving water is an unnamed tributary of Lehigh River.
NO-5	**§102.4(b)(5)(vi) A narrative description of the location and type of perimeter and on site BMPs used before, during, and after the earth disturbance activities.**	**-**
NO-5.a.	**Hellertown Launcher**	-
NO-5.a.i	Page 3 of the E&S Narrative references utilizing a sediment basin. A sediment basin is not proposed. Please address this inconsistency.	The E&S Narrative has been revised to reference a temporary sediment trap (ESCGP Section 2-3).
NO-6	**§102.4(b)(5)(vii) A sequence of BMP installation and removal in relation to the scheduling of earth disturbance activities, prior to, during, and after earth disturbance activities that ensure the proper functioning of all BMPs.**	**-**
NO-6.a	The sequence for upland area pipeline installation suggests clearing and grading activities as well as installation of access roads will occur without E&S BMPs. All E&S BMPs should be installed prior to earth disturbance.	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence has been revised (ESCGP Section 2-2) to incorporate all comments and provide clarity throughout.

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NO-6.b	The construction sequence for upland locations should more clearly describe the timing of the installation and repair of temporary waterbars in relation to pipeline trenching and backfills.	As specified in the construction sequence, temporary waterbars (and permanent waterbars) will be installed following the removal of topsoil along the construction ROW. The temporary waterbars will be restored following pipeline installation, which ends with trench backfilling. The construction sequence for upland locations has been updated (ESCGP Section 2-2) to more clearly specify the timing of temporary waterbar repair and removal.
NO-6.c	Please clarify use of the activity termed “grading”. Step 2 of the sequence describes grading of construction work areas, however, there are no proposed contours depicted.	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence has been revised (ESCGP Section 2-2) to incorporate all comments and provide clarity throughout. The "Site Grading" portion of the construction sequence has been revised to "Rough Grading and Stockpiling" for clarity. This section of the construction sequence outlines the stripping and stockpiling of topsoil that will take place after site clearing, followed by the rough grading of the construction workspace as needed. The rough grading of the site is temporary and will be restored to original contours following construction.
NO-6.d	Clarify post construction sequence Step 3 in relation to temporary water bar removal. The timing of the temporary water bar removal should be clearly specified in the sequence.	The construction sequence for upland locations has been updated (ESCGP Section 2-2) to more clearly specify the timing of temporary waterbar repair and removal. Step 3 of the post construction sequence has been revised to clarify the timing of temporary waterbar removal.
NO-6.e	The sequence should address the timing of the construction of the Mainline Block Valves #6 & 7, Hellertown Launcher and TCO & UGI-LEH Interconnects, as it relates to the mainline construction. (i.e., E&S installation, repair and removal)	The mainline and lateral pipeline installation and successful hydrostatic testing will be completed prior to the installation of the MLV. Following the hydrostatic testing of the pipeline, a section of the pipe will be cut and removed for the insertion of the MLV. Following the

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		installation of the MLV, and until permanent stabilization is achieved, the site will utilize temporary E&S BMPs as shown on each facility's E&S package. The site will be restored according to the PCSM plans (i.e. gravel, permanent stormwater BMPs, fencing, etc.). The Hellertown Launcher and TCO & UGI-LEH Interconnects sites will be installed in tandem with the mainline and lateral pipeline installation. The E&S for these facilities and the mainline through these locations is detailed in the facility E&S packages (ESCGP Section 2-3).
NO-6.f	The sequence should specify that no more than 15,000 square feet of disturbed area reach final grade before initiating seeding and mulching operations (page 262 of the E&SPC Manual). §102.11(a)(1)	As discussed at the PADEP coordination meeting on July 17, 2019, it is not feasible for 15,000 square feet or less of disturbed area to reach final grade before initiating seeding and mulching operations. For this pipeline project, with a nominal corridor of 100-foot width, it would mean that only 150 feet of pipeline right-of-way could be graded before initiating seeding. This presents logistical issues as well as extends the time it takes to restore the right-of-way. PennEast intends to have a separate topsoil crew and seeding crew restoring the right-of-way, spaced along the pipeline for continuous production. The seeding crew will be following the topsoil crew and PennEast will adhere to the requirement that temporary stabilization must be provided for earth-exposed areas where earthwork is delayed or stopped for a period of 4 or more days. The Project Construction Sequencing (ESCGP Section 2-2) has been revised to state the following:

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		"WORK EFFORT WILL BE SUBDIVIDED INTO CATEGORIES AND PERFORMED BY SPECIALIZED CREWS (E.G, SITE PREPARATION/CLEARING, TRENCHING, PIPE CONSTRUCTION, TOPSOILING, SEEDING, ETC). EACH CREW WILL PROGRESS IN A LOGICAL MANNER, GENERALLY FROM THE BEGINNING TO END OF THE PIPELINE. THE TIME PERIOD BETWEEN TRENCH EXCAVATION AND THE START OF SITE STABILIZATION SHALL NOT EXCEED 30 CALENDAR DAYS. RESTORATION WILL BE COMPLETED AS SOON AS POSSIBLE AFTER GRADING. CESSATION OF ACTIVITY FOR 4 DAYS OR LONGER REQUIRES TEMPORARY STABILIZATION." There will be a few instances at HDDs, road bores, wetlands, and waterbodies where travel lanes may remain open for specialty crews.
NO-6.g	The sequence should specify that cessation of activity for 4 days or longer requires temporary stabilization (page 260 of the E&SPC Manual).	This note has been added to the General Conditions section of the Project Construction Sequencing (ESCGP Section 2-2).
NO-6.h	Specify critical stages when the licensed professional must be present to oversee installation of Structural PCSM BMP(s) as required by §102.8 (k).	The critical stages when the licensed professional must be present to oversee installation of structural PCSM BMPs have been included in the BMP Installation Sequence, provided in the PCSM drawing package for each aboveground facility (ESCGP Section 3-3). Additionally, these critical stages were also listed in the NOI Section H.g.
NO-6.i	**Mainline Block Valve #6**	-
NO-6.i.i	The plan indicates a temporary waterbar conflict with Swale 1 and Mainline Block Valve #6 improvements, please clarify installation, repair and removal of the temporary waterbar in the construction sequence for Mainline Block Valve #6.	The Mainline Block Valve #6 BMP installation sequence has been revised to specify the installation/repair and removal of the temporary waterbar (ESCGP Section 2-3 & ESCGP Section 3-3).

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NO-6.j	**Hellertown Launcher**	-
NO-6-j.i	The sequence calls for the installation of topsoil stockpiles, however, there are no topsoil stockpiles currently identified on the plan drawing(s). Please make all necessary corrections (see Chapter 2 in the E&SPC Manual).	The E&S Plan has been revised to depict the approximate topsoil stockpile location (ESCGP Section 2-3).
NO-6-j.ii	A check of the plan drawing found the following BMPs were not addressed by the BMP sequence: Outlet basin, clean out stake, level spreader (during sediment trap phase).	The BMP installation sequence has been revised to address the installation of the outlet basin, clean out stake, and the removal of the outlet basin for the installation of the level spreader (ESCGP Section 2-3 & ESCGP Section 3-3).
NO-6-j.iii	The sequence indicates construction of the sediment trap which would discharge to a level spreader system that, under the sequence, is not yet constructed. Please revise the sequence to provide for the logical installation of proposed BMPs.	To avoid sedimentation in the level spreader, it was the intention to install an outlet basin at the pipe outlet of the sediment trap to be removed prior to the installation of the level spreader/conversion of the sediment trap to the infiltration basin. As discussed in the previous response, the BMP installation sequence has been revised to add clarity (ESCGP Section 2-3 & ESCGP Section 3-3). In addition, the temporary outlet basin has been depicted on the E&S plan, and a detail was added for the barrel/riser sediment trap with outlet basin dimensions.
NO-6.k	**TCO & UGI-LEH Interconnects**	-
NO-6.k.i	The sequence calls for the installation of topsoil stockpiles and GeoWeb Panel System, however, the topsoil stockpiles and GeoWeb Panel System are not currently identified on the plan drawing(s). Please make all necessary corrections (see Chapter 2 in the E&SPC Manual).	The GeoWeb Panel System is to be installed with erosion control blanket on all slopes 3H:1V and greater, as labeled on Slope-2. This label has been duplicated for Slope-3 for clarity. The E&S plan has been revised to depict approximate topsoil stockpile location (ESCGP Section 2-3).
NO-6.k.ii	Clarification is requested as to when Swales 3 & 4 are to be installed. Sequence step 6 calls for weighted sediment filter tubes to be installed in Swales 3 & 4, however,	The weighted sediment filter tubes are to be installed to provide protection against sedimentation from soils being disturbed during the grading of Slope-2, installation of the GeoWeb Panel System and erosion control blanket on

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	Swales 3 & 4 are not proposed to be constructed until sequence step 14. Please revise as necessary.	Slope-2, and grading of Swales 3 and 4. The weighted sediment filter tubes will be removed once the grading of Slope-2 is complete and the riprap for swales 3 and 4 is installed.
NO-6.k.iii	Clarification is requested as to how Swales 1 & 2 will be constructed in sequence step 15. Compost Sock Sediment Traps 2, 3, & 4 appear to be partly located in the proposed Swale 2. The sequence does not address moving or removing the traps for swale construction.	As noted in step 4 of the BMP installation sequence, traps ST-2, ST-3, and ST-4 will be removed when filling and grading of Slope-1 commences between MH-8 and the access road. These filling and grading operations mentioned will occur as part of BMP installation sequence step 6, "perform excavation, filling and grading activities in accordance with the proposed contour elevations, notes, and typical details shown on the approved ESC drawing set."
NO-6.k.iv	Clarification is requested as sequence step 11 calls for installation of inlet protection to CB-1, CB-2, and CB-3, however, CB-3 does not appear to be installed or addressed in the sequence.	CB-3 will be installed as part of the Subsurface Stormwater Infiltration System (BMP installation sequence step 12). Installation of an inlet filter bag on CB-3 has been moved to the end of step 12 for further clarification.
NO-7	**§102.4(b)(5)(viii) Supporting calculations and measurements.**	-
NO-7.a	Please provide the information requested by Standard E&S Worksheet #1 for all proposed compost filter socks. (e.g., Sock No. 377-6+00, 377-7+00, 377-8+00) (See pages 5 & 8 of the E&SPC Manual).	Standard E&S Worksheet #1 contains all the relevant information as required by the E&S Manual. The area referenced between stations 3776+00 and 3778+00 is located within staging area PE-STA-D-08. For full limits of the staging area, please refer to the drawings listed in the reference block. The Standard E&S Worksheet #1 has been separated by Project component (e.g. mainline, access roads, contractor yards, staging areas, etc.). The sizing/location information for the compost filter socks in this area can be found on the staging area sheets (ESCGP Section 2-1).

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NO-7.b	Standard Worksheet #11: The Channel Calculations provided on the Worksheet are inconsistent with the standards found in the E&SPC Manual. All channels require a minimum of 6” of freeboard (calculations for diversion socks should be based off maximum effective heights when considering proposed depths).	Worksheet #11 has been revised for all temporary channels to accommodate a 6" freeboard, per E&S Manual requirements. The worksheets are located in the E&S Narrative, Appendix 2 (ESCGP Section 2-1).
NO-7.c	A spot check indicated the 2yr/1hr storm used to calculate rain fall intensity is not consistent with Figure 5.2 (Channel 53-50-1). Please provide source of depths on Standard Worksheet #10 (Channels).	Rainfall intensity was calculated using the equations provided in the E&S Manual on page 114. The equation for 2-year frequency storm was used for temporary channels in non-special protection watersheds and the 5-year equation was used for temporary channels in special protection watersheds. As stated in the E&S Manual, "An acceptable alternative to the above equations is the use of Tables 5.4 through 5.9 with Figures 5.2 through 5.12." This information has been documented in Worksheet #10, provided for each clean water diversion (ESCGP Section 2-1).
NO-7.d	**Hellertown Launcher**	-
NO-7.d.i	For vegetated channels, the analysis for manufactured linings without vegetation and with vegetation should be provided on Standard Worksheet #11 in separate columns. The analysis of the manufactured lined condition of Swales 1, 2 and 3 should be provided.	Standard Worksheet #11 has been revised to include 2 columns for each lined swale, one without vegetation and one with vegetation (ESCGP Section 2-3).
NO-7.d.ii	Please correct the response provided for the Project Location section on Standard Worksheet #11.	The Project Location section on Standard Worksheet #11 has been revised to Northampton County (ESCGP Section 2-3).
NO-7.d.iii	The Manning’s n value used for Swales 1 & 2 in the non-reinforced vegetation condition does not conform to Table 6.3. Either show supporting evidence for the n value used or adjust the n value used to conform to Table 6.3.	Worksheet #11 has been updated to reflect the correct Manning's n values, conforming to Table 6.3 (ESCGP Section 2-3).

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NO-7.d.iv	Sediment clean out (storage) elevation of sediment trap should be a minimum of 1 foot above basin bottom. Please adjust accordingly.	The sediment cleanout elevation has been revised to 1 foot above basin bottom (ESCGP Section 2-3).
NO-7.d.v	Required 2:1 flow length in the proposed sediment trap appears to be undersized based on the discharge point of Swale 3. Baffles may be required.	The E&S Plan has been revised to call for a 16-foot long baffle on the north side of the sediment trap. Standard construction detail #7-14 has been added to the plan set and the BMP installation sequence has been revised accordingly (ESCGP Section 2-3).
NO-7.d.vi	Standard Worksheet #19 data infers there is an embankment spillway. An embankment spillway is not part of a riser style trap. Please clarify what type of sediment trap is being proposed at this location.	The proposed sediment trap will be a riser style trap. The Standard Worksheet #19 has been revised to reflect this (ESCGP Section 2-3).
NO-7.d.vii	Calculations should be provided to show that the barrel riser spillway provides 1.5 cfs/acre discharge capacity. Please provide Standard Worksheet #17 or supporting calculations.	Standard Worksheet #17 has been included in the Hellertown Launcher E&S Narrative as part of Appendix C: E&SCP Design Calculations (ESCGP Section 2-3).
NO-7.e	**Mainline Block Valve #6**	-
NO-7.e.i	Supporting calculations should be provided for proposed Swale 1, standard worksheet #11 is recommended for this purpose.	Supporting calculations for the PCSM BMPs have been provided in the PCSM Report (ESCGP Section 3-3). For the information from standard worksheet #11 for proposed Swale 1, please refer to Appendix B "Calculation Sheet."
NO-7.f	**TCO & UGI-LEH Interconnects**	-
NO-7.f.i	For vegetated channels, the analysis for manufactured linings without vegetation and with vegetation should be provided on Standard Worksheet #11. The analysis of the manufactured lined condition of Swales 1 & 2 should be provided. It appears that Landlok TRM-435 is proposed according to Figure 49 on sheet 024-03-04-003 (See page 382 of the E&SPC Manual).	Standard Worksheet #11 has been revised to include 2 columns for each lined swale, one without vegetation and one with vegetation (ESCGP Section 2-3).
NO-7.f.ii	The Manning's n value used for Swales 1 & 2 in the non-reinforced vegetation condition does not conform to Table 6.3 (pg. 131 of the E&SPC Manual). Either show	Worksheet #11 has been updated to reflect the correct Manning's n values, conforming to Table 6.3 (ESCGP Section 2-3).

