

This document outlines National Fuel Gas Supply Corporation's response to the Pennsylvania Department of Environmental Protection Technical Deficiency letter issued for the FM100 Project on December 4, 2020. Each comment has been reproduced and a corresponding answer provided. Where applicable, National Fuel has updated plans and/or drawings and have noted the updates to those documents herein. Revised versions of these documents are being provided in digital format as part of this response. To the extent possible, National Fuel has minimized the number of documents submitted in this response by only providing the applicable items that changed due to the comments below; items not provided with this response were not changed from the previous submission.

**Re: Technical Deficiency #2 Response**

**ESCGP-3 Permit:**

**DEP Application No. ESG830019003-00 APS ID No. 1008279; AUTH ID No. 1299840**

**Permit Requirements**

**Q1.** Please make the following corrections to the Summary of Bio-Infiltration BMPs in the NOI 25 PA Code § 102.6(a)(1):

**Q1.a.** The column Elevation of Limiting Zone-Water Table Bedrock etc. has an entry of N/A. This column is applicable. Infiltration tests done as part of the most recent response indicate limiting zones were not encountered, for which an entry of >2ft should be entered. Please update this column to correspond with the submitted information.

**Response:** The "Elevation of Limiting Zone-Water Table Bedrock, etc." column of the Summary of Bio-Infiltration BMPs tables have been revised to correctly list a depth of >2 feet for each BMP at each facility.

**Q1.b.** Please ensure each drainage area is entered properly and corresponds with the submitted PCSM Reports. As an example, the Carpenter Hollow OPP has listed total drainage of 0.356 acres, while in the PCSM Report this number is 1.109 acres.

**Response:** The total drainage for Carpenter Hollow OPP is 1.109 acres and the NOI has been revised accordingly. In addition, drainage areas for each facility were reviewed against the corresponding PCSM reports and updated where applicable.

**Q2.** Please revise the Overview Map to reflect the clarification made in the recent response regarding the Marvindale Interconnect. It appears the map label

should reference the KL Valve Set, as the Marvindale Interconnect is existing and does not require any PCSM. 25 PA Code §102.6(a)(1)

**Response:** The Overview Map has been revised to correctly label "NEW KL VALVE SET" and "EXISTING MARVINDALE INTERCONNECT" and is provided as file 01-04-00\_Project\_Overview\_Map\_20201207\_Rev2.

### **Waters of the Commonwealth**

**Q3.** Table 2.2-1A Waterbodies Crossed by the Project does not appear to have been updated with the streams along the abandonment line, nor the newly delineated streams from recent surveys. Besides, stream names and/or classifications still contain errors (Streams 037, 068, 070, 112-114, 196) and waterbody names and classifications are not shown for the ditches that receive perennial or intermittent flow. Please ensure that the table is consistent with the project and all streams are included with correct classifications, including the following:

**Q3.a.** In the FM100 Abandonment Section the following streams are not listed: Mix Run (HQ-CWF), Bennett Branch of the Sinnemahoning Creek (WWF), Little Dent Run (HQ-CWF), Boyer Run (CWF), UNT to Driftwood Branch of the Sinnemahoning Creek at MP 26.2 (EV), Driftwood Branch of the Sinnemahoning Creek (EV), Johnson Run (EV). 25 PA Code § 102.4(b)(5)(v).

**Response:** Table 2.2-1A has been updated to account for all revised stream naming conventions and classifications and is provided as file 02-01-01.a\_Appx A\_Table 2.2-1A\_Waterbodies\_Rev2.

**Q3.b.** Stream 146 is not listed in this table; however, it is included in the table provided in the E&S Notes page 004 as having foam placed in the abandoned pipe between Station 250+21 and 254+21. 25 PA Code § 102.4(b)(5)(v).

**Response:** Table 2.2-1A has been updated to account for Stream 146 and is provided as file 02-01-01.a\_Appx A\_Table 2.2-1A\_Waterbodies\_Rev2.