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	supporting evidence for the n value used or adjust the n value used to conform to Table 6.3.	
NO-7.f.iii	The proposed size of the riprap at HW-1 appears to be inconsistent with Figure 9.3 of the E&SPC Manual. Figure 9.3 should be used to size riprap aprons for minimum tailwater conditions.	The proposed riprap at HW-1 has been revised to R-4, per Figure 9.3 of the E&S Manual (ESCGP Section 2-3).
NO-7.f.iv	Supporting calculations should be provided for the proposed compost filter sock sediment traps. Standard Worksheet #19 is recommended for this purpose.	Standard Worksheet #19 has been added as part of Appendix C: E&SCP Design Calculations.
NO-8	**§102.4(b)(5)(ix) Plan drawings.**	-
NO-8.a	Provide a typical detail for the proposed weighted sediment filter tube(s) (Item 9, page 5 of the E&SPC Manual). Standard Construction Detail # 4-3, 4-4, and/or 4-5 as appropriate is recommended for this purpose. Revise the plan accordingly.	The only locations where weighted sediment filter tubes are proposed are select facility sites. In these instances, Standard Construction Detail #4-4 has been included in the details of that facility package (ESCGP Section 2-3).
NO-8.b	Provide a construction detail for the sediment trap emergency spillway (Item 9, page 5 of the E&SPC Manual) §102.11(a)(1). Standard Construction Detail # 7-13 is recommended for this purpose. Revise the plan accordingly.	The only location in Northampton County where a sediment trap is proposed is at the Hellertown Launcher & Mainline Launcher/Receiver site. As part of the E&S facility package for the site, the emergency overflow structure details ("Surface Basin Spillway Riprap Lining") can be found in the PCSM details sheets (ESCGP Section 3-3).
NO-8.c	The details provided for the proposed access road appear inconsistent with the plan view. Access roads should be designed according to Chapter 3 of the E&SPC Manual.	The proposed access roads were designed in accordance with the E&S Manual. Permanent access roads have appropriate E&S BMPs shown as part of the facility E&S packages. Temporary access roads where there is an existing road surface, will not require BMPs, as the existing road will be utilized. As stated in the E&S General Notes, "The installation of temporary access roads may require selective tree limb clearing and placement of temporary stone." No additional BMPs are required due to the nature of the improvements. For temporary access

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		roads that do not make use of an existing road, E&S BMPs are shown on the plans and corresponding worksheets are provided.
NO-8.d	Clarification is requested for General Note #19 that references comment #4 on E&S drawing sheet 003A. Comment #4 provided appears unrelated. Please clarify.	General Note #19 has been revised to state the following: "All sediment removed from BMPs shall be disposed of in the manner described on the plan drawings" (ESCGP Section 2-2).
NO-8.e	Specify the type of lime to be applied for permanent seeding (page 265 of the E&SPC Manual). Table 11.2 is recommended.	Table 11.2 is located on the E&S and Site Restoration General Notes sheets (ESCGP Sections 2-2 and 3-2).
NO-8.f	Complete constructions details should be provided on the E&S drawing for the proposed channels. Please check all proposed swales along the pipeline route, mainline block valves, interconnects and the Hellertown Launcher to show the correct staple patterns and matting type as per the design.	For the pipeline route, Standard Construction Detail #6-1 has been added to the E&S details as Figure 34D to show correct staple patterns (ESCGP Section 2-2). As referenced in the detail, matting type and channel dimensions can be found in the Clean Water Diversion table in the E&S details. Each facility has been reviewed for the inclusion of appropriate channel details. As a result, Standard Construction Detail #6-1 has been added to the Mainline Block Valve 6 E&S package (ESCGP Section 2-3).
NO-8.g	Figure 9 (Waterbar Detail) is inconsistent with Standard Construction Detail #3-5 of the E&SPC Manual.	As stated in Appendix D of the E&S Manual, "If, for whatever reason, it is necessary to alter a detail from this manual, the term 'Standard Construction Detail' may not be used." The waterbar detail in Figure 9 has the same maximum spacing requirements, 2% diversion slope, and minimum height as the standard construction detail. Additional detail has been provided in Figure 9 for further clarity for the contractor (ESCGP Section 2-2).
NO-8.h	Figure 12 (Trench Plug Detail) provided is inconsistent with Standard Construction Detail #13-4 and the plug material	As stated in Appendix D of the E&S Manual, "If, for whatever reason, it is necessary to alter a detail from this manual, the term 'Standard Construction Detail' may not

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	is inconsistent with Table 13.1 of the E&SPC (Manual pg. 291).	be used." The spacing and impervious trench plug requirement at waterbody and wetland crossings match Standard Construction Detail #13-4. Figure 12 includes synthetic foam and sand as an acceptable plug material for slopes less than 100 percent. Foam trench breakers are an approved alternative BMP. The detail has been revised to remove sand as an acceptable plug material (ESCGP Section 2-2).
NO-8.i	The inlet protection and broad-based dips were specified in the plan narrative and detail sheets but were not observed in plan view or legend. Please revise the plan view and/or legend to address these.	The inlet protection details are included for use as needed in the field when working upslope of inlets within an impervious surface. No locations have been identified in plan; however, these may be required as directed by the Environmental Inspector. Broad based dips are proposed at access roads AR-071 and AR-072DN, as shown on E&S Pipeyard Detail 000-03-04-005 and E&S Access Road Detail 000-03-03-050, respectively. The linetype for the broad-based dips was previously included in the legend and on the plan view drawings but was difficult to see. The linetype has been revised to be more visible (ESCGP Section 2-2).
NO-8.j	Please provide the appropriate manufacturer's media specifications for the proposed Filtrexx Diversion socks.	The E&S Narrative (ESCGP Section 2-1) has been revised to include Appendix 3B, "Filtrexx Runoff Diversion Media Specifications."
NO-8.k	Please provide the appropriate manufacturer's media specifications and construction details for the proposed Filtrexx Durasoxx.	Durasoxx is a compost filter sock mesh manufactured by Filtrexx. Compost filter sock details are already included as part of the E&S details as Figures 5A, 5B, and 5C (ESCGP Section 2-2). Specifically, the Durasoxx is a robust mesh specified in locations with large upslope lengths or high percent slopes. This is equivalent to heavy duty multi-filament polypropylene (HDMFPP) as shown in Figure 5B.

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		Specifications for Filtrexx's Siltsoxx mesh fabric (Durasoxx) have been included as Appendix 3A in the E&S Narrative (ESCGP Section 2-1).
NO-8.l	Rock Construction Entrances (RCE) should not impede access points to public or private entrances. It appears some RCEs cross private driveways, for example at mile post 74.9. Please review all RCEs to ensure that they do not impede public and/or private entrances. For those RCEs that impede public and/or private entrances, please revise the RCEs to address this issue.	The RCE at milepost 74.9 has been revised to avoid conflict with the existing driveway (ESCGP Section 2-2). All other RCEs have been reviewed and do not impede access to public and/or private entrances.
NO-8.m	It appears that additional E&S BMPs are necessary for installation and removal of the temporary and permanent access roads. Please review the plans for the installation and removal of the temporary and permanent access roads. Please revise and provide additional E&S BMPs where appropriate.	Permanent access roads have appropriate E&S BMPs shown as part of the facility E&S packages (ESCGP Section 2-3). Temporary access roads where there is an existing road surface, will not require BMPs, as the existing road will be utilized. As stated in the E&S General Notes, "The installation of temporary access roads may require selective tree limb clearing and placement of temporary stone." No additional BMPs are required due to the nature of the improvements. For temporary access roads that do not make use of an existing road, E&S BMPs are shown on the plans and corresponding worksheets are provided.
NO-8.n	It does not appear that adequate access has been provided to Pipeyard (PE-D-05) and the BMPs on the south side of Hope Road.	RCEs have been added for Pipeyard PE-D-05 as well as on either side of Hope Road (ESCGP Section 2-2).
NO-8.o	Any PCSM BMPs impacted by construction of the pipeline should be identified in plan view. For example, Pipeyard (PE-D-05) on the south side of Hope Road, appears to be constructed within the soil amendments. These soil amendments are being utilized for post construction stormwater management to address stormwater volume	PennEast has added a note to the E&S and Site Restoration plans indicating the impact to soil amendments for NPDES permit# PAG02004814019 (ESCGP Section 3-2). PennEast intends to restore any existing PCSM BMPs impacted by the Project.

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	and water quality for that site. Please reference existing NPDES permit# PAG02004814019. Please review the project (pipeline route, launchers, mainline valves, pipeyards, contractor yard, interconnects, etc.) for PCSM BMPs. If the pipeline route or any ancillary construction impact existing PCSM BMPs along the route, this will need to be compensated for with additional PCSM BMPs or expansion of existing PCSM BMPs.	
NO-8.p	Clarification is requested for the proposed location of some of the water bars as they appear to conflict with existing features which may not allow complete installation or functionality of the BMP or could cause accelerated erosion. For example, stone walls and existing drainage ways are in the immediate vicinity of some of the proposed water bars.	The entire LOD has been surveyed, and stone walls are being displayed on the plans. During construction, the stone walls will be removed and waterbars will be installed to minimize accelerated erosion. It was the design intent that if there is a direct conflict with a stone wall and a waterbar, it would be proposed as a temporary waterbar. The waterbars were reviewed for such conflicts. Permanent waterbars conflicting with stone walls were identified between stations 3860+00 and 3865+00, 3880+00 and 3885+00, and 4000+00 and 4005+00. In these locations, the permanent waterbars were revised to be temporary (ESCGP Sections 2-2 and 3-2).
NO-8.q	Clarify Figures 9 and 10 to indicate if the details are for permanent or temporary waterbars or both.	Figures 9 and 10 are for both permanent and temporary waterbars. The word "permanent" was removed from the maximum spacing from Figure 9 (ESCGP Section 2-2).
NO-8.r	Clarify Figure 33 to indicate the location of the pipeline trench. Additional instructions should be added to clarify the timing of installation and removal of slope pipes in relation to trenching and backfilling. Additional details may be required if slope pipe is to span the trench.	Figure 33 has been revised to show the approximate location of the pipeline trench (ESCGP Section 2-2). The slope pipe will connect to the level spreader perforated pipe by zip ties. Therefore, during dry weather construction, the slope pipe would be stored within the construction workspace but not connected to the perforated pipe allowing for trenching operations and

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		vehicular traffic. Prior to wet weather events and at the end of each work day, the slope pipes will be reattached to the perforated pipe and the diversion sock, and will be zip tied to ensure proper conveyance. Figure 33 has been revised to include notes regarding the timing of installation for the level spreader, the diversion sock, and the slope pipe (ESCGP Section 2-2).
NO-8.s	Provide a complete construction detail that depicts the water body crossing method “Dry Crossing if No Flow”. The detail should depict the extent and type of restoration method(s) proposed to be used.	Figure 20A "Typical Stream Dry Crossing if no Flow" has been added to the E&S details (ESCGP Section 2-2).
NO-8.t	Provide adequate sediment control BMPs downslope of earth disturbance to protect the existing downslope waterbodies during construction and after backfilling (See Sheet 125 for an example of waterbodies not being protected from accelerated erosion, etc.).	It is PennEast's intent to provide adequate sediment control BMPs downslope of earth disturbance to protect the existing downslope waterbodies during construction and after backfilling. Sheet 125 has been revised to include sediment barriers upslope of waterbody 051415_JC_1001_I_MI (ESCGP Section 2-2).
NO-8.u	**Hellertown Launcher**	-
NO-8.u.i	The provided Standard Construction Detail #6-1 appears to be altered and is not standard as provided. The detail fails to provide a column for specifying matting type.	The detail has been revised to include the column for specifying matting type (ESCGP Section 2-3).
NO-8.u.ii	Provide a construction detail for the proposed sediment trap outlet basin. Standard Construction Detail #8-6 is recommended for this purpose.	Standard Construction Detail #8-6 has been added to the E&S plan set (ESCGP Section 2-3).
NO-8.u.iii	Please clarify/label the plan view location of the proposed sediment trap outlet basin. It appears to be located within the level spreader.	The E&S Plan has been updated to depict the location of the sediment trap outlet basin. As part of the conversion of the sediment trap to the infiltration basin, the sediment trap outlet basin will be removed, and the level spreader will be installed. The BMP installation sequence has been revised to add clarity (ESCGP Section 2-3).
NO-8.u.iv	Completed Standard Construction Detail #8-2 should be provided on the plan drawings for the sediment trap.	Completed Standard Construction Detail #8-2 has been added to the E&S plan set (ESCGP Section 2-3).

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NO-8.u.v	A baffle, silt curtain or forebay detail should be provided if additional flow length is required.	Standard Construction Detail #7-14 has been added to the E&S plan set (ESCGP Section 2-3). The E&S plan has been revised to depict the baffle, which will provide the required additional flow length from Swale 1.
NO-8.u.vi	A cleanout stake detail should be provided in the plan and detail view.	A clean out stake detail has been added to the E&S plan set (ESCGP Section 2-3). The E&S plan has been revised to depict the location of the clean out stake in the sediment trap and the symbology has been added to the legend.
NO-8.u.vii	The plan drawing shows compost socks located in concentrated flow at the discharge point of Swale 3. Revise the location to avoid concentrated flow.	The E&S plan has been revised to move the compost filter sock out of the concentrated flow area. A weighted sediment filter tube will be used to remove sediment at the discharge end of Swale-3 (ESCGP Section 2-3).
NO-8.u.viii	The sediment trap contours on the plan drawing should depict the elevations required for construction of the sediment trap. A separate or inset drawing should be provided that depicts the proposed conversion and associated BMPs.	It is PennEast's intent to provide the temporary and permanent BMPs on the same plan to avoid confusion for the contractor in the field. The notes on the E&S plan, as well as the BMP installation sequence, describe the construction of the temporary sediment trap, the conversion of the temporary sediment trap to the infiltration basin, and the proposed bottom elevation of each.
NO-8-v	**TCO & UGI-LEH Interconnects**	-
NO-8.v.i	Clarification is requested as to whether a Staging/Stockpile Area will be required for the proposed project. If a Staging/Stockpile Area will be required, the location of the proposed Staging/Stockpile Area should be provided in E&S plan view within the ESCGP and LOD boundaries with adequate access and E&S BMPs and should be addressed in the sequence. (See Item #10 on pg. 325 of the E&SPC Manual)	The E&S Plan has been revised to depict the approximate topsoil stockpile location. Staging will take place on site, within the LOD. The proposed E&S BMPs are designed to provide adequate coverage to disturbed areas of the LOD.
NO-8.v.ii	A spot check of the channels found that the dimensions/protective lining specified for Swales 1 & 2 in the calculations are not consistent with those shown on	The dimensions/protective lining specified for Swale-1 and Swale-2 in the detail sheets are correct. The calculations have been revised (ESCGP Section 2-3).

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	the detail sheets (page 127 of the E&SPC Manual). Please check the calculations for all channels and address all inconsistencies.	
NO-8.v.iii	Please specify either an appropriate filter stone or geotextile underlayment for the proposed riprap lined Swales 3 & 4 on figure 50 (Standard Construction Detail #6-3 on sheet 024-03-04-003) consistent with page 135 and 142 of the E&SPC Manual.	Figure 50 in the E&S details has been revised to call for an AASHTO #3 underlayment, 4-inch thickness (ESCGP Section 2-3).
NO-9	**§102.4(b)(5)(x) A maintenance program which provides for the operation and maintenance of BMPs and the inspection of BMPs on a weekly basis and after each stormwater event, including the repair or replacement of the BMPs to ensure effective and efficient operation.**	-
NO-9.a	Provide complete disposal directions for sediment removed from the various BMPs. Note #18 on sheets 024-03-02-002 and 024A-03-02-002 and Note #19 on sheet 000-01-01-003A references disposal directions, however, these references do not address complete disposal directions. Please provide adequate disposal directions for sediment removal for Erosion and Sediment Control BMPs for the project.	As described in Note #5 in the Demobilization and Site Clean Up section of the project construction sequence, materials not incorporated as trench backfill or general grading will be reused, recycled or removed from the construction workspace in accordance with PADEP's standards. This note has been revised to more clearly specify the contractor's responsibility to dispose of such materials (ESCGP Sections 2-2 and 2-3).
NO-10	**§102.4(b)(5)(xii) Identification of the naturally occurring geologic formations or soil conditions that may have the potential to cause pollution during earth disturbance activities and include BMPs to avoid or minimize potential pollution and its impact from the formations.**	-
NO-10.a	Provide instructions for proper handling of the karst soils identified as having potential to cause pollution to the surface waters. See, for example, sheet 024A-03-02-002.	As part of the ESCGP permit application, PennEast included a Geologic Hazard Mitigation Plan as Appendix 4 to the E&S Narrative (ESCGP Section 2-1). This Plan includes a section regarding karst hazards and proposed mitigation.
Bucks County		

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BU-1	**Provisions of subsections of §102.22(b) regarding temporary and permanent stabilization.**	-
BU-1.a	Drawing sheet (D) 000-01-01-003B, "Temporary and Permanent Stabilization" items A and B. Please revise notation in item A to specify that temporary stabilization is required in areas where earth disturbance ceases for more than 4 days and revise notation in item B to specify that erosion control blankets are recommended in areas of steep slopes or concentrated flow.	Temporary and permanent stabilization items A and B have been updated to reflect these changes (ESCGP Section 2-2).
BU-2	**§102.4(b)(5)(vii) A sequence of BMP installation and removal in relation to the scheduling of earth disturbance activities, prior to, during and after earth disturbance activities that ensure the proper functioning of all BMPs.**	-
BU-2.a	D 000-01-01-003D BCCD concurs with comments provided by Monroe County regarding sequencing of site grubbing, E&S installations, and access road construction and requests these revisions be applied to the plan set to be resubmitted to Bucks County as well. No site grubbing, or access road construction should begin until adequately sized perimeter controls have been installed downslope of proposed disturbance.	PennEast has reviewed all comments provided by the agencies regarding the Project Construction Sequence. The Project Construction Sequence has been revised (ESCGP Section 2-2) to incorporate all comments and provide clarity throughout.
BU-3	**§102.4(b)(5)(vi) A narrative description of the location and type of perimeter and onsite BMPs used before, during and after the earth disturbance activity.**	-
BU-3.a	D 000-03-09-003 Please clarify the proposed compost sock size for the waterbar sump in figure 10. The detail contains conflicting references to 12" and 18" diameter sock.	Figure 10 has been revised to state that the compost filter sock around the sump will be 6' in length, and a 12" diameter sock (ESCGP Section 2-2).
BU-3.b	D 000-03-01-153 and D 000-03-03-055 BCCD recommends providing a rock construction entrance	There is no long-term staging proposed in this location. The RCE was placed at the beginning of the temporary