**Q3.c.** The Narrative section 8.1.6 mentions South Branch Oswayo Creek as an EV water, but this is not included in the table. 25 PA Code § 102.4(b)(5)(v).

**Response:** Table 2.2-1A has been updated to account for all streams and is provided as file 02-01-01.a\_Appx A\_Table 2.2-1A\_Waterbodies\_Rev2.

**Q4.** There are several wetland classifications incorrectly listed in Table 2.2-1B Wetlands Located within Project Work Areas. Several wetlands should be classified as Exceptional Value based on their contiguous connection with other EV wetlands and/or their hydrologic connection to a stream supporting the natural reproduction of trout (some examples are Wetlands 007b, 008, 009, 009b, 012b, 023, 025, 031, 034, 035-1, 035a, 065, 091, 091a, 112, 114, 125, 134, 134a, 136a). Additionally, the Driftwood Branch of the Sinnemahoning Creek has an existing use of EV, MF and, wetlands 303, 303b, 147a, 147, 305, 305a are all located within the 100-year floodplain classifying them as EV. 25 PA Code § 102.4(b)(5)(v)

**Response:** Table 2.2-1B has been updated to account for the correct wetland classifications based on revised stream designations and is provided as file 02-01-01.b\_Appx A\_Table 2.2-1B\_Wetlands\_Rev2.

**Q5.** Several Streams on Table 2.2-1C Floodways have an incorrect designation:

**Q5.a.** The Driftwood Branch Basin from Sterling Run to its mouth is EV, so streams 169, 132, 363-370 should be listed as EV, as well as 167-168, which should be listed as UNT to Johnson Run and not directly to the Driftwood Branch. 25 PA Code § 102.4(b)(5)(v).

**Response:** Table 2.2-1C has been updated to account for all revised stream naming conventions and classifications and is provided as file 02-01-01.c\_Appx A\_Table 2.2-1C\_Floodways\_Rev2.

**Q5.b.** Stream 171 is Boyer Run and stream 172 is a UNT to Boyer Run. They both have designated uses as CWF and not WWF. 25 PA Code § 102.4(b)(5)(v).

**Response:** Table 2.2-1C has been updated to account for all revised stream naming conventions and classifications and is provided as file 02-01-01.c\_Appx A\_Table 2.2-1C\_Floodways\_Rev2.

**Q5.c.** Hunts Run has been given an existing use of EV, so streams 127, 128, and 129 should be listed as EV in that table. 25 PA Code § 102.4(b)(5)(v).

**Response:** Table 2.2-1C has been updated to account for all revised stream naming conventions and classifications and is provided as file 02-01-01.c\_Appx A\_Table 2.2-1C\_Floodways\_Rev2.

**Q5.d.** Stream 173 is Little Dent Run and has an existing use of HQ-CWF but is listed as WWF. Please revise. 25 PA Code § 102.4(b)(5)(v).

**Response:** Table 2.2-1C has been updated to account for all revised stream naming conventions and classifications and is provided as file 02-01-01.c\_Appx A\_Table 2.2-1C\_Floodways\_Rev2.

**Q5.e.** In Potter County, streams 125, 126, 133, 161,162 all have existing uses of EV- the two portions of the First Fork of the Sinnemahoning Creek Basin in which they are located have existing uses of EV. 25 PA Code § 102.4(b)(5)(v).

**Response:** Table 2.2-1C has been updated to account for all revised stream naming conventions and classifications and is provided as file 02-01-01.c\_Appx A\_Table 2.2-1C\_Floodways\_Rev2.

### **PNDI Requirements**

**Q6.** The Fish and Wildlife Service Letter dated November 06, 2019, regarding the Final 4(d) Rule for the Northern Long-eared Bat requires you to update and resubmit the information required in the IPaC key since the project was not completed within one year of the letter date. Please provide. 25 PA Code § 102.6(a)(2).

**Response:** On 12/10/2020 the USFWS issued a NLEB 4d renewal verification email for the project which is provided as file 01-06-02\_PNDI\_USFWS\_PGC\_PDCNR\_PFBC\_Consultation\_Rev2.