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	at the terminus of access road AR-079 at the area of interface between the existing gravel road and the work area. If this area is to be used for long-term staging, BCCD recommends addressing this proposed use on the E&S plan (For example, show E&S controls, stable staging area, provide provisions for post-construction stabilization, and any other details appropriate for using this area for long-term staging.)	access road, as the road stations between 0+00 and 1+00 is not an existing road and is forested/dirt cover type. Therefore, to minimize the potential for soil to be deposited on the existing road, the RCE is placed at station 0+00.
BU-3.c	D 000-03-01-154 Please clarify location of clean water slope pipe relative to diversion sock at approximate station 4059+00.	The linetype has been revised to show the flow arrow for the diversion sock to the south of the slope pipe. The slope pipe is located at the low point between the two diversion socks (ESCGP Section 2-2).
Post Construction Stormwater Management Plan - Project Wide		
PW-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPs including permanent stabilization specifications and locations.**	-
PW-1.a	It appears that there are permanent water bars that will be discharging 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, to the greatest extent practicable, the permanent waterbars should be located outside of the riparian buffer.	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 waterbody, 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 waterbodies. Based on the spacing requirements for waterbars listed in the E&S Manual Chapter 13, depending on the slope of

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		existing grade, the placement of all permanent waterbars outside of riparian zones is not feasible.
PW-1.b	It appears that there are permanent waterbars that will be constructed upslope of wetlands. These permanent waterbars should not be diverting surface water away from the wetland as this may cause a secondary impact to the wetlands. Please provide information elaborating on the potentially affected wetland(s) hydrology and demonstrating that the proposed permanent waterbars will not cause secondary impacts to those wetland(s).	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.
PW-1.c	Credit cannot be taken for multiple BMPs that are located within one another. Each BMP has certain design criteria. Even though these design criteria may overlap, the actual BMPs may not overlap. Each BMP must remain separate. Please revise the PCSM Plans, Narrative and Worksheets accordingly. For example, the Wyoming Interconnect is proposing an infiltration berm and minimize soil compaction areas that appear to overlap. Please review all PCSM BMPs throughout project with respect to proposed PCSM BMPs that may overlap and/or located within one another.	A new plan sheet has been created to demonstrate the areas of non-structural BMPs that are being used (ESCGP Section 3-3). In the example provided, the "Minimal Compaction Area" is being used as a construction note to the contractor and not being taken credit for as an area of minimum compaction. Non-structural BMPs used for water quality credit are demonstrated on the site restoration plan for each site. In the Wyoming Interconnect example, this will be shown on drawing number 020-03-06-001.1.
PW-2	**§ 102.8(h)PCSM implementation for special protection waters.**	-
PW-2.a	The antidegradation analyses states that they are not applicable for each site, which does not adequately address the required anti-degradation requirements. They are too vague and do not contain sufficient information for each specific site. Make the antidegradation analysis specific to each site that the PCSM Plan covers. This analysis should evaluate and include non-discharge alternatives. If non-discharge alternatives do not exist for	Section 3.1, PCSM Plan General Requirements (b)(1); 3.1.1, Fifteen factors of the PCSM Plan (f)(14); and 3.1.2, PCSM Plan Stormwater Analysis (h)(3) in each of the PCSM Reports for each site have been updated to explain how each Project site has eliminated the net change in stormwater volume, rate and quality for stormwater events up to and including the 2-year/24-hour storm (ESCGP Section 3-3). It also explains how each Project

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	each site, then make that demonstration and include in the PCSM Plans antidegradation best available combination of technologies (ABACT) BMPs.	site will use various structural and non-structural BMPs to meet the water quality and quantity requirements. And since peak runoffs will be attenuated with an infiltration trench and discharged overland towards a water body, the Project site falls under the definition of a non-discharge alternative and is in compliance with anti-degradation requirements.
Post Construction Stormwater Management Plan - Northampton County		
NO-1	**Complete PCSM/SR Plans.**	-
NO-1.a	**NOI Checklist # 7.h.: Supporting Calculations**	-
NO-1.a.i	Please provide a County specific Worksheet #10 for each proposed impervious facility.	Worksheet #10 has been provided in the PCSM reports for each site (ESCGP Section 3-3).
NO-1.a.ii	Mainline Block Valve #6, Worksheet #4 total site area and managed areas are inconsistent with Worksheets #1 and #3.	Worksheet #1, #3, and #4 of PCSM Report 353754-MM-E-E-108 have been updated to have an accurate total site area and managed area (ESCGP Section 3-3).
NO-1.a.iii	Please clarify which Saucon Township listed on Worksheet #1 of the Hellertown Launcher supporting calculations is being referenced.	Worksheet #1 in the appendix and Pages 6 and 9 of the PCSM Report have been updated to list Lower Saucon Township (ESCGP Section 3-3).
NO-1.b	Section 9.3 of the E&S narrative notes that the access roads will be restored in accordance with the landowner agreements. Access roads should be restored to original conditions upon project completion or additional PCSM BMPs may be required to manage changes in runoff rate, volume and water quality. Please identify any access roads which will be permanently improved and provide PCSM BMPs as appropriate.	Previously, Section 9.2 of the E&S Narrative stated that "Temporary access roads (TARs) for construction will be restored in accordance with landowner agreements." All temporary access roads will be restored to original conditions upon Project completion. Section 9.2 of the E&S Narrative has been updated to reflect this (ESCGP Section 2-1). Any permanent access roads required for the Project have already been included as part of the PCSM packages (ESCGP Section 3-3).
NO-1.c	Section 9.6 of the E&S Narrative notes that “Property will be restored as close to original conditions as practical unless otherwise specified by the landowner”. Please add	As requested, the note has been added to Section 9.6 of the E&S Narrative as well as General Notes sheet 000-01-01-003A (ESCGP Sections 2-1 and 2-2).

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	a statement to the E&S narrative and a prominent note to the plans that any restoration activities which entail a post construction change in land use shall be evaluated for post construction stormwater impacts approved by PA DEP and/or the appropriate conservation district and may require the installation of PCSM BMPs to manage stormwater rate, volume and water quality impacts.	
NO-2	**§102.8(f)(8) Supporting calculations.**	-
NO-2.a	Worksheet #4 has calculated the Existing Conditions and Developed Conditions for the entire drainage area to the point of interest. For Worksheet #4, please calculate the Existing Conditions and Developed Conditions using just the managed area.	Worksheet #4 for each PCSM Report has been updated to only include the managed areas for the existing conditions and the developed conditions (ESCGP Section 3-3).
NO-2.b	The Managed Area should be the Total Site Area minus the Protected Site Area. This does not appear to be consistent in the application. For example, the Springville interconnect PCSM Report, Page 70 of 368 shows a Total Site Area of 3.03 acres and the Managed Area of 1.79 acres; but there is not any Protected Site Area that would decrease the Managed Area. Please revise all Worksheet #4 throughout the application to have consistency with respect to the Total Site Area, Protected Site Area, and Managed Area.	The worksheets for each PCSM Report were updated to show the correct managed area which is the total site area minus the protected site area (ESCGP Section 3-3).
NO-2.c	Please provide the Pond Report for all the proposed infiltration basins using the 2-year storm event.	A pond report for each infiltration basin was provided in the December 2018 ESCGP Application. The print out title pond report does not differentiate between design storms as it shows information about the infiltration basin. A new copy of the node report for the infiltration basin was added to the Calculations section of each PCSM report (ESCGP Section 3-3). This report shows the flow into and out of the node as well as storage for the 2-year design storm.

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NO-2.d	Should water quality compliance not be demonstrated with the use of PCSM Worksheet #10 at each specific site, please show water quality compliance using PCSM Worksheets #12 and #13 for each specific site as applicable.	Water quality compliance has been demonstrated with PCSM Worksheet #10 for all sites (ESCGP Section 3-3). PCSM Worksheet #12 and #13 were not included.
NO-3	**§102.22(a) Permanent stabilization. Upon final completion of an earth disturbance activity or any stage or phase of an activity, the site shall immediately have topsoil restored, replaced, or amended, seeded, mulched or otherwise permanently stabilized and protected from accelerated erosion and sedimentation.**	-
NO-3.a	The Site Restoration Narrative notes that the pipeline areas will be restored to existing conditions or to meadow in good condition. However, the various seed mixtures on the Site Restoration Plans contain non-meadow species and there are multiple options for the seed mix restoration seed mixes. Please be more specific in the seed mix which should be used to achieve a meadow in good condition post development land use.	Both the E&S and Site Restoration General Notes have been revised to include updated seed mixes (ESCGP Sections 2-2 and 3-2). The seed mixes are more specific and accomplish restoring existing conditions or meadow in good condition.
NO-3.b	The Maintenance Activities to be done as needed on the PCSM Plans indicates that, "Plant alternative grass species in the event of unsuccessful establishment." The PCSM Plans should indicate specific grass species in the event of unsuccessful establishment. Please revise the PCSM Plans to be more specific regarding alternative grass species to be utilized in the event of unsuccessful establishment within the right-of-way, interconnect, compression station, and main line valve restorations. Primary consideration should be given to the use of native grass species.	The following seed mixes have been provided for upland areas within the E&S and Site Restoration packages (ESGCP Section 2-2 and 3-2): -Standard Upland ROW -Residential -Clover/Food Plot with ROW Any of these may be used as an alternative seed mix if there is unsuccessful establishment of the initial seed mix.
NO-3.c	The proposed infiltration berms have top of berm heights that appear to be at grade. Please revise the PCSM Plans	The top of berms for the following sites were confirmed to be at maximum 1' above existing grade: Hellertown

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	to include berm heights that will impound the proposed stormwater volume as designed.	Launcher, Springville interconnect and Wyoming Interconnect. Infiltration berms were not used at any other site.
NO-3.d	It appears that the proposed infiltration berm ponding area will be cut into the existing grade to provide the ponding as shown on the PCSM Plans. This is not acceptable. The intent of an infiltration berm is to limit the disturbance of the surrounding area and provide infiltration area. Please revise the PCSM Plans to include the infiltration berm and infiltration berm height. Please be advised that the maximum allowable infiltration berm height is 2 feet.	The top of berms for the following sites were confirmed to be at maximum 1' above existing grade: Hellertown Launcher, Springville interconnect and Wyoming Interconnect. Infiltration berms were not used at any other site. Infiltration berms have been adjusted to show the intended infiltration area at existing grade. Infiltration berm #3 at the Wyoming Interconnect has been adjusted to show a best fit contour line (ESCGP Section 3-3). It was observed that there is a localized high point that is adjusting the contour line to not match related contours. The infiltration area matches the associated contour pattern.
Post Construction Stormwater Management Plan - Wyoming Interconnect		
WI-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
WI-1.a	Please be advised that the PCSM BMP vegetated swales with bed slopes greater than 3 percent but less than 6 percent are acceptable as a water quality BMP only if check dams or earthen check berms are provided and designed according to the PCSM Manual, Chapter 6. Should the PCSM BMP vegetated swales be credited as a water quality BMP, please revise the design of the swales to include the check dams.	Check dams were added to the Wyoming Interconnect plan drawing No.020-03-06-001 and construction details drawing No.020-03-07-005. Check dam calculations were added to PCSM Report (See ESCGP Section 3-3, Appendix B).
WI-2	**§102.8(f)(8) Supporting calculations.**	-
WI-2.a	Table 7 has loading ratios for the Basin only. Please provide the loading ratios for the other PCSM BMPs provided on the site.	Table 7 on page 12 was revised to show all BMP loading ratios (ESCGP Section 3-3).

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WI-2.b	Credit for minimization of the total disturbed area has not been carried through to Worksheet #3. For credit to apply for this PCSM BMP, please include the acreage of minimized total disturbed area to Worksheet #3.	Credit is not being taken for minimized area of disturbance/reduced grading for this site.
WI-2.c	The PCSM Report indicates that a hydrodynamic separator is being proposed at the inlet of the proposed infiltration basin and thus the loading ratio for the infiltration basin is zero. Please provide the loading ratio to the basin for both the maximum impervious loading ratio and maximum loading ratio for the infiltration basin as if the hydrodynamic separator was not proposed.	Table 7 on page 12 was revised to show all BMP loading ratios (ESCGP Section 3-3).
WI-2.d	If check dams are utilized for the vegetated swale, please include all applicable calculations relating to the length between each check dam, height, ponding time, and number of check dams.	Check dams were added to the Wyoming Interconnect plan drawing No.020-03-06-001 and construction details drawing No.020-03-07-005. Check dam calculations were added to PCSM Report (See ESCGP Section 3-3, Appendix B).
WI-2.e	Please provide the proposed vegetated swales on Worksheet #5, including the area and the storage volume of stormwater that will be treated by the proposed vegetated swale.	Water quality credit is not claimed for the proposed vegetated swales on worksheet 5.
WI-2.f	Please provide loading ratios for the proposed infiltration berms. Please note that the maximum impervious loading ratio is 5:1 (impervious area to infiltration bed area) and the total maximum loading ratio is 8:1 (total area to infiltration area).	Table 7 on page 12 was revised to show all BMP loading ratios (ESCGP Section 3-3).
WI-2.g	Please provide the calculations showing the volume being detained upslope of the infiltration berms.	ESCGP Section 3-3, Appendix B has the infiltration berm volume calculations.
WI-2.h	Please provide the Pond Report for the infiltration basin for the 2-year storm frequency.	A basin report for the 2-year storm has been provided in Appendix H of the PCSM Report (ESCGP Section 3-3).
WI-3	**§102.8(f)(9) Plan drawings**	**-**
WI-3.a	Please delineate and label on the PCSM Plans the location of the proposed areas of minimized earth disturbance.	An additional plan sheet has been added to the PCSM plan sets for each site showing the areas and associated

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		notes that are proposed to be used in Worksheet 10 (ESCGP Section 3-3). The Project no longer proposes to use NS BMP 5.6.1 *Minimize Total Disturbed Area.*
WI-3.b	**Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:**	See response to WI-3.a
WI-3.b.i	The protected areas are not to be subject to grading or movement of existing soils.	See response to WI-3.a
WI-3.b.ii	Existing native vegetation is not to be removed from the protected area.	See response to WI-3.a
WI-3.b.iii	Additional planting of native vegetation is allowed within the protected area.	See response to WI-3.a
WI-3.b.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response to WI-3.a
WI-3.b.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response to WI-3.a
WI-3.b.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response to WI-3.a
WI-3.c	**If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:**	An additional plan sheet has been added to the PCSM plan sets for each site showing the areas and associated notes that are proposed to be used in worksheet 10 (ESCGP Section 3-3). The Project no longer proposes to use NS BMP 5.6.2 *Minimize Soil Compaction*.
Wi-3.c.i	The protected area shall not be stripped of existing topsoil.	See response to WI-3.c
WI-3.c.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response to WI-3.c
WI-3.c.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response to WI-3.c

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WI-3.c.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response to WI-3.c
WI-3.c.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response to WI-3.c
WI-3.d	Please delineate and label on the PCSM Plans the location of the proposed areas for protection of sensitive/special value features.	See response to WI-3.c
WI-3.e	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the protected sensitive/special value features.	See response to WI-3.c
WI-3.f	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect sensitive/special value features.	See response to WI-3.c
WI-3.g	**Please provide the following notations on the PCSM Plan with respect to protection of sensitive/special value features:**	An additional plan sheet has been added to the PCSM plan sets for each site showing the areas and associated notes that are proposed to be used in Worksheet 10 (ESCGP Section 3-3). The NS BMP 5.4.1 Protect Sensitive/Special Value Features is no longer proposed at this Project site.
WI-3.g.i	The protected areas shall be clearly delineated in the field and protected prior to any construction activities taking place.	See response to WI-3.g
WI-3.g.ii	The protected feature shall not be disturbed during construction except for temporary impacts for mitigation or restoration efforts.	See response to WI-3.g
WI-3.h	Credit for protecting sensitive/special value features has not been followed through to BMP Worksheet #3. In order for this credit to apply Worksheet #3 must also include the BMP. Please revise accordingly.	See response to WI-3.g

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WI-3.i	Please show on the PCSM Plans the area(s) where infiltration will be taking place for the infiltration berms.	On the PCSM plan sheet 020-03-06-001 (ESCGP Section 3-3), the box hatch near the infiltration berm is used to denote the areas and associated notes that will be used for infiltration. In the legend on this sheet, the hatch is labeled as minimal compaction/berm infiltration area.
WI-3.j	Please provide the detail for the check dams.	The detail for the check dams can be found on Sheet 020-03-07-005 of the PCSM plans (ESCGP Section 3-3).
WI-3.k	Please provide the locations of the proposed soil amendments and restoration on the PCSM Plans.	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in Worksheet 10. The plan sheet number is 020-03-06-001.1 (ESCGP Section 3-3).
WI-3.l	**Please provide the following notations on the PCSM Plan with respect to the soil amendments and restoration:**	See response to WI-3.k
WI-3.l.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response to WI-3.k
WI-3.l.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface.	See response to WI-3.k
WI-3.l.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response to WI-3.k
WI-3.l.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response to WI-3.k
WI-3.l.v	The methodology should only be performed when the soil conditions are dry.	See response to WI-3.k
WI-3.l.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response to WI-3.k
WI-3.m	Please provide the type of methodology to be used for the soil amendment and restoration.	Methodology, compost ratio, and till depth has been added to the notes for soil amendment on PCSM Drawing 020-03-06-001.1 (ESCGP Section 3-3).

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WI-3.n	Please provide on the PCSM Plans for the use of the ratio of soil to compost of 2:1 (soil:compost) as per the PCSM Manual, Chapter 6.	See response to WI-3.m
WI-3.o	Please indicated the depth of till for minor compaction and major compaction as per the PCSM Manual.	See response to WI-3.m
WI-3.p	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in Worksheet 10. The plan sheet number is 020-03-06-001.1 (ESCGP Section 3-3).
WI-3.q	**Please provide the following notations on the PCSM Plans regarding the proposed landscape restoration:**	-
WI-3.q.i	If forest restoration is utilized for the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
WI-3.q.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
WI-3.q.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
WI-3.q.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
WI-3.q.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting in order to eliminate undesired species and prep soil.	See response to WI-3.p
WI-3.q.iii	Should the landscape restoration areas become disturbed and/or compacted, soils amendment and restoration may be required.	See response to WI-3.p
WI-3.q.iv	All buffer boundaries shall be delineated and clearly marked prior to any construction activity taking place.	See response to WI-3.p

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WI-3.q.v	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable is allowed.	See response to WI-3.p
WI-3.q.vi	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response to WI-3.p
WI-3.q.vii	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response to WI-3.p
WI-3.q.viii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response to WI-3.p
Post Construction Stormwater Management Plan - Springville Interconnect		
SI-1	**§102.8(f)(8) Supporting Calculations.**	-
SI-1.a	Please provide loading ratios for the proposed infiltration berms. Please note that the maximum impervious loading ratio is 5:1 (impervious area to infiltration bed area) and the total maximum loading ratio is 8:1 (total area to infiltration area).	Table 3 on page 10 was revised to show all BMP loading ratios (ESCGP Section 3-3).
SI-1.b	Please provide the calculations showing the volume being detained upslope of the infiltration berms. Please be advised that the maximum infiltration period for the infiltration berms should not exceed 72 hours.	Appendix B of the PCSM Report has been revised to include the infiltration berm volume being detained (ESCGP Section 3-3). The draindown period is longer than 72 hours. As indicated on the plan drawing notes, infiltration testing will be required during construction. If the tested rate fails to meet the design infiltration rate, the contractor shall restore or amend the top 18 inches of soil. The test shall be repeated and soil amended, as needed, until the design infiltration rate is reached.
SI-2	**§102.8(f)(9) Plan drawings.**	**-**
SI-2.a	**If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:**	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in

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		Worksheet 10. The plan sheet number is 021-03-06-001.1 (ESCGP Section 3-3).
SI-2.a.i	The protected area shall not be stripped of existing topsoil.	See response for SI-2.a
SI-2.a.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for SI-2.a
SI-2.a.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for SI-2.a
SI-2.a.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for SI-2.a
SI-2.a.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for SI-2.a
SI-2.b	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in Worksheet 10. The plan sheet number is 021-03-06-001.1 (ESCGP Section 3-3).
SI-2.b.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for SI-2.b
SI-2.b.ii	Existing native vegetation is not to be removed from the protected area.	See response for SI-2.b
SI-2.b.iii	Additional planting of native vegetation is allowed within the protected area.	See response for SI-2.b
SI-2.b.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for SI-2.b
SI-2.b.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for SI-2.b

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SI-2.b.vi	All protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for SI-2.b
SI-2.c	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in Worksheet 10. The plan sheet number is 021-03-06-001.1 (ESCGP Section 3-3). This Project does not propose to protect and/or utilize the natural drainage features as a PCSM BMP.
SI-2.d	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is not proposed as a PCSM BMP at this Project site.
SI-2.e	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is not proposed as a PCSM BMP at this Project site.
SI-2.f	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is not proposed as a PCSM BMP at this Project site.
SI-2.g	Please label on the PCSM Plans the swales or section of swales that are being utilized as a vegetated filter swale. Please note that swales that have bed slopes greater than 6 percent cannot be used as a PCSM BMP.	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in Worksheet 10. The plan sheet number is 021-03-06-001.1 (ESCGP Section 3-3).
SI-2.h	Please show on the PCSM Plans the area(s) where infiltration will be taking place for the infiltration berms.	On the PCSM plan sheet 021-03-06-001 (ESCGP Section 3-3), the box hatch near the infiltration berm is used to denote the areas and associated notes that will be used

Comment Number	PADEP Comment	PennEast Response
		for infiltration. In the legend on this sheet, the hatch is labeled as minimal compaction/berm infiltration area.
SI-2.i	**Please provide the following notations on the PCSM Plan with respect to the soil amendment and restoration:**	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in Worksheet 10. The plan sheet number is 021-03-06-001.1 (ESCGP Section 3-3).
SI-2.i.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for SI-2.i
SI-2.i.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface.	See response for SI-2.i
SI-2i.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for SI-2.i
SI-2i.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for SI-2.i
SI-2i.v	The methodology should only be performed when the soil conditions are dry.	See response for SI-2.i
SI-2i.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for SI-2.i
SI-2.j	Please provide the type of methodology to be used for the soil amendment and restoration.	Methodology, compost ratio, and till depth has been added to the notes for soil amendment on PCSM Drawing 021-03-06-001.1 (ESCGP Section 3-3).
SI-2.k	Please provide on the PCSM Plans that the ratio of soil to compost should be 2:1 (soil:compost) as per the PCSM Manual, Chapter 6.	Methodology, compost ratio, and till depth has been added to the notes for soil amendment on PCSM Drawing 021-03-06-001.1 (ESCGP Section 3-3).
SI-2.l	Please the proposed depth of till for minor compaction and major compaction as per the PCSM Manual.	Methodology, compost ratio, and till depth has been added to the notes for soil amendment on PCSM Drawing 021-03-06-001.1 (ESCGP Section 3-3).
SI-2.m	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in

Comment Number	PADEP Comment	PennEast Response
		Worksheet 10. The plan sheet number is 021-03-06-001.1 (ESCGP Section 3-3).
SI-2.n.i	Should forest restoration be utilized for the landscape restoration.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
SI-2.n.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
SI-2.n.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
SI-2.n.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
SI-2.n.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting to eliminate undesired species and soil preparation.	See response for SI-2.m
SI-2.n.iii	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required	See response for SI-2.m
SI-2.n.iv	Any buffer boundaries shall be delineated and clearly marked prior to any construction activities taking place.	See response for SI-2.m
SI-2.n.v	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable are allowed.	See response for SI-2.m
SI-2.n.vi	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for SI-2.m
SI-2.n.vii	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for SI-2.m

Comment Number	PADEP Comment	PennEast Response
SI-2.n.viii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for SI-2.m
Post Construction Stormwater Management Plan - Auburn-Leidy Interconnect		
AL-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
AL-1-a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	BMP Worksheet 10 and PCSM Report 353754-MM-EN-CO-011 have been updated to include Structural BMP 6.4.8 *Vegetated Swale*, Structural BMP 6.7.2 *Landscape Restoration*, and Structural BMP 6.7.3, *Soils Amendment/Restoration*. All landscape restoration that is performed will be re-vegetation using native species and will not be protection of existing vegetation.
AL-2	**§102.8(f)(8) Supporting Calculations.**	-
AL-2-a	Please provide the void space of the material used in the subsurface infiltration bed. Also, please show within the basin dewatering time calculations that the void space was included within the dewatering time, or if the 4-foot perforated pipes will have the capacity to contain the required 2-year volume to be infiltrated.	Basin dewatering calculations in Appendix B of PCSM Report 353754-MM-EN-CO-011 were revised to include 40% rock porosity (ESCGP Section 3-3).
AL-3	**§102.8(f)(9) Plan drawings.**	-
AL-3-a	Please label on the PCSM Plans the swales or section of swales that are being utilized as a vegetated filter swale.	The PCSM plan was revised to indicate swale lining type on sheets 022-03-06-001 and 022-03-06-001.1 (ESCGP Section 3-3).
AL-3-b	Please show on the PCSM Plans the type of protective lining being proposed for the swales.	Protective lining for the vegetated swale has been added to the detail on sheet 022-03-07-006 (ESCGP Section 3-3).
AL-3-c	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans.	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-EN-CO-011. The suggested notes in

Comment Number	PADEP Comment	PennEast Response
		Comments AL-3-c.i – AL-3-c.v have not been added to the plan set.
AL-3-c.i	The protected area shall not be stripped of existing topsoil.	See response for AL-3-c
AL-3-c.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for AL-3-c
AL-3-c.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for AL-3-c
AL-3-c.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for AL-3-c
AL-3-c.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for AL-3-c
AL-3-d	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of PCSM Report 353754-MM-EN-CO-011 (ESCGP Section 3-3). The Project no longer proposes the use of NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features.*
AL-3-e	You must provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is not proposed as a PCSM BMP at this Project site.
AL-3-f	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for the areas that you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is not proposed as a PCSM BMP at this Project site.
AL-3-g	The credit has not been followed through to the BMP Worksheet #3 for the protection/utilization of the natural	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is not proposed as a PCSM BMP at this Project site.

Comment Number	PADEP Comment	PennEast Response
	drainage features. In order for this credit to apply, Worksheet #3 must include this BMP.	
AL-3-h	Please show on the PCSM Plans the area(s) where infiltration will be taking place for the infiltration berms.	On the PCSM plan sheet 022-03-06-001, the box hatch near the infiltration berm is used to denote the areas and associated notes that will be used for infiltration. In the legend on this sheet, the hatch is labeled as minimal compaction/berm infiltration area.
AL-3-i	Please provide the following notations on the PCSM Plan with respect to the soil amendment and restoration:	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in Worksheet 10. The plan sheet number is 022-03-06-001.1 (ESCGP Section 3-3).
AL-3-i.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for AL-3-i
AL-3-i.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface	See response for AL-3-i
AL-3-i.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for AL-3-i
AL-3-i.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for AL-3-i
AL-3-i.v	The methodology should only be performed when the soil conditions are dry.	See response for AL-3-i
AL-3-i.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for AL-3-i
AL-3-j	Please provide the type of methodology to be used for the soil amendment and restoration.	Methodology, compost ratio, and till depth has been added to the notes for soil amendment on PCSM Drawing 022-03-06-001.1 (ESCGP Section 3-3).
AL-3-k	Please indicated on the PCSM Plans that the ratio of soil to compost is 2:1 (soil:compost) as per the PCSM Manual, Chapter 6.	Methodology, compost ratio, and till depth has been added to the notes for soil amendment on PCSM Drawing 022-03-06-001.1 (ESCGP Section 3-3).

Comment Number	PADEP Comment	PennEast Response
AL-3-l	Please indicate the proposed depth of till for minor compaction and major compaction as per the PCSM Manual.	Methodology, compost ratio, and till depth has been added to the notes for soil amendment on PCSM Drawing 022-03-06-001.1 (ESCGP Section 3-3).
AL-3-m	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in Worksheet 10. The plan sheet number is 022-03-06-001.1 (ESCGP Section 3-3).
AL-3-n	**Please provide the following notations on the PCSM Plans regarding the landscape restoration:**	-
AL-3-n.i	If forest restoration is utilized for the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
AL-3-n.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
AL-3-n.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
AL-3-n.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
AL-3-n.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting in order to eliminate undesired species, prep soil, etc.	See response for AL-3-m
AL-3-n.iii	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for AL-3-m
AL-3-n.iv	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre- emergent herbicides, or mowing as applicable is allowed.	See response for AL-3-m

Comment Number	PADEP Comment	PennEast Response
AL-3-n.v	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for AL-3-m
AL-3-n.vi	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for AL-3-m
AL-3-n.vii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for AL-3-m
AL-3-o	Please provide the minimum cover for the proposed subsurface infiltration basin between the top of the 4-foot perforated pipe and the finished grade.	Dimension added to sheet 022-03-07-005 stating that the minimum cover above the 4' diameter HDPE pipe is 2 feet (ESCGP Section 3-3).
AL-3-p	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-EN-CO-011 (ESCGP Section 3-3). The suggested notes from Comments AL-3-p.i – AL-3-p.iv have not been added to the plan set.
AL-3-p.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for AL-3-p
AL-3-p.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for AL-3-p
AL-3-p.iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for AL-3-p
AL-3-p.iv	Pruning or required maintenance of existing trees is permitted.	See response for AL-3-p
AL-3-q	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been provided on Worksheet #3. To receive water quality credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	See response for AL-3-p

Comment Number	PADEP Comment	PennEast Response
AL-3-r	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	An additional plan sheet has been added to the PCSM plan sheets for each site showing the areas and associated notes that are proposed to be used in Worksheet 10. The plan sheet number is 022-03-06-001.1 (ESCGP Section 3-3).
AL-3-r.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for AL-3-r
AL-3-r.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface	See response for AL-3-r
AL-3-r.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for AL-3-r
AL-3-r.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for AL-3-r
AL-3-r.v	The methodology should only be performed when the soil conditions are dry.	See response for AL-3-r
AL-3-r.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for AL-3-r
AL-3-s	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for AL-3-r
Post Construction Stormwater Management Plan - Kidder Compressor Station		
KD-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
KD-1-a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	BMP Worksheet 10 and PCSM Report 353754-MM-EN-CO-039 have been updated to include NS BMP 5.6.1, *Minimize Total Disturbed Area*, Structural BMP 6.4.8 *Vegetated Swale*, Structural BMP 6.7.2 *Landscape Restoration,* and Structural BMP 6.7.3 *Soils Amendment/Restoration* (ESCGP Section 3-3). All landscape restoration that is performed will be re-

Comment Number	PADEP Comment	PennEast Response
		vegetation using native species and will not be protection of existing vegetation.
KD-2	**§102.8(f)(8) Supporting Calculations**	-
KD-2-a	Please be advised that vegetated filter swale that have bed slopes greater than 3 percent and less than 6 percent cannot be utilized as a water quality BMP unless check dams or earthen check berms are provided and designed according to the PCSM Manual. It appears that Swale 3 has a bed slope greater than 3 percent. Please revise accordingly.	Water quality credit is not claimed for Vegetated Swale No.4.
KD-2-b	Please provide the calculations relating to the length between each check dam, height, ponding time, and number of check dams for each proposed vegetated filter swale that will need to use check dams.	Water quality credit is not claimed for Vegetated Swale No.4.
KD-3	**§102.8(f)(9) Plan drawings.**	-
KD-3-a	Please label on the PCSM Plans the swales or section of swales that are being utilized as a vegetated filter swale.	Swales have been labeled on Drawing 024-03-07-001 and 024-03-07-001.1, for which swales will be utilized as a vegetated filter swale (ESCGP Section 3-3).
KD-3-b	Please show on the PCSM Plans the type of protective lining being proposed for the swales.	Protective lining for the vegetated swale has been added to the detail on sheet 023-03-07-009 (ESCGP Section 3-3).
KD-3-c	Please provide the applicable details relating to the check dams on the PCSM Plans. The details should have all elevations, dimensions, sizes, depths, slopes, materials, products, notations for construction, and any other applicable information used for construction of the BMP.	Water quality credit is not claimed for Vegetated Swale No.4.
KD-3-d	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of PCSM Report 353754-MM-EN-CO-039 (ESCGP Section 3-3). The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed at this Project site.