**Q7.** Please confirm the intent for the Tamarack PNDI Receipt, as this does not have the project Contact Information entered and is not signed. Additionally, the Tamarack Compressor Station appears to be included in the overall FM100 PNDI. If this is used, the expired receipt will need to be updated, as 3 of the agencies have a “No Known Impact” result and therefore no clearance letters. 25 PA Code § 102.6(a)(2).

**Response:** Please disregard this PNDI receipt as the Tamarack Compressor Station is accounted for within the overall project PNDI receipt. The standalone Tamarack PNDI receipt has been removed from the updated file 01-06-02\_PNDI\_USFWS\_PGC\_PDCNR\_PFBC\_Consultation\_Rev2.

**Q8.** The response to Comment Q2.d indicates ongoing and extensive conversation with Denise Mitcheltree regarding impacts to State Game Lands. Please provide any updates. The response also indicates a record of agency communications in Attachment 1-06B-00 PNDI and USFWS Concurrence Letters. This attachment could not be located, please provide and include the most recent correspondences and any final determination. 25 PA Code § 102.6(a)(2).

**Response:** National Fuel is committed to obtaining the necessary land rights to cross State Game Lands prior to construction. To this end, National Fuel has consulted with the PGC to obtain license agreements to cross State Game Lands. The PGC provided DRAFT license agreements for National Fuel's review on 12/8/2020: National Fuel's internal review is ongoing. Documentation of these efforts is found in the file:  
01-06-02\_PNDI\_USFWS\_PGC\_PDCNR\_PFBC\_Consultation\_Rev2.

It is noted that agency correspondence was provided in three files:

- 01-06-01\_Q21AC\_PHMC\_All\_Correspondence\_CSI\_FINAL.pdf
- 01-06-02\_Combined\_PNDI\_Report&Correspondence\_CSI\_FINAL.pdf
- 01-06-03\_Combined\_IPaC\_Report&Correspondence\_CSI\_FINAL.pdf

For convenience, National Fuel has combined the PNDI, USFWS, PGC, PDCNR, and PFBC Correspondence and added Table 1.7-1 which contains a record of project permitting efforts into one file named, 01-06-02\_PNDI\_USFWS\_PGC\_PDCNR\_PFBC\_Consultation\_Rev2. It is also noted that updated final agency consultations have replaced obsolete items. The PHMC consultation remains unchanged.

### **Riparian Buffer Requirements**

**Q9.** Regarding Riparian Buffer Table 4.1: List of Preliminary Species for Replanting in the Site Restoration Narrative, please provide clarification for the planting methods in wet areas and justification for selecting primarily flood intolerant shrubs and small trees for riparian zone plantings. Additionally, Winterberry is listed with flood intolerance; however, in PADEP's Riparian Forest Buffer Guidance (Document Number 394-5600-001 PADEP 2010), this

species is listed with a flood tolerance of very tolerant. Please revise. 25 PA Code § 102.14(b)(4)(i).

**Response:** National Fuel understands that riparian areas are highly dynamic systems and accommodate a wide variety of species of various flood tolerance. A healthy riparian area has a broad distribution of species and successional status. It is noted that National Fuel has selected trees and shrubs of various species to promote diversity and ecosystem health. Some of these species are more flood tolerant than others; however, all the species selected were observed in riparian areas across the Project during field surveys and are acceptable per PADEP's, Bureau of Watershed Management Riparian Forest Buffer Guidance document #394-5600-001 (November 27, 2010).

Riparian Buffer Table 4.1: List of Preliminary Species for Replanting in the Site Restoration Narrative has been updated to be consistent with PADEP's, Riparian Forest Buffer Guidance document (2010). Furthermore, National Fuel will follow the guidelines for Riparian Forest Buffer Planting and Establishment (p. 50-59), which covers among other things, planting in wet conditions. National Fuel will work with a qualified contractor who understands the habitat needs of the various species and will locate plants in areas that will minimize mortality.