Comment Number	PADEP Comment	PennEast Response
KD-3-e	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed at this Project site.
KD-3-f	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed at this Project site.
KD-3-g	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed at this Project site.
KD-3-h	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-EN-CO-039 (ESCGP Section 3-3). The suggested notes in Comments KD-3-h.i – KD-3-h.v have not been added to the plan set.
KD-3-h.i	The protected area shall not be stripped of existing topsoil.	See response for KD-3-h
KD-3-h.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for KD-3-h
KD-3-h.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for KD-3-h
KD-3-h.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for KD-3-h
KD-3-h.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for KD-3-h

Comment Number	PADEP Comment	PennEast Response
KD-3-i	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-039 (ESCGP Section 3-3).
KD-3-i.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for KD-3-i
KD-3-i.ii	Existing native vegetation is not to be removed from the protected area	See response for KD-3-i
KD-3-i.iii	Additional planting of native vegetation is allowed within the protected area.	See response for KD-3-i
KD-3-i.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for KD-3-i
KD-3-i.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for KD-3-i
KD-3-i.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for KD-3-i
KD-3-j	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-039 (ESCGP Section 3-3).
KD-3-j.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for KD-3-i
KD-3-j.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface	See response for KD-3-i
KD-3-j.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for KD-3-i
KD-3-j.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for KD-3-i
KD-3-j.v	The methodology should only be performed when the soil conditions are dry.	See response for KD-3-i

Comment Number	PADEP Comment	PennEast Response
KD-3-j.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for KD-3-i
KD-3-k	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for KD-3-i
KD-3-l	Please provide on the PCSM Plans for the use of the ratio of soil to compost of 2:1 (soil:compost) as per the PCSM Manual, Chapter 6.	See response for KD-3-i
KD-3-m	Please indicate the proposed depth of till for minor compaction and major compaction as per the PCSM Manual.	See response for KD-3-i
KD-3-n	Please show on the PCSM Plans the areas of landscape restoration.	See response for KD-3-i
KD-3-o	**Please provide the following notations on the PCSM Plans regarding the landscape restoration:**	-
KD-3-o.i	i. Should forest restoration be utilized for the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
KD-3-o.i.1	1. Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
KD-3-o.i.2	2. Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
KD-3-o.i.3	3. Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
KD-3-o.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting to eliminate undesired species and soil preparation.	See response for KD-3-i

Comment Number	PADEP Comment	PennEast Response
KD-3-o.iii	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required	See response for KD-3-i
KD-3-o.iv	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable are allowed.	See response for KD-3-i
KD-3-o.v	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for KD-3-i
KD-3-o.vi	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for KD-3-i
KD-3-o.vii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for KD-3-i
KD-3-p	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.3 *Re-Vegetate / Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-EN-CO-039 (ESCGP Section 3-3). The suggested notes in Comments KD-3-p.i- KD-3-p.iv have not been added to the plan set.
KD-3-p.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for KD-3-p
KD-3-p.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for KD-3-p
KD-3-p.iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for KD-3-p
KD-3-p.iv	Pruning or required maintenance of existing trees is permitted.	See response for KD-3-p
KD-3-q	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been provided on Worksheet #3. To receive water quality	The NS BMP 5.6.3 *Re-Vegetate / Re-Forest Disturbed Areas* has been removed from Worksheet 10 (ESCGP Section 3-3).

Comment Number	PADEP Comment	PennEast Response
	credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	
KD-3-s	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-039 (ESCGP Section 3-3).
KD-3-s.i.	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for KD-3-s
KD-3-s.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface	See response for KD-3-s
KD-3-s.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for KD-3-s
KD-3-s.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for KD-3-s
KD-3-s.v	The methodology should only be performed when the soil conditions are dry.	See response for KD-3-s
KD-3-s.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for KD-3-s
KD-3-t	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for KD-3-s
Post Construction Stormwater Management Plan - TCO & UGI LEH Interconnect		
TCO-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
TCO-1a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	BMP Worksheet 10 and Section 4.4.3 of PCSM Report 353754-MM-EN-CO-013 have been updated to include NS BMP 5.6.1 *Minimize Total Disturbed Area*, Structural BMP 6.4.8 *Vegetated Swale*, Structural BMP 6.7.2 *Landscape Restoration,* and Structural BMP 6.7.3 *Soils*

Comment Number	PADEP Comment	PennEast Response
		Amendment/Restoration (ESCGP Section 3-3). All landscape restoration that is performed will be re-vegetation using native species and will not be protection of existing vegetation.
TCO-2	**§102.8(f)(8) Supporting Calculations.**	-
TCO-2-a	Please provide the void space of the material used in the subsurface infiltration bed. Also, please show within the basin dewatering time calculations that the void space was included within the dewatering time, or if the 4-foot perforated pipes will have the capacity to contain the required 2-year volume to be infiltrated.	The stone bedding below the 5' modular storage chamber is not included in the storage volume. The stone is used only for bedding for the module. Any additional storage that is provided by the void space within this stone is not accounted for, to be conservative. The required 1-year volume will be stored within the modular storage. No changes have been made to the plans or narrative.
TCO-3	**§102.8(f)(9) Plan drawings.**	-
TCO-3-a	Please label on the PCSM Plans the swales or section of swales that are being utilized as a vegetated filter swale.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-013 (ESCGP Section 3-3).
TCO-3-b	Please show on the PCSM Plans the type of protective lining being proposed for the swales.	Protective lining for the vegetated swale has been added to the detail on sheet 023-03-07-004 (ESCGP Section 3-3).
TCO-3-c	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of PCSM Report 353754-MM-EN-CO-013 (ESCGP Section 3-3). The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
TCO-3-d	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.

Comment Number	PADEP Comment	PennEast Response
TCO-3-e	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
TCO-3-f	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
TCO-3-g	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-013, (ESCGP Section 3-3).
TCO-3-g.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for TCO-3-g
TCO-3-g.ii	Existing native vegetation is not to be removed from the protected area	See response for TCO-3-g
TCO-3-g.iii	Additional planting of native vegetation is allowed within the protected area.	See response for TCO-3-g
TCO-3-g.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for TCO-3-g
TCO-3-g.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for TCO-3-g
TCO-3-g.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for TCO-3-g
TCO-3-h	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-013 (ESCGP Section 3-2).
TCO-3-i	**Please provide the following notations on the PCSM Plans regarding the landscape restoration:**	-

Comment Number	PADEP Comment	PennEast Response
TCO-3-i.i	If forest restoration is utilized for the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
TCO-3-i.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
TCO-3-i.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose landscape restoration, shrub or tree planting at this site; therefore, no notes have been added to the PCSM Plan.
TCO-3-i.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
TCO-3-i.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting to eliminate undesired species, prep soil, etc.	See response for TCO-3-h
TCO-3-i.iii	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for TCO-3-h
TCO-3-i.iv	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable are allowed.	See response for TCO-3-h
TCO-3-i.v	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for TCO-3-h
TCO-3-i.vi	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for TCO-3-h
TCO-3-vii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for TCO-3-h
TCO-3-j	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.3 *Re-Vegetate / Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-EN-CO-013. The

Comment Number	PADEP Comment	PennEast Response
		suggested notes from Comments TC)-3-j.i - TCO-3-j.iv have not been added to the plan set.
TCO-3-j.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for TCO-3-j
TCO-3-j.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for TCO-3-j
TCO-3-j,iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for TCO-3-j
TCO-3-j.iv	Pruning or required maintenance of existing trees is permitted.	See response for TCO-3-j
TCO-3-k	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been provided on Worksheet #3. To receive water quality credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	Water quality credit is not claimed for re-vegetation and reforestation of disturbed areas.
TCO-3-l	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-013 (ESCGP Section 3-3).
TCO-3-l.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for TCO-3-l
TCO-3-l.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface	See response for TCO-3-l
TCO-3-l.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for TCO-3-l
TCO-3-l.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for TCO-3-l
TCO-3-l.v	The methodology should only be performed when the soil conditions are dry.	See response for TCO-3-l

Comment Number	PADEP Comment	PennEast Response
TCO-3-l.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for TCO-3-l
TCO-3-m	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for TCO-3-l
Post Construction Stormwater Management Plan - Hellertown Launcher		
HT-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
HT-1-a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	BMP Worksheet 10 and PCSM Report 353754-MM-EN-CO-014 have been updated to include Structural BMP 6.4.8 *Vegetated Swale*, Structural BMP 6.7.2 *Landscape Restoration*, and Structural BMP 6.7.3 *Soils Amendment/Restoration*. All landscape restoration that is performed will be re-vegetation using native species and will not be protection of existing vegetation.
HT-2	**§102.8(f)(8) Supporting Calculations.**	
HT-2-a	Please be advised that vegetated filter swale that have bed slopes greater than 3 percent and less than 6 percent cannot be utilized as a water quality BMP unless check dams or earthen check berms are provided and designed according to the PCSM Manual. It appears that Swale 2 has a bed slope greater than 3 percent. Please revise accordingly.	Check dams were added to Hellertown Launcher plan drawing No.024A-03-06-001 and construction details drawing No.024A-03-07-002. Check dam calculations were added to PCSM Report (See ESCGP Section 3-3, Appendix B).
HT-2-b	Please provide the calculations relating to the length between each check dam, height, ponding time, and number of check dams for each proposed vegetated filter swale that will need to use check dams.	Check dams were added to Hellertown Launcher plan drawing No.024A-03-06-001 and construction details drawing No.024A-03-07-002. Check dam calculations were added to PCSM Report (See ESCGP Section 3-3, Appendix B).

Comment Number	PADEP Comment	PennEast Response
HT-2-c	It appears that instead of providing the infiltration berm calculations for the Hellertown Launcher, you have provided the Springville Interconnect infiltration berm volume calculations for IB-1. Please provide the infiltration berm volume calculations for the proposed infiltration berms at the Hellertown Launcher.	The correct infiltration berm calculations for Hellertown Launcher have been added to Appendix B of the PCSM Report (ESCGP Section 3-3).
HT-2-d	Please provide the infiltration period (draw down time) calculations for each proposed infiltration berm. Please be advised that the maximum infiltration period for each infiltration berm is 72 hours	Table 11 on pg. 23 of the PCSM Report has been updated to include all of the BMP drain down times (ESCGP Section 3-3).
HT-2-e	Please provide loading ratios for the proposed infiltration berms. Please note that the maximum impervious loading ratio is 5:1 (impervious area to infiltration bed area) and the total maximum loading ratio is 8:1 (total area to infiltration area).	Table 3 on pg. 8 of the PCSM Report has been updated to show all of the loading ratios for all of the proposed BMPs (ESCGP Section 3-3).
HT-3	**§102.8(f)(9) Plan drawings**	-
HT-3-a	Please label on the PCSM Plans the swales or section of swales that are being utilized as a vegetated filter swale.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in worksheet 10 of the PCSM Report 353754-MM-EN-CO-014. Swale lining type has also been added to drawing 024A-03-06-001 (ESCGP Section 3-3).
HT-3-b	Please show on the PCSM Plans the type of protective lining being proposed for the swales.	Details have been added to 024A-03-06-002 to show protective lining types (ESCGP Section 3-3).
HT-3-c	Please provide the applicable details relating to the check dams on the PCSM Plans. The details should have all elevations, dimensions, sizes, depths, slopes, materials, products, notations for construction, and any other applicable information used for construction of the BMP.	Check dams were added to Hellertown Launcher plan drawing No.024A-03-06-001 and construction details drawing No.024A-03-07-002. Check dam calculations were added to PCSM Report (See ESCGP Section 3-3, Appendix B).
HT-3-d	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of PCSM Report 353754-MM-EN-CO-011 (ESCGP Section 3-3). The NS BMP 5.4.3 *Protect/Utilize*

Comment Number	PADEP Comment	PennEast Response
		Natural Drainage Features is no longer proposed for this Project site.
HT-3-e	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
HT-3-f	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
HT-3-g	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
HT-3-h	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-EN-CO-014. The suggested notes from Comments HT-3-h.i – HT-3-h.v have not been added to the plan set.
HT-3-h.i	The protected area shall not be stripped of existing topsoil.	See response for HT-3-h
HT-3-h.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for HT-3-h
HT-3-h.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for HT-3-h
HT-3-h.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for HT-3-h
HT-3-h.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for HT-3-h

Comment Number	PADEP Comment	PennEast Response
HT-3-i	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	The NS BMP 5.6.1 *Minimize Total Disturbed Area* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-EN-CO-014. The suggested notes from Comments HT-3-i.i – HT-3-i.vi have not been added to the plan set.
HT-3-i.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for HT-3-i
HT-3-i.ii	Existing native vegetation is not to be removed from the protected area.	See response for HT-3-i
HT-3-i.iii	Additional planting of native vegetation is allowed within the protected area.	See response for HT-3-i
HT-3-i.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for HT-3-i
HT-3-i.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for HT-3-i
HT-3-i.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for HT-3-i
HT-3-j	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-014 (ESCGP Section 3-3).
HT-3-k	**Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:**	-
HT-3-k.i	If forest restoration is utilized for the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
HT-3-k.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.

Comment Number	PADEP Comment	PennEast Response
HT-3-k.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
HT-3-k.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
HT-3-k.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting to eliminate undesired species, prep soil, etc.	See response for HT-3-j
HT-3-k.iii	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for HT-3-j
HT-3-k.iv	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable are allowed.	See response for HT-3-j
HT-3-k.v	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for HT-3-j
HT-3-k.vi	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for HT-3-j
HT-3-k.vii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for HT-3-j
HT-3-l	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-014 (ESCGP Section 3-3).
HT-3-l.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for HT-3-l
HT-3-l.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface	See response for HT-3-l

Comment Number	PADEP Comment	PennEast Response
HT-3-l.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for HT-3-l
HT-3-l.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for HT-3-l
HT-3-l.v	The methodology should only be performed when the soil conditions are dry.	See response for HT-3-l
HT-3-l.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for HT-3-l
HT-3-m	Please provide the type of methodology to be used for the soil amendment and restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-014 (ESCGP Section 3-3).
HT-3-n	Infiltration Berm-1 and Infiltration Berm-2 as shown on the PCSM Plans appear to be cutting into the existing ground and will not be providing any ponding area. Please revise the PCSM Plans to provide adequate ponding area for the infiltration berms.	Infiltration Berm 1 and Berm 2 have been updated so that they are not cutting into the existing ground (ESCGP Section 3-3).
HT-3-o	Please show on the PCSM Plans and Details the invert elevation of the inflow pipe discharging into the level spreader.	The invert elevation of the inflow pipe has been added to the detail in the PCSM Drawings (ESCGP Section 3-3).
HT-3-p	Please provide the bottom elevation of the proposed level spreader on the PCSM Plans.	The bottom elevation of the level spreader has been added to the detail in the PCSM Drawings (ESCGP Section 3-3).
Post Construction Stormwater Management Plan - Blue Mountain Interconnect		
BMI-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-

Comment Number	PADEP Comment	PennEast Response
BMI-1.a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	Worksheet #10 in Appendix B of the PCSM Report has been updated to remove the NS BMP 5.6.3 *Re-vegetate / Re-Forest Disturbed Area* (ESCGP Section 3-3).
BMI-2	**§102.8(f)(8) Supporting Calculations.**	
BMI-2.a	The volume capacity calculations for the proposed subsurface infiltration basin shows that the depth will be 12 inches. However, the design of the subsurface infiltration bed shows that the orifice will be located approximately 9 inches above the bottom elevation of the subsurface infiltration basin. The volume capacity of the subsurface infiltration basin may not be adequate to infiltrate the required stormwater volume. Please either revise the design of the subsurface infiltration basin or change the capacity/infiltration calculations to show an accurate depiction of the subsurface infiltration bed.	A basin volume table has been added to Appendix B of the PCSM Report (ESCGP Section 3-3).
BMI-2.b	The subsurface basin dewatering time calculations show that the basin will be approximately 4 feet in depth. However, the PCSM Plan details show that the depth of the infiltration basin will be 3-feet, 10-inches in depth. Please revise accordingly.	PCSM details drawing No. 028-03-07-004 was revised accordingly (ESCGP Section 3-3).
BMI-2.c	The proposed subsurface infiltration basin has 3-foot diameter perforated HDPE pipes and AASHTO #2 stone around the basin system. The basin dewatering time calculations need to be revised to show the void space with the stone for the subsurface infiltration basin volume capacity. The calculations provided do not adequately show that the subsurface infiltration basin will have the required volume capacity to adequately infiltrate the proposed stormwater volume.	The dewatering time calculations were revised to include rock porosity (See ESCGP Section 3-3, Appendix B).

Comment Number	PADEP Comment	PennEast Response
BMI-2.d	Please provide the infiltration period calculations (draw down time) for the infiltration area.	Additional calculations provided to show the drain down time for the infiltration area in ESCGP Section 3-3 Appendix B.
BMI-3	**§102.8(f)(9) Plan Drawings**	-
BMI-3.a	Please label on the PCSM Plans the swales or section of swales that are being utilized as a vegetated filter swale.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-015 (ESCGP Section 3-3). Swale lining type has also been added to drawing 028-03-06-001.
BMI-3.b	Please provide the applicable details relating to the check dams on the PCSM Plans. The details should have all elevations, dimensions, sizes, depths, slopes, materials, products, notations for construction, and any other applicable information used for construction of the BMP.	Proposed swales have been design to have a longitudinal slope under 3%. All applicable details for the construction of the sale can be found on drawing 028-03-07-004.
BMI-3.c	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of PCSM Report 353754-MM-EN-CO-011 (ESCGP Section 3-3). The Project no longer proposes the use of The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features*.
BMI-3.d	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
BMI-3.e	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
BMI-3.f	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.

Comment Number	PADEP Comment	PennEast Response
	through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	
BMI-3.g	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-EN-CO-015. The suggested notes from Comments BMI-3.g.i – BMI-3.g.v have not been added to the plan set.
BMI-3.g.i	The protected area shall not be stripped of existing topsoil.	See response for BMI-3.g
BMI-3.g.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for BMI-3.g
BMI-3.g.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for BMI-3.g
BMI-3.g.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for BMI-3.g
BMI-3.g.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for BMI-3.g
BMI-3.h.	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	The NS BMP 5.6.1 *Minimize Total Disturbed Area* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-EN-CO-015. The suggested notes from Comments BMI-3.h.i – BMI-3.h.vi have not been added to the plan set.
BMI-3.h.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for BMI-3.h
BMI-3.h.ii	Existing native vegetation is not to be removed from the protected area.	See response for BMI-3.h
BMI-3.h.iii	Additional planting of native vegetation is allowed within the protected area.	See response for BMI-3.h
BMI-3.h.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for BMI-3.h

Comment Number	PADEP Comment	PennEast Response
BMI-3.h.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for BMI-3.h
BMI-3.h.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for BMI-3.h
BMI-3.i	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-015 (ESCGP Section 3-3).
BMI-3.j	**Please provide the following notations on the PCSM Plans regarding the landscape restoration:**	-
BMI-3.j.i	If forest restoration is utilized for the landscape restoration:	PennEast does not propose landscape restoration, shrub or PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
BMI-3.j.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
BMI-3.j.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
BMI-3.j.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
BMI-3.j.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting in order to eliminate undesired species, prep soil, etc.	See response for BMI-3.i
BMI-3.j.iii	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for BMI-3.i

Comment Number	PADEP Comment	PennEast Response
BMI-3.j.iv	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable is allowed.	See response for BMI-3.i
BMI-3.j.v	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for BMI-3.i
BMI-3.j.vi	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for BMI-3.i
BMI-3.j.vii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for BMI-3.i
BMI-3.k	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-015 (ESCGP Section 3-3).
BMI-3.k.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for BMI-3.k
BMI-3.k.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface.	See response for BMI-3.k
BMI-3.k.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for BMI-3.k
BMI-3.k.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for BMI-3.k
BMI-3.k.v	The methodology should only be performed when the soil conditions are dry.	See response for BMI-3.k
BMI-3.k.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for BMI-3.k
BMI-3.l	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for BMI-3.k

Comment Number	PADEP Comment	PennEast Response
BMI-3.m	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-015 (ESCGP Section 3-3). This project is not taking credit for re-vegetation and reforestation of disturbed areas.
BMI-3.m.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for BMI-3.m
BMI-3.m.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for BMI-3.m
BMI-3.m.iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for BMI-3.m
BMI-3.m.iv	Pruning or required maintenance of existing trees is permitted.	See response for BMI-3.m
BMI-3.n	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been provided on Worksheet #3. To receive water quality credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	See response for BMI-3.m
Post Construction Stormwater Management Plan - Blue Mountain Side Valve		
BMSV-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
BMSV-1.a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	BMP Worksheet 10 and PCSM Report 353754-MM-E-E-114 have been updated to include Structural BMP 6.4.8 *Vegetated Swale*, Structural BMP 6.7.2 *Landscape Restoration*, and 6.7.3, Structural BMP *Soils Amendment/Restoration* (ESCGP Section 3-3). All landscape restoration that is performed will be re-

Comment Number	PADEP Comment	PennEast Response
		vegetation using native species and will not be protection of existing vegetation.
BMSV-2	**§102.8(f)(8) Supporting Calculations**	**-**
BMSV-2.a	Please be advised that vegetated filter swale that have bed slopes greater than 3 percent and less than 6 percent cannot be utilized as a water quality BMP unless check dams or earthen check berms are provided and designed according to the PCSM Manual. It appears that Swale 2 has a bed slope greater than 3 percent. Please revise accordingly.	Check dams were added to Blue Maintain Side Valve plan drawing No.028A-03-06-001 and construction details drawing No.028-03-07-004. Check dam calculations were added to the PCSM Report (See Appendix B).
BMSV-2.b	Please provide the calculations relating to the length between each check dam, height, ponding time, and number of check dams for each proposed vegetated filter swale that will need to use check dams.	Check dams were added to Blue Maintain Side Valve plan drawing No.028A-03-06-001 and construction details drawing No.028-03-07-004. Check dam calculations were added to the PCSM Report (See Appendix B).
BMSV-3	**§102.8(f)(9) Plan Drawings**	**-**
BMSV-3.a	Please label on the PCSM Plans the swales or section of swales that are being utilized as a vegetated filter swale.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-EN-CO-014. Swale lining type has also been added to drawing 028A-03-06-001 (ESCGP Section 3-3).
BMSV-3.b	Please show on the PCSM Plans the type of protective lining being proposed for the swales.	The type of protective lining for the swales is called out on PCSM Drawing 028A-03-06-001 and in the detail sheets for each type of swale (ESCGP Section 3-3).
BMSV-3.c	Please provide the applicable details relating to the check dams on the PCSM Plans. The details should have all elevations, dimensions, sizes, depths, slopes, materials, products, notations for construction, and any other applicable information used for construction of the BMP.	Check dams were added to Blue Maintain Side Valve plan drawing No.028A-03-06-001 and construction details drawing No.028-03-07-004. Check dam calculations were added to PCSM Report (See Appendix B).
BMSV-3.d	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	Details have been added to 028-03-07-004 to show protective lining types (ESCGP Section 3-3).

Comment Number	PADEP Comment	PennEast Response
BMSV-3.e	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of PCSM Report 353754-MM-EN-CO-011 (ESCGP Section 3-3). The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
BMSV-3.f	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
BMSV-3.g	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* is no longer proposed for this Project site.
BMSV-3.h	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-114 (ESCGP Section 3-3).
BMSV-3.h.i	The protected area shall not be stripped of existing topsoil.	See response for BMSV-3.h
BMSV-3.h.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for BMSV-3.h
BMSV-3.h.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for BMSV-3.h
BMSV-3.h.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for BMSV-3.h
BMSV-3.h.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for BMSV-3.h

Comment Number	PADEP Comment	PennEast Response
BMSV-3.i	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-114 (ESCGP Section 3-3).
BMSV-3.i.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for BMSV-3.i
BMSV-3.i.ii	Existing native vegetation is not to be removed from the protected area	See response for BMSV-3.i
BMSV-3.i.iii	Additional planting of native vegetation is allowed within the protected area.	See response for BMSV-3.i
BMSV-3.i.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for BMSV-3.i
BMSV-3.i.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for BMSV-3.i
BMSV-3.i.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for BMSV-3.i
BMSV-3.j	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-114 (ESCGP Section 3-3).
BMSV-3.k	**Please provide the following notations on the PCSM Plans regarding the landscape restoration:**	-
BMSV-3.k.i	If forest restoration is utilized for the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
BMSV-3.k.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.

Comment Number	PADEP Comment	PennEast Response
BMSV-3.k.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
BMSV-3.k.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
BMSV-3.k.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting in order to eliminate undesired species, prep soil, etc.	See response for BMSV-3.j
BMSV-3.k.iii	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for BMSV-3.j
BMSV-3.k.iv	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable is allowed.	See response for BMSV-3.j
BMSV-3.k.v	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for BMSV-3.j
BMSV-3.k.vi	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for BMSV-3.j
BMSV-3.k.vii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for BMSV-3.j
BMSV-3.l	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-114 (ESCGP Section 3-3).
BMSV-3.l.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for BMSV-3.l
BMSV-3.l.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface.	See response for BMSV-3.l

Comment Number	PADEP Comment	PennEast Response
BMSV-3.l.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for BMSV-3.l
BMSV-3.l.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for BMSV-3.l
BMSV-3.l.v	The methodology should only be performed when the soil conditions are dry.	See response for BMSV-3.l
BMSV-3.l.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for BMSV-3.l
BMSV-3.m	Please provide the type of methodology to be used for the soil amendment and restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-114 (ESCGP Section 3-3).
BMSV-3.n	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-114 (ESCGP Section 3-3). This project is not taking credit for re-vegetation and reforestation of disturbed areas.
BMSV-3.n.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for BMSV-3.n
BMSV-3.n.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for BMSV-3.n
BMSV-3.n.iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for BMSV-3.n
BMSV-3.n.iv	Pruning or required maintenance of existing trees is permitted.	See response for BMSV-3.n
BMSV-3.n	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been provided on Worksheet #3. To receive water quality	See response for BMSV-3.n

Comment Number	PADEP Comment	PennEast Response
	credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	
Post Construction Stormwater Management Plan - Main Line Valve MLV-1		
MLV1-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
MLV1-1.a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	Worksheet 10 of PCSM Report 353754-MM-E-E-108 has been updated to include NS BMP 5.5.4 *Cluster Uses at Each Site*, Structural BMP 6.7.2 *Landscape Restoration,* and Structural BMP 6.7.3 *Soils Amendment/Restoration*. All landscape restoration that is performed will be re-vegetation using native species and will not be protection of existing vegetation.
MLV1-2	**§102.8(f)(8) Supporting Calculations**	-
MLV1-2.a	The change in runoff volume calculations provided within the PCSM Report, Worksheet #4, states that the calculations are for the 1-year storm event. The volume calculations must be for the 2-year/24-hour storm event. Please revise the PCSM Report calculations to show the regulatory requirement of the 2-year/24-hour storm event calculations for the MLV-1 underground stormwater infiltration system.	The PCSM Report 353754-MM-E-E-108 states in Table 2 (pg. 6) and Table 9 (pg. 20) "show the Total Volume summary for the 1-year, 2-year and 2" capture." Section 4.4.1 states the "infiltration trench is utilized to provide storage and infiltration to prevent any increases in stormwater runoff volume, up to and including the 2-year/24-hour storm event using the prescribed land use characteristics." This response is also noted in (f)(4) in section 3.1.1 (pg. 5). Worksheet 4 has been provided for the 1-year and 2-year storm and have been labeled Worksheet 4A (1-year) and Worksheet 4b (2-year) (ESCGP Section 3-3).
MLV1-2.b	The hydrologic calculations show that the infiltration trench will only receive 159 cubic feet of stormwater. However, Worksheet #5 indicates that the infiltration trench will be infiltrating 336 cubic feet of stormwater.	Worksheet 5 PCSM Report 353754-MM-E-E-108, Table 2 (pg. 6), and Table 9 (pg. 20) have been updated to show the amount of stormwater that is being received by the infiltration trench during the 2-year storm as the

Comment Number	PADEP Comment	PennEast Response
	The proposed infiltration trench cannot infiltration more stormwater than it is receiving. Please revise accordingly.	stormwater volume. This number has been revised to 159 CF (ESCGP Section 3-3).
MLV1-3	**§102.8(f)(9) Plan Drawings**	**-**
MLV1-3.a	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	The NS BMP *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 22) of the PCSM Report 353754-MM-E-E-108 (ESCGP Section 3-3).
MLV1-3.b	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 22) of the PCSM Report 353754-MM-E-E-108 (ESCGP Section 3-3).
MLV1-3.c	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 22) of the PCSM Report 353754-MM-E-E-108 (ESCGP Section 3-3).
MLV1-3.d	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	The only NS BMP that is being used on Worksheet 10 of PCSM Report 353754-MM-E-E-108 and is not a part of Worksheet 3 of PCSM Report 353754-MM-E-E-108 is NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features*. This NS BMP has been removed from Worksheet 10.
MLV1-3.e	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-108. The suggested notes from Comments MLV1-3.e.i – MLV1-3.e.v have not been added to the plan set.
MLV1-3.e.i	The protected area shall not be stripped of existing topsoil.	See response for MLV1-3.e
MLV1-3.e.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for MLV1-3.e

Comment Number	PADEP Comment	PennEast Response
MLV1-3.e.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV1-3.e
MLV1-3.e.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for MLV1-3.e
MLV1-3.e.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for MLV1-3.e
MLV1-3.f	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	The NS BMP 5.6.1 *Minimizing Total Disturbed Area* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-108. The suggested notes from Comments MLV1-3.f.i – MLV1-3.f.vi have not been added to the plan set.
MLV1-3.f.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for MLV1-3.f
MLV1-3.f.ii	Existing native vegetation is not to be removed from the protected area.	See response for MLV1-3.f
MLV1-3.f.iii	Additional planting of native vegetation is allowed within the protected area.	See response for MLV1-3.f
MLV1-3.f.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for MLV1-3.f
MLV1-3.f.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV1-3.f
MLV1-3.f.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for MLV1-3.f
MLV1-3.g	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-114 (ESCGP Section 3-2).

Comment Number	PADEP Comment	PennEast Response
MLV-1.3.h	**Please provide the following notations on the PCSM Plans regarding the landscape restoration:**	-
MLV-1.3.h.i	If forest restoration is utilized for the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV1-3.h.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV1-3.h.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV1-3.h.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV1-3.h.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting in order to eliminate undesired species, prep soil, etc.	See response for MLV1-3.h
MLV1-3.h.iii	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for MLV1-3.h
MLV1-3.h.iv	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable is allowed.	See response for MLV1-3.h
MLV1-3.h.v	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for MLV1-3.h
MLV1-3.h.vi	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for MLV1-3.h
MLV1-3.h.vii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for MLV1-3.h

Comment Number	PADEP Comment	PennEast Response
MLV-1-3.i	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-114 (ESCGP Section 3-3).
MLV1-3.i.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for MLV1-3.i
MLV1-3.i.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface.	See response for MLV1-3.i
MLV1-3.i.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for MLV1-3.i
MLV1-3.i.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for MLV1-3.i
MLV1-3.i.v	The methodology should only be performed when the soil conditions are dry.	See response for MLV1-3.i
MLV1-3.i.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for MLV1-3.i
MLV1-3.j	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for MLV1-3.i
MLV1-3.k	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-108 (ESCGP Section 3-3). The suggested notes from Comments MLV1-3.k.i – MLV1-3.k.v have not been added to the plan set.
MLV1-3.k.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV1-3.k
MLV1-3.k.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for MLV1-3.k
MLV1-3.k.iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for MLV1-3.k

Comment Number	PADEP Comment	PennEast Response
MLV1-3.k.iv	Pruning or required maintenance of existing trees is permitted.	See response for MLV1-3.k
MLV1-3.l	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been provided on Worksheet #3. To receive water quality credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-108. No changes to Worksheet 3 of PCSM Report 353754-MM-E-E-108 have been made. The NS BMP 5.5.4 *Cluster Uses at Each Site* has been added to Worksheet 10, Section 4.4.3 (pg. 21), and Section 3.1.1 (pg. 10) in the PCSM Report 53754-MM-E-E-108.
Post Construction Stormwater Management Plan - Main Line Valve MLV-2		
MLV2-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
MLV2-1.a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	Worksheet 10 of PCSM Report 353754-MM-E-E-109 has been updated to include NS BMP 5.5.4, *Cluster Uses at Each Site*, Structural BMP 6.7.2 *Landscape Restoration,* and Structural BMP 6.7.3 *Soils Amendment/Restoration*. All landscape restoration that is performed will be re-vegetation using native species and will not be protection of existing vegetation.
MLV2-1.b	The PCSM Report shows that the vegetated swale, Swale 1, is being utilized as a water quality BMP. However, the design calculations and PCSM Plans show that Swale 1 has a bottom width of 0 feet. To take water quality credit for Swale 1, the bottom width must be a minimum of 2 feet and a maximum of 8 feet. Please revise the design of Swale 1 or remove Swale 1 from Worksheet #10 as a water quality BMP.	Worksheet 10 of the PCSM Report 353754-MM-E-E-109 has been updated to remove the vegetated swale as it is not being used as a water quality BMP. The swale has not been redesigned. The vegetated swale has been removed from the executive summary (pg. 1) and Section 4.4.3 Water Quality (pg. 22) (ESCGP Section 3-3).