In addition to the changes above, National Fuel has revised the Riparian Restoration Map books (abandonment and modernization) and has provided them as:

- 00-00-01\_ESCGP3 Response\_Att A\_Rip\_Rest\_Mpbk\_ABAN\_Rev2
- 00-00-01\_ESCGP3 Response\_Att A\_Rip\_Rest\_Mpbk\_MOD\_1\_OF\_2\_Rev2

It is also noted that file 00-00-01\_ESCGP3 Response\_Att\_A\_Rip\_Rest\_Mpbk\_MOD\_2\_OF\_2\_FINAL has not changed but has been provided for convenience.

### **E&S Plan**

**Q10.** Discussions regarding the technical deficiency comments indicated that the proposed Driftwood Branch Sinnemahoning ford crossing would not be used, and notation would be added to reflect the crossing method. Notes were not apparent on the plans and the intent for this crossing is not clear. Please be sure the plans reflect the method of crossing. 25 PA Code § 102.4(b)(5)(ix).

**Response:** As previously discussed, National Fuel intends to utilize foot traffic only for the Stream 365 (Driftwood Branch Sinnemahoning Creek) crossing location.

For clarity, a label indicating "FOOT TRAFFIC ONLY WITHIN STREAM 365" has been added to the E&S Abandonment Alignment 12 and the Wetland and Stream Crossing Plan WSS-CAM-AB-002.1.

**Q11.** Please confirm that the Grove Run Trail Road will be used in its entire length from the intersection with the Ridge Road to access the pipeline for the 872 and 873 Rectifier access. Recent site visits have shown the GIS layer to be primarily correct for the Grove Trail Road. Please clarify how the road location was determined and ensure it is correctly demarcated on the plans. 25 PA Code § 102.4(b)(5)(ix).

**Response:** National Fuel intends to utilize the entire length of Grove Run Trail Road from the intersection with Ridge Road. Upon further review, neither the GIS layer or the proposed access road LOD matched the aerial imagery available on Google Earth. National Fuel sent a survey crew to the location to confirm the Grove Run Trail Road centerline on December 10th, 2020. The proposed limits of disturbance have been revised to correctly demarcate Grove Run Trail Road on E&S Abandonment Alignment 15 and SR Abandonment Alignment 15.

**Q12.** The response to Q11.f does not clarify the concerns for the access to rectifier removal at MP 33.4 (STA 1763+75). Utilizing the access road for the rectifier removal at STA 1763+55 is understood. The plans still show STA 1763+75 access directly from Ridge Road. Can the access road for STA 1763+55 be used for both rectifiers? Please clarify and update the plans as needed. 25 PA Code § 102.4(b)(5)(ix).

**Response:** As previously stated, the proposed access point to the valve setting at MP 33.4 is an already existing access road used for operation. National Fuel does not anticipate an issue with utilizing this access point. However, National Fuel understands PADEP's concerns with installing a rock construction entrance on a slope of this grade.

The installation and removal/restoration involved with the rock construction entrance would result in most of the earth disturbance in this location. For this reason, National Fuel has revised E&S Abandonment Alignment 17 to remove the rock construction entrance proposed off of Ridge Road. The work will be completed quickly (likely one or two days total), and National Fuel will monitor Ridge Road to ensure the road remains clean.

**Q13.** The response to Q6.f clarifies the ESCAMP role and mentions that the agency-published standards will take precedence if there are any inadvertent conflicts. Please clarify the PA DEP as the agency for these plans, since other agencies are referenced. 25 PA Code § 102.4(b)(5)(ix).

**Response:** National Fuel must be responsive to all agency requirements and standards; this includes PADEP, FERC, and other federal and state agencies, including county conservation districts. Occasionally conflicts may arise between agency requirements. In such circumstances, National Fuel proposes to consult with the respective agencies to resolve the conflict(s). As an overarching philosophy, National Fuel intends to implement the most stringent environmental requirements requested by the agencies in order to protect the environment.

Upon further review of the ESCAMP, National Fuel has made revisions to the redacted version of the ESCAMP (provided as Appendix G of the ESCGP-3 Narrative). The following table provides deletions and additions made to the ESCAMP as requested by PADEP and FERC, and the justifications associated therewith. National Fuel deleted all references pertaining to the regulations of the state of New York from the ESCAMP. The deletion of the New York standards will not negatively impact National Fuel’s ability to control erosion, nor will it reduce the rigor of the environmental protections outlined in the ESCAMP as the PADEP and FERC standards remain intact and will provide sufficient environmental protections. National Fuel has not itemized each of these deletions as they are self-evident as they each reference a New York state standard.

In addition to the New York state deletions, several minor editorial additions occurred for clarity (e.g., defining terms such as ESCGP-3 on pages 8, 14). These additions do not substantively change the environmental protections required of National Fuel. As such, these clerical revisions are not detailed. All other revisions are outlined by page number below:

No.	Page(s)	Modifications within ESCAMP	Justification
1	8, 20, 23, 25	“Within 24 hours of <del>0.5</del> 0.25 inch of rainfall.”	This condition is consistent with PADEP’s direction that 0.25-inches is required by the updated NPDES standards which PADEP is adopting into the Erosion and Sediment Pollution Control Program Manual. This standard exceeds the requirements outlined in the FERC’s Plan and Procedures. The modification is more stringent from the

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2	19	<p><del>“Where activity ceases for 20 or more days or</del> jobs not cleaned up by October 15 will be final graded and seeded with Aroostook (if available) winter rye at a rate of 170 pounds per acre.</p> <p><i>*Upon temporary cessation of an earth disturbance activity or any stage or phase of an activity where a cessation of earth disturbance activities will exceed 4 days, the site shall be immediately seeded, mulched, or otherwise protected from accelerated erosion and sedimentation pending future earth disturbance activities. 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.</i></p>	<p>approved ESCAMP and provides additional environmental protections.</p> <p>These modifications occurred at the request of PADEP; for clarity however, National Fuel added additional language to the bottom of the page, directly out of the PADEP Chapter 102 regulations. These added provisions do not conflict with published FERC guidance and provide additional environmental protections.</p>
3	21	<p>REVERT TO ORIGINAL LANGUAGE:</p> <p>Mulch all disturbed areas (except cultivated croplands) <del>before</del> seeding if: Final cleanup, including final grading and installation of permanent erosion control measures, is not completed in an area within <del>20 4</del> days after the trench in that area is backfilled (<del>10 days in residential areas-10 days in residential areas</del>); or</p>	<p>The original modifications occurred at the request of PADEP; however, the PADEP and FERC requirements are not mutually exclusive. Therefore, National Fuel retracts these changes and will include and implement the original language, identical to language found in FERC’s Upland Erosion Control, Revegetation, and Maintenance Plan</p>
4	23	<p>The following table has been reintroduced into the document in its entirety:</p> <p><i>Table 2: Temporary Trench Breakers: Hard/Soft Plug Spacing</i></p>	<p>While temporary trench breakers are not proposed for the project, these and/or hard/soft plugs will be utilized, where applicable, in instances where lengths of trench near resources, on hillsides, etc., need to remain open for a prolonged period of time. National Fuel will still also apply the standards for permanent trench breakers across the project.</p>

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5	36	<p>Commence cleanup operations immediately following backfill operations.* <i>Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas).</i></p> <p><del><i>Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas).</i></del></p> <p><i>* 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.</i></p>	<p>These modifications occurred at the request of PADEP; however, the FERC and PADEP requirements are not mutually exclusive. Therefore, National Fuel retracts this deletion, has added it back into the ECAMP narrative, and will implement both standards during construction.</p>
6	38	<p><i>Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas).*</i></p> <p><del><i>*Final grading shall be completed within 10 days after the ditch is backfilled, weather and soil moisture permitting.</i></del></p> <p><del><i>*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.</i></del></p>	<p>This revision and addition occurred at the request of PADEP and to further clarify the restoration requirement taken from FERC's Upland Erosion Control, Revegetation, and Maintenance Plan. The addition of the PADEP note at the bottom of the page will increase environmental protections when implemented with the other ESCAMP requirements.</p>
7	48	<p><del><i>Where additional access is necessary, existing access roads may be used upon agreement with the landowner.</i></del></p>	<p>This has been removed to ensure that all additional access roads are approved by FERC via the variance request process prior to use.</p>
8	53	<p><i>Final grading, topsoil replacement, and installation of permanent erosion</i></p>	<p>These modifications occurred at the request of PADEP; however, the FERC</p>