Comment Number	PADEP Comment	PennEast Response
MLV2-2	**§102.8(f)(8) Supporting Calculations**	
MLV2-2.a	As per the PCSM Manual, Appendix C, Protocol 2, Page 14, "It is desired that soils underlying infiltration devices should have infiltration rates between 0.1 and 10 inches per hour". According to the infiltration testing results provided in the PCSM Report, the infiltration rate is 0.07 in/hr which is not within the acceptable range at the actual elevation of the BMP where the infiltration is to occur. Please provide the additional measures necessary to provide infiltration within the acceptable range.	PCSM Report 353754-MM-E-E-109 has been updated to add a paragraph on page 21 after Table 10: Trench Drain Time. It states that the contractor is to amend the soil until an infiltration rate between 0.25 in/hr and 7.00 in/hr is achieved (ESCGP Section 3-3).
MLV2-3	**§102.8(f)(9) Plan Drawings**	-
MLV2-3.a	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and from Section 4.4.3 (pg. 22) of the PCSM Report 353754-MM-E-E-109 (ESCGP Section 3-3).
MLV2-3.b	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and from Section 4.4.3 (pg. 22) of the PCSM Report 353754-MM-E-E-109 (ESCGP Section 3-3).
MLV2-3.c	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and from Section 4.4.3 (pg. 22) of the PCSM Report 353754-MM-E-E-109 (ESCGP Section 3-3).
MLV2-3.d	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and from Section 4.4.3 (pg. 22) of the PCSM Report 353754-MM-E-E-109 (ESCGP Section 3-3).
MLV2-3.e	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-109. The suggested notes from

Comment Number	PADEP Comment	PennEast Response
		Comments MLV2-3.e.i – MLV2-3.e.v have not been added to the plan set.
MLV2-3.e.i	The protected area shall not be stripped of existing topsoil.	See response for MLV2-3.e
MLV2-3.e.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for MLV2-3.e
MLV2-3.e.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV2-3.e
MLV2-3.e.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for MLV2-3.e
MLV2-3.e.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for MLV2-3.e
MLV2-3.f	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	The NS BMP 5.6.1 *Minimizing Total Disturbed Area* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-109 (ESCGP Section 3-2). The suggested notes from Comments MLV2-3.f.i – MLV2-3.f.vi have not been added to the plan set.
MLV2-3.f.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for MLV2-3.f
MLV2-3.f.ii	Existing native vegetation is not to be removed from the protected area	See response for MLV2-3.f
MLV2-3.f.iii	Additional planting of native vegetation is allowed within the protected area.	See response for MLV2-3.f
MLV2-3.f.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for MLV2-3.f
MLV2-3.f.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV2-3.f

Comment Number	PADEP Comment	PennEast Response
MLV2-3.f.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for MLV2-3.f
MLV2-3.g	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-109 (ESCGP Section 3-2).
MLV2-3.h	**Please provide the following notations on the PCSM Plans regarding the landscape restoration:**	-
MLV2-3.h.i	If forest restoration is utilized for the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV2-3.h.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV2-3.h.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV2-3.h.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV2-3.h.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting in order to eliminate undesired species, prep soil, etc.	See response for MLV2-3.h
MLV2-3.h.iii	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for MLV2-3.h
MLV2-3.h.iv	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable is allowed.	See response for MLV2-3.h

Comment Number	PADEP Comment	PennEast Response
MLV2-3.h.v	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for MLV2-3.h
MLV2-3.h.vi	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for MLV2-3.h
MLV2-3.h.vii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for MLV2-3.h
MLV2-3.i	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-109 (ESCGP Section 3-3).
MLV2-3.i.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for MLV2-3.i
MLV2-3.i.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface.	See response for MLV2-3.i
MLV2-3.i.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for MLV2-3.i
MLV2-3.i.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for MLV2-3.i
MLV2-3.i.v	The methodology should only be performed when the soil conditions are dry.	See response for MLV2-3.i
MLV2-3.i.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for MLV2-3.i
MLV2-3.j	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for MLV2-3.i
MLV2-3.k	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-109 (ESCGP Section 3-3). The suggested notes from Comments MLV2-3.k.i – MLV2-3.k.iv have not been added to the plan set.

Comment Number	PADEP Comment	PennEast Response
MLV2-3.k.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV2-3.k
MLV2-3.k.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for MLV2-3.k
MLV2-3.k.iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for MLV2-3.k
MLV2-3.k.iv	Pruning or required maintenance of existing trees is permitted.	See response for MLV2-3.k
MLV2-3.l	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been provided on Worksheet #3. To receive water quality credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	NS BMP 5.6.3, *Re-Vegetate/Re-Forest Disturbed Areas,* is no longer used on Worksheet 10 of PCSM Report 353754-MM-E-E-109 or mentioned in the PCSM Report 353754-MM-E-E-109. No changes to Worksheet 3 of PCSM Report 353754-MM-E-E-109 have been made. BMP 5.5.4, *Cluster Uses at Each Site,* has been added to Worksheet 10 of PCSM Report 353754-MM-E-E-109, Section 4.4.3 (pg.22), and Section 3.1.1 (pg. 11) in the PCSM Report 53754-MM-E-E-109 (ESCP Section 3-3).
Post Construction Stormwater Management Plan - Main Line Valve MLV-3		
MLV3-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
MLV3-1.a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	Worksheet 10 of PCSM Report 353754-MM-E-E-110 has been updated to have 5.5.4, *Cluster Uses at Each Site*, 6.7.2, *Landscape Restoration*, and 6.7.3, *Soils Amendment/Restoration*. All landscape restoration that is performed will be re-vegetation using native species and will not be protection of existing vegetation.

Comment Number	PADEP Comment	PennEast Response
MLV3-1.b	The PCSM Report shows that the vegetated swale, Swale 1, is being utilized as a water quality BMP. However, the design calculations and PCSM Plans show that Swale 1 has a bottom width of 0 feet. To take water quality credit for Swale 1, the bottom width must be a minimum of 2 feet and a maximum of 8 feet. Please revise the design of Swale 1 or remove Swale 1 from Worksheet #10 as a water quality BMP.	Swale 1 has been removed from BMP Worksheet #10 of PCSM Report 353754-MM-E-E-110 and is not mentioned as a water quality BMP in the PCSM Report. Reference to the swale remains in the report as it serves to direct flow and has a role in meeting attenuated peak flows. A sentence was added to Section 3.1.(b).(8) stating (pg. 4) "The vegetated swale is being used for conveyance purposes only, no credit for water quality has been taken due to not meeting all the PADEP swale requirements. Specifically, the 2-foot swale bed bottom requirement is not met" (ESCGP Section 3-3).
MLV3-2	**§102.8(f)(8) Supporting Calculations**	-
MLV3-2.a	The Worksheet 5 within the PCSM Report shows that the proposed infiltration trench will infiltrate 1,426 cubic feet of stormwater. However, the hydrologic calculations show that the proposed infiltration trench will only receive approximately 491 cubic feet of stormwater during the 2-year storm event. The infiltration trench cannot infiltrate a larger amount of stormwater than it can receive during the storm event. Please revise accordingly.	Worksheet 5 PCSM Report 353754-MM-E-E-110 and Table 2 (pg. 6) and Table 9 (pg. 19) have been updated to show the amount of stormwater that is being received by the infiltration trench during the 2-year storm as the stormwater volume. This number has been updated to be 491 CF (ESCGP Section 3-3).
MLV3-3	**§102.8(f)(9) Plan Drawings**	-
MLV3-3.a	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of the PCSM Report 353754-MM-E-E-110
MLV3-3.b	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of the PCSM Report 353754-MM-E-E-110 (ESCGP Section 3-3).

Comment Number	PADEP Comment	PennEast Response
MLV3-3.c	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of the of PCSM Report 353754-MM-E-E-110 (ESCGP Section 3-3).
MLV3-3.d	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 of PCSM Report 353754-MM-E-E-110 or mentioned in the PCSM Report 353754-MM-E-E-110 (ESCGP Section 3-3). The suggested notes from Comments MLV3-3.e.i – MLV3-3.e.v have not been added to the plan set.
MLV3-3.e	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:	NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 of PCSM Report 353754-MM-E-E-111 or mentioned in the PCSM Report 353754-MM-E-E-109 (ESCGP Section 3-3). The suggested notes from Comments MLV3-3.e.i – MLV3-3.e.v have not been added to the plan set.
MLV3-3.e.i	The protected area shall not be stripped of existing topsoil.	See response for MLV3-3.e
MLV3-3.e.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for MLV3-3.e
MLV3-3.e.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV3-3.e
MLV3-3.e.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for MLV3-3.e
MLV3-3.e.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for MLV3-3.e
MLV3-3.f	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 of PCSM Report 353754-MM-E-E-110 or mentioned in the PCSM Report 353754-MM-E-E-110 (ESCGP Section 3-3). The suggested notes from

Comment Number	PADEP Comment	PennEast Response
		Comments MLV3-3.f.i – MLV3-3.f.vi have not been added to the plan set.
MLV3-3.f.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for MLV3-3.f
MLV3-3.f.ii	Existing native vegetation is not to be removed from the protected area.	See response for MLV3-3.f
MLV3-3.f.iii	Additional planting of native vegetation is allowed within the protected area.	See response for MLV3-3.f
MLV3-3.f.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for MLV3-3.f
MLV3-3.f.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV3-3.f
MLV3-3.f.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for MLV3-3.f
MLV3-3.g	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-110 (ESCGP Section 3-3).
MLV3-3.h	Please provide the following notations on the PCSM Plans regarding the landscape restoration:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-110 (ESCGP Section 3-3).
MLV3-3.h.i	If forest restoration is utilized for the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV3-3.h.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.

Comment Number	PADEP Comment	PennEast Response
MLV3-3.h.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV3-3.h.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV3-3.h.ii	In the sequence of construction, the site preparation should occur in the fall prior to planting in order to eliminate undesired species, prep soil, etc.	See response for MLV3-3.h
MLV3-3.h.iii	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for MLV3-3.h
MLV3-3.h.iv	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable is allowed.	See response for MLV3-3.h
MLV3-3.h.v	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for MLV3-3.h
MLV3-3.h.vi	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for MLV3-3.h
MLV3-3.h.vii	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for MLV3-3.h
MLV3-3.i	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-110 (ESCGP Section 3-3).
MLV3-3.i.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for MLV3-3.i
MLV3-3.i.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface.	See response for MLV3-3.i

Comment Number	PADEP Comment	PennEast Response
MLV3-3.i.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for MLV3-3.i
MLV3-3.i.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for MLV3-3.i
MLV3-3.i.v	The methodology should only be performed when the soil conditions are dry.	See response for MLV3-3.i
MLV3-3.i.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for MLV3-3.i
MLV3-3.j	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for MLV3-3.i
MLV3-3.k	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-110 (ESCGP Section 3-3). The suggested notes from Comments MLV3-3.k.i – MLV3-3.k.iv have not been added to the plan set.
MLV3-3.k.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV3-3.k
MLV3-3.k.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for MLV3-3.k
MLV3-3.k.iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for MLV3-3.k
MLV3-3.k.iv	Pruning or required maintenance of existing trees is permitted.	See response for MLV3-3.k
MLV3-3.l	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been provided on Worksheet #3. To receive water quality credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-110. No changes to Worksheet 3 of PCSM Report 353754-MM-E-E-110 have been made.

Comment Number	PADEP Comment	PennEast Response
		The NS BMP 5.5.4 *Cluster Uses at Each Site* has been added to worksheet 10 of PCSM Report 353754-MM-E-E-110, Section 4.4.3 (pg. 20), and Section 3.1.1 (pg. 10) in the PCSM Report 53754-MM-E-E-110.
Post Construction Stormwater Management Plan - Main Line Valve MLV-4		
MLV4-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
MLV4-1.a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	Worksheet 10 of PCSM Report 353754-MM-E-E-111 has been updated to have NS BMP 5.5.4 *Cluster Uses at Each Site,* Structural BMP 6.7.2 *Landscape Restoration*, and Structural BMP 6.7.3 *Soils Amendment/Restoration* (ESCGP Section 3-3). All landscape restoration that is performed will be re-vegetation using native species and will not be protection of existing vegetation.
MLV4-2	**§102.8(f)(8) Supporting Calculations.**	**-**
MLV4-2.a.	The soils on the project site exhibit excessive infiltration rates. To ensure that water quality is met, and that the groundwater is not contaminated by any potential pollutants from the stormwater runoff, the rates must be reduced to acceptable levels. Please provide the procedure/notation on the PCSM Report and PCSM Plan to meet the target infiltration rates. Please revise accordingly.	PCSM Report 353754-MM-E-E-111 has been updated to add a paragraph on page 20 after Table 10. It states that the contractor is to amend the soil until an infiltration rate between 0.25 in/hr and 7.00 in/hr is achieved (ESCGP Section 3-3).
MLV4-2.b.	The Worksheet 5 within the PCSM Report shows that the proposed infiltration trench will infiltrate 606 cubic feet of stormwater. However, the hydrologic calculations show that the proposed infiltration trench will only receive approximately 543 cubic feet of stormwater during the 2-year storm event. The infiltration trench cannot infiltrate a	Worksheet 5 PCSM Report 353754-MM-E-E-111, Table 2 (pg. 6), and Table 9 (pg. 19) have been updated to show the amount of stormwater that is being received by the infiltration trench during the 2-year storm as the stormwater volume. This number has been revised to 543 CF (ESCGP Section 3-3).

Comment Number	PADEP Comment	PennEast Response
	larger amount of stormwater than it can receive during the storm event. Please revise accordingly.	
MLV4-3	**§102.8(f)(9) Plan drawings.**	
MLV4-3.a.	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and from Section 4.4.3 (pg. 20) of the of PCSM Report 353754-MM-E-E-111 (ESCGP Section 3-3).
MLV4-3.b.	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and from Section 4.4.3 (pg. 20) of the of PCSM Report 353754-MM-E-E-111 (ESCGP Section 3-3).
MLV4-3.c.	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and from Section 4.4.3 (pg. 20) of the of PCSM Report 353754-MM-E-E-111 (ESCGP Section 3-3).
MLV4-3.d.	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and from Section 4.4.3 (pg. 20) of the of PCSM Report 353754-MM-E-E-111 (ESCGP Section 3-3).
MLV4-3.e.	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-111 (ESCGP Section 3-3). The suggested notes from Comments MLV4-3.e.i – MLV4-3.e.v have not been added to the plan set.
MLV4-3.e.i.	The protected area shall not be stripped of existing topsoil.	See response for MLV4-3.e
MLV4-3.e.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for MLV4-3.e
MLV4-3.e.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV4-3.e

Comment Number	PADEP Comment	PennEast Response
MLV4-3.e.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for MLV4-3.e
MLV4-3.e.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for MLV4-3.e
MLV4-3.f	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-111 (ESCGP Section 3-3). The suggested notes from Comments MLV4-3.e.i – MLV4-3.e.v have not been added to the plan set.
MLV4-3.f.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for MLV4-3.f
MLV4-3.f.ii	Existing native vegetation is not to be removed from the protected area.	See response for MLV4-3.f
MLV4-3.f.iii	Additional planting of native vegetation is allowed within the protected area.	See response for MLV4-3.f
MLV4-3.f.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for MLV4-3.f
MLV4-3.f.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV4-3.f
MLV4-3.f.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for MLV4-3.f
MLV4-3.g.	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-111 (ESCGP Section 3-3).
MLV4-3.h.	**Please provide the following notations on the PCSM Plans regarding the landscape restoration:**	-

Comment Number	PADEP Comment	PennEast Response
MLV4-3.h.i	If forest restoration is utilized as the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV4-3.h.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV4-3.h.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV4-3.h.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV4-3.h.ii.	In the sequence of construction, the site preparation should occur in the fall prior to planting in order to eliminate undesired species, prep soil, etc.	See response for MLV4-3.h
MLV4-3.h.iii.	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for MLV4-3.h
MLV4-3.h.iv.	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable is allowed.	See response for MLV4-3.h
MLV4-3.h.v.	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for MLV4-3.h
MLV4-3.h.vi.	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for MLV4-3.h
MLV4-3.h.vii.	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed	See response for MLV4-3.h
MLV4-3.i.	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	See response for MLV4-3.h