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		<p><i>control structures will be completed within 20 days after backfilling the trench (10 days in residential areas).</i></p> <p><del><i>Final grading, topsoil replacement, and installation of permanent erosion control structures will be completed within 20 days after backfilling the trench (10 days in residential areas).</i></del></p> <p><i>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.</i></p>	<p>and PADEP requirements are not mutually exclusive. Therefore, National Fuel retracts this deletion, has added it back into the ESCAMP narrative, and will implement both standards during construction.</p>
9	Wetland Crossing Drawing #4; and Wetland Travel Area #4A	A geotextile underlayment has been added to this drawing.	This is consistent with PADEP's Erosion and Sediment Pollution Control Program Manual and is not in conflict with the requirements outlined in the FERC's Plan and Procedures. The modification is more stringent from the approved ESCAMP and provides additional environmental protections.
10	Filter Fence Drawing #5	This drawing has been reintroduced in its entirety.	While the use of filter fence in special protection watersheds is not preferred per PADEP's Erosion and Sediment Pollution Control Program Manual, National Fuel proposes to include this specification in the ESCAMP in case site conditions warrant use of the material as a supplemental measure, with PADEP approval.
11	Trench Breaker Drawing #6A	This drawing has been modified to remove soil as a medium for trench breakers. Also spacing requirements for temporary trench breakers and hard/soft plugs have been reintroduced as has the specification for the use of synthetic foam as a permanent trench breaker medium.	This is consistent with PADEP's Erosion and Sediment Pollution Control Program Manual and is not in conflict with the requirements outlined in the FERC's Plan and Procedures. The modification provides greater environmental protections from the approved ESCAMP. As mentioned previously, temporary trench breakers and hard/soft plugs should be utilized in certain instances where trench is

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<b>12</b>	Streambank Stabilization Drawing #7	This drawing has been deleted in its entirety.	<p>proposed to remain open for a prolonged period of time.</p> <p>This drawing is inconsistent with PADEP's direction not to use riprap for streambed restoration; rather they would prefer the use of native streambed material. National Fuel has proposed equal or better protection in these instances through the use of the Erosion and Sediment Control Details (refer to Figure 18) submitted as part of the ESCGP-3 permit application to PADEP; this drawing has been attached for convenience.</p>
<b>13</b>	Slope Breakers Hard Plugs and Soft Plugs Drawing #8A	This drawing has been reintroduced in its entirety.	<p>This drawing has been reintroduced as it accurately depicts the spacing requirements for slope breakers required by PADEP. This spacing offers more protection than the spacing included in the FERC's Upland Erosion Control, Revegetation, and Maintenance Plan. Also, as previously discussed, it offers guidance on the installation of hard/soft plugs.</p>
<b>14</b>	Diversion Ditch Drawing #11	This drawing has been deleted in its entirety.	<p>Diversion ditches of this nature are not being proposed as part of this project. In instances where flow is being diverted, National Fuel has proposed equal or better protection through the use of the Erosion and Sediment Control Details (refer to Figure 31A) submitted as part of the ESCGP-3 permit application to PADEP; this drawing has been attached for convenience.</p>
<b>15</b>	Straw Bale Installation Drawing #22	This drawing has been reintroduced in its entirety.	<p>Like filter fence (Drawing #5), while the use of straw bales in special protection watersheds is not preferred per PADEP's Erosion and Sediment Pollution Control Program Manual, National Fuel proposes to include this specification in the ESCAMP in case site conditions warrant use of the material as a supplemental measure, with PADEP approval.</p>