Comment Number	PADEP Comment	PennEast Response
MLV4-3.i.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for MLV4-3.h
MLV4-3.i.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface.	See response for MLV4-3.h
MLV4-3.i.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for MLV4-3.h
MLV4-3.i.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for MLV4-3.h
MLV4-3.i.v	The methodology should only be performed when the soil conditions are dry.	See response for MLV4-3.h
MLV4-3.i.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for MLV4-3.h
MLV4-3.j	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for MLV4-3.h
MLV4-3.k	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-111 (ESCGP Section 3-3). The suggested notes from Comments MLV4-3.k.i – MLV4-3.k.iv have not been added to the plan set.
MLV4-3.k.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV4-3.k
MLV4-3.k.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for MLV4-3.k
MLV4-3.k.iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for MLV4-3.k
MLV4-3.k.iv	Pruning or required maintenance of existing trees is permitted.	See response for MLV4-3.k
MLV4-3.l	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the

Comment Number	PADEP Comment	PennEast Response
	provided on Worksheet #3. To receive water quality credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	PCSM Report 353754-MM-E-E-111 (ESCGP Section 3-3). No changes to Worksheet 3 of PCSM Report 353754-MM-E-E-111 have been made. The NS BMP 5.5.4 *Cluster Uses at Each Site* has been added to Worksheet 10, Section 4.4.3 (pg. 20), and Section 3.1.1 (pg. 10) in the PCSM Report 53754-MM-E-E-111.
MLV4-4	**§ 102.8(h)PCSM implementation for special protection waters.**	-
MLV4-4.a.	The application does not clearly address the antidegradation requirements in §93.4c(b). The analyses are required to be undertaken as part of the antidegradation regulation compliance. The antidegradation analyses provided within the application for each site within a special protection watershed states, "not applicable." The antidegradation analysis provided does not satisfy these requirements. The antidegradation should be specific for each site for which the PCSM Plan covers. The analysis should evaluate and include non-discharge alternatives in the PCSM Plans as per 102.8(h)(1). Should the specific site make the demonstration that non-discharge alternatives do not exist, the PCSM Plan must include ABACT BMPs as per 102.8(h)(2). Please include a site specific antidegradation analysis for each specific site throughout the PennEast Pipeline project, including any interconnects, compression stations, mainline valves and any other area proposing permanent impervious area within a special protection watershed.	Section 3.1 PCSM Plan General Requirements (b)(1); 3.1.1 Fifteen factors of the PCSM Plan (f)(14); and 3.1.2 PCSM Plan Stormwater Analysis (h)(3) in each of the PCSM Reports for each site have been updated to explain how each site has eliminated the net change in stormwater volume, rate and quality for stormwater events up to and including the 2-year/24-hour storm. It also explains how each site will use various structural and non-structural BMPs to meet the water quality and quantity requirements. As since peak runoffs will be attenuated with an infiltration trench and discharged overland towards a water body, the site falls under the definition of a nondischarge alternative and is in compliance with anti-degradation requirements.
Post Construction Stormwater Management Plan - Main Line Valve MLV-6		
MLV6-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for**	-

Comment Number	PADEP Comment	PennEast Response
	permanent stormwater BMPS including permanent stabilization specification and locations.	
MLV6-1.a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	Worksheet 10 of PCSM Report 353754-MM-E-E-112 has been updated to include NS BMP 5.5.4 *Cluster Uses at Each Site*, Structural BMP 6.7.2 *Landscape Restoration*, and Structural BMP 6.7.3 *Soils Amendment/Restoration* (ESCGP Section 3-3). All landscape restoration that is performed will be re-vegetation using native species and will not be protection of existing vegetation.
MLV6-2	**§102.8(f)(9) Plan drawings.**	-
MLV6-2.a.	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of PCSM Report 353754-MM-E-E-112 (ESCGP Section 3-3).
MLV6-2.b.	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of PCSM Report 353754-MM-E-E-112 (ESCGP Section 3-3).
MLV6-2.c.	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of PCSM Report 353754-MM-E-E-112 (ESCGP Section 3-3).
MLV6-2.d.	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of PCSM Report 353754-MM-E-E-112 (ESCGP Section 3-3).
MLV6-2.e.	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-112 (ESCGP Section 3-3). The suggested notes from Comments MLV6-2.e.i – MLV6-2.e.v have not been added to the plan set.

Comment Number	PADEP Comment	PennEast Response
MLV6-2.e.i.	The protected area shall not be stripped of existing topsoil.	See response for MLV6-2.e
MLV6-2.e.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for MLV6-2.e
MLV6-2.e.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV6-2.e
MLV6-2.e.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for MLV6-2.e
MLV6-2.e.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for MLV6-2.e
MLV6-2.f	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-112 (ESCGP Section 3-3). The suggested notes from Comments MLV6-2.f.i – MLV6-2.f.vi have not been added to the plan set.
MLV6-2.f.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for MLV6-2.f
MLV6-2.f.ii	Existing native vegetation is not to be removed from the protected area.	See response for MLV6-2.f
MLV6-2.f.iii	Additional planting of native vegetation is allowed within the protected area.	See response for MLV6-2.f
MLV6-2.f.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for MLV6-2.f
MLV6-2.f.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV6-2.f
MLV6-2.f.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for MLV6-2.f

Comment Number	PADEP Comment	PennEast Response
MLV6-2.g.	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-112 (ESCGP Section 3-3).
MLV6-2.h.	**Please provide the following notations on the PCSM Plans regarding the landscape restoration:**	-
MLV6-2.h.i	If forest restoration is utilized as the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV6-2.h.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV6-2.h.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV6-2.h.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV6-2.h.ii.	In the sequence of construction, the site preparation should occur in the fall prior to planting in order to eliminate undesired species, prep soil, etc.	See response for MLV6-2.g
MLV6-2.h.iii.	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for MLV6-2.g
MLV6-2.h.iv.	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable is allowed.	See response for MLV6-2.g
MLV6-2.h.v.	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for MLV6-2.g
MLV6-2.h.vi.	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for MLV6-2.g

Comment Number	PADEP Comment	PennEast Response
MLV6-2.h.vii.	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed	See response for MLV6-2.g
MLV6-2.i.	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	See response for MLV6-2.g
MLV6-2.i.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for MLV6-2.g
MLV6-2.i.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface.	See response for MLV6-2.g
MLV6-2.i.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for MLV6-2.g
MLV6-2.i.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for MLV6-2.g
MLV6-2.i.v	The methodology should only be performed when the soil conditions are dry.	See response for MLV6-2.g
MLV6-2.i.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for MLV6-2.g
MLV6-2.j	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for MLV6-2.g
MLV6-2.k	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-112 (ESCGP Section 3-3). The suggested notes from Comments MLV6-2.k.i – MLV6-2.k.iv have not been added to the plan set.
MLV6-2.k.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV6-2.k
MLV6-2.k.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for MLV6-2.k

Comment Number	PADEP Comment	PennEast Response
MLV6-2.k.iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for MLV6-2.k
MLV6-2.k.iv	Pruning or required maintenance of existing trees is permitted.	See response for MLV6-2.k
MLV6-2.l	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been provided on Worksheet #3. To receive water quality credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-112 (ESCGP Section 3-3). No changes to Worksheet 3 of PCSM Report 353754-MM-E-E-112 have been made. The NS BMP 5.5.4 *Cluster Uses at Each Site* has been added to worksheet 10, Section 4.4.3 (pg. 20), Section 3.1.1 (pg. 10) in the PCSM Report 53754-MM-E-E-112.
Post Construction Stormwater Management Plan - Main Line Valve MLV-7		
MLV7-1	**§102.8(f)(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPS including permanent stabilization specification and locations.**	-
MLV7-1.a	The proposed PCSM BMP of re-vegetating and reforestation of disturbed areas using native species has been selected on Worksheet #10. It is unclear whether this BMP will be protecting existing vegetation or will be for new vegetation. Please clarify.	Worksheet 10 of PCSM Report 353754-MM-E-E-113 has been updated to include NS BMP 5.5 *Cluster Uses at Each Site,* Structural BMP 6.7.2 *Landscape Restoration*, and Structural BMP 6.7.3 *Soils Amendment/Restoration*. All landscape restoration that is performed will be re-vegetation using native species and will not be protection of existing vegetation.
MLV7-2	**§102.8(f)(9) Plan drawings.**	
MLV7-2.a.	Please delineate and label on the PCSM Plans those areas where you propose to protect and/or utilize the natural drainage features as a PCSM BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of the PCSM Report (ESCGP Section 3-3).

Comment Number	PADEP Comment	PennEast Response
MLV7-2.b.	Please provide a land preservation agreement, protection agreement, deed restriction or other enforceable instrument that ensures perpetual protection of the area where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of the PCSM Report (ESCGP Section 3-3).
MLV7-2.c.	Please provide specific coordinates (metes and bounds) that are to be used within the enforceable instrument for those areas where you propose to protect/utilize natural drainage features.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of the PCSM Report (ESCGP Section 3-3).
MLV7-2.d.	The credit for the protection/utilization of natural drainage features as a PCSM BMP has not been followed through to the BMP Worksheet #3. In order for this credit to apply, Worksheet #3 must include this BMP.	The NS BMP 5.4.3 *Protect/Utilize Natural Drainage Features* has been removed from Worksheet 10 and Section 4.4.3 (pg. 20) of the PCSM Report (ESCGP Section 3-3).
MLV7-2.e.	If using the minimization of soil compaction as a PCSM BMP, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-113 (ESCGP Section 3-3). The suggested notes from Comments MLV7-2.e.i – MLV7-2.e.v have not been added to the plan set.
MLV7-2.e.i.	The protected area shall not be stripped of existing topsoil.	See response for MLV7-2.e
MLV7-2.e.ii	The protected areas are not to be subject to excess equipment movement, storage or stockpile of equipment or material of any kind.	See response for MLV7-2.e
MLV7-2.e.iii	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV7-2.e
MLV7-2.e.iv	Soil amendment or additional topsoil and light grading is permitted in the protected area.	See response for MLV7-2.e
MLV7-2.e.v	Should the minimum soil compaction areas be disturbed/compacted, they may require soil amendment and restoration.	See response for MLV7-2.e

Comment Number	PADEP Comment	PennEast Response
MLV7-2.f	Please provide the following notations on the PCSM Plans for the areas proposed to be protected from earth disturbance:	The NS BMP 5.6.2 *Minimize Soil Compaction* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-113 (ESCGP Section 3-3). The suggested notes from Comments MLV7-2.f.i – MLV7-2.f.vi have not been added to the plan set.
MLV7-2.f.i	The protected areas are not to be subject to grading or movement of existing soils.	See response for MLV7-2.f
MLV7-2.f.ii	Existing native vegetation is not to be removed from the protected area.	See response for MLV7-2.f
MLV7-2.f.iii	Additional planting of native vegetation is allowed within the protected area.	See response for MLV7-2.f
MLV7-2.f.iv	Pruning or other required maintenance of vegetation is allowed in the protected area.	See response for MLV7-2.f
MLV7-2.f.v	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV7-2.f
MLV7-2.f.vi	Any protected areas that have been disturbed/compacted during construction may require soil amendment and restoration.	See response for MLV7-2.f
MLV7-2.g.	Please show on the PCSM Plans the areas of landscape restoration.	An additional plan sheet has been added to the PCSM Plan showing the areas that are proposed to be used in Worksheet 10 of the PCSM Report 353754-MM-E-E-113 (ESCGP Section 3-3).
MLV7-2.h.	**Please provide the following notations on the PCSM Plans regarding the landscape restoration:**	-
MLV7-2.h.i	If forest restoration is utilized as the landscape restoration:	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV7-2.h.i.1	Tree seedlings should range from 12 to 18 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.

Comment Number	PADEP Comment	PennEast Response
MLV7-2.h.i.2	Shrubs should range from 18 to 24 inches in height.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV7-2.h.i.3	Trees and shrubs should be planted on 8-foot centers or as recommended by the vegetation guidelines.	PennEast does not propose shrub or tree planting for landscape restoration at this site; therefore, no notes have been added to the PCSM Plan.
MLV7-2.h.ii.	In the sequence of construction, the site preparation should occur in the fall prior to planting in order to eliminate undesired species, prep soil, etc.	See response for MLV7-2.g
MLV7-2.h.iii.	If the landscape restoration areas become disturbed and/or compacted, soil amendment and restoration may be required.	See response for MLV7-2.g
MLV7-2.h.iv.	Weed control methods such as organic mulch, weed control fabrics, shallow cultivation, pre-emergent herbicides, or mowing as applicable is allowed.	See response for MLV7-2.g
MLV7-2.h.v.	Deer control, tree protection, stream buffer fencing and/or other types of vegetation protection as applicable is required.	See response for MLV7-2.g
MLV7-2.h.vi.	Monitoring of the new landscaped restoration areas shall be done four times a year for four years.	See response for MLV7-2.g
MLV7-2.h.vii.	The use of significant amounts of chemicals, fertilizers, herbicides and pesticides on the landscape restoration is not allowed.	See response for MLV7-2.g
MLV7-2.i.	Please provide the following notations on the PCSM Plan with respect to soil amendment and restoration:	See response for MLV7-2.g
MLV7-2.i.i	Soil amendment and restoration should not take place within the drip line of trees or tree line.	See response for MLV7-2.g
MLV7-2.i.ii	Soil amendment and restoration should not take place over utility installations within 30 inches of the surface.	See response for MLV7-2.g
MLV7-2.i.iii	Soil amendment and restoration should not take place where trenching/drainage lines are installed.	See response for MLV7-2.g

Comment Number	PADEP Comment	PennEast Response
MLV7-2.i.iv	Soil amendment and restoration should not take place where compaction of the soils by design is required.	See response for MLV7-2.g
MLV7-2.i.v	The methodology should only be performed when the soil conditions are dry.	See response for MLV7-2.g
MLV7-2.i.vi	The methodology should only be performed using a solid shank ripper, not a disk or plow due to their ineffectiveness.	See response for MLV7-2.g
MLV7-2.j	Please provide the type of methodology to be used for the soil amendment and restoration.	See response for MLV7-2.g
MLV7-2.k	If using re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP for this site, please provide the following notations on the PCSM Plans:	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-113 (ESCGP Section 3-3). The suggested notes from Comments MLV7-2.k.i – MLV7-2.k.iv have not been added to the plan set.
MLV7-2.k.i	The protected area must be clearly delineated in the field and protected prior to any construction activities taking place.	See response for MLV7-2.k
MLV7-2.k.ii	Construction limits shall not encroach within 10 feet of the drip line of trees.	See response for MLV7-2.k
MLV7-2.k.iii	Any trees which are to be protected shall be maintained and protected for the life of the project (50 years) or until redevelopment occurs.	See response for MLV7-2.k
MLV7-2.k.iv	Pruning or required maintenance of existing trees is permitted.	See response for MLV7-2.k
MLV7-2.m	The use of re-vegetation and reforestation of disturbed areas using native species as a PCSM BMP has not been provided on Worksheet #3. To receive water quality credits, the BMP must be provided on Worksheet #3. Please revise accordingly.	The NS BMP 5.6.3 *Re-Vegetate/Re-Forest Disturbed Areas* is no longer used on Worksheet 10 or mentioned in the PCSM Report 353754-MM-E-E-113 (ESCGP Section 3-3). No changes to Worksheet 3 of PCSM Report 353754-MM-E-E-113 have been made. The NS BMP 5.5.4 *Cluster Uses at Each Site* has been added to Worksheet 10, Section 4.4.3 (pg. 20), and

Comment Number	PADEP Comment	PennEast Response
		Section 3.1.1 (pg. 10) in the PCSM Report 53754-MM-E-E-113.
Other Comments		
Other	The DEP received the following comment from the Department of Conservation and Natural Resources, Bureau of State Parks: DCNR has concerns with a slope stabilization technique PennEast introduced at an April 2019 post survey meeting. PennEast communicated the potential need for Self-Drilling SuperNails, anchoring wire mesh, to stabilize soil and establish vegetation on the north slope of the Mud Run ravine. The Mud Run ravine is located in the Mud Run Natural Area in Hickory Run State Park (project mile maker 33.1-33.3). The Bureau of State Parks will not accept any stabilization technique requiring manufactured components. The Bureau of State Parks will prohibit any above ground structures in any potential Right of Way License with PennEast. The DEP requests that PennEast consider a different type of permanent stabilization for this location. Please provide any calculations, details, and plans as per the E&S Pollution Control Manual.	PennEast has prepared a technical memo describing how construction and restoration will minimize the risk of slope failure along this stream (Attachment ESCGP-1).