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<b>16</b>	Stormwater Channel Drawing #27	This drawing has been deleted in its entirety.	No temporary storm water earthen channels are proposed as part of this project. This drawing was removed for clarity. In instances where storm water channels are proposed, National Fuel has proposed equal or better protection through the use of the Post-Construction Stormwater Management packages submitted as part of the ESCGP-3 permit application to PADEP.
<b>17</b>	Energy Dissipater Drawing #31	This drawing has been deleted in its entirety.	This drawing is inconsistent with PADEP's Erosion and Sediment Pollution Control Program Manual. National Fuel has proposed equal or better protection in these instances through the use of the Drawings #28 and #39.
<b>18</b>	Discharge Method for Trench Dewatering Drawing #39	This drawing has been modified to remove the use of filter fences.	The use of filter fences in special protection watersheds is not allowed per PADEP's Erosion and Sediment Pollution Control Program Manual. National Fuel has proposed the use of compost filter socks to provide equal or better protection in these instances.
<b>19</b>	Elevated Washrack Drawing #44	This drawing has been deleted in its entirety.	No elevated washracks have been proposed as part of this project. National Fuel has proposed equal or better protection in these instances through the use of the Erosion and Sediment Control Details (refer to Figure 1).
20	Compost Filter Sock Drawing #45C	This drawing has been modified to remove Figure 4.2: Maximum Permissible Slope Lengths Above Compost Filter Socks.	The information presented in Figure 4.2 is inconsistent with PADEP's Erosion and Sediment Pollution Control Program Manual. National Fuel has proposed equal or better protection through the use of the Erosion and Sediment Control Details (refer to Figure 4c).
<b>21</b>	Trench Dewatering Sediment Corral Drawing #47	This drawing has been deleted in its entirety.	No sediment corrals using hay bales have been proposed as part of this project. Where secondary containment is required (i.e., in special protection watersheds, within 50 feet of any receiving surface water, or where grassy area is not available), compost filter sock shall be installed. National Fuel has

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			proposed this through the use of the Erosion and Sediment Control Details (refer to Figure 27) submitted as part of the ESCGP-3 permit application to PADEP; this drawing has been attached for convenience.
22	Hydrotest Water Discharge Device Drawing #48	This drawing has been deleted in its entirety.	National Fuel has proposed equal or better protection in these instances through the use of the Erosion and Sediment Control Details (refer to Figure 26A & 26B) submitted as part of the ESCGP-3 permit application to PADEP; these drawings have been attached for convenience.
23	Large Volume Hydrotest Water Discharge Device Drawing #48a	This drawing has been deleted in its entirety.	National Fuel has proposed equal or better protection in these instances through the use of the Erosion and Sediment Control Details (refer to Figure 26A & 26B) submitted as part of the ESCGP-3 permit application to PADEP; these drawings have been attached for convenience.
24	Attachment 5: NFG General Seed Mixtures	<i>For disturbed areas that achieve finished grade during non-germinating seasons, use temporary mixtures until germinating season begins.</i>	Previously, the dates for temporary mixtures were listed as October 15 through March 31 and the dates for permanent mixtures were listed as April 1 through October 14. Temporary seed mixes may be used for temporary stabilization all year round. This point was clarified to PADEP as part of the technical deficiency response. For clarity, the date of October 15 through March 31 for temporary mixtures was removed and the statement indicated was added.



# **FM100 Project**

ESCGP-3 Permit Application

November 18, 2019 (Updated September 2020, December 2020)

CP19-491-000: Public

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# **FM100 Project**

ESCGP-3 Permit Application  
Filing Materials

November 18, 2019 (Updated September 2020, December 2020)

CP19-491-000: Public

# Contents

The following Table of Contents reflects the contents of the Original JPA-105 Application. Items highlighted in **RED** text were altered or otherwise updated in response to PADEP's Technical Deficiency letter issued for the FM100 Project on December 4, 2020. To the extent possible, National Fuel has minimized the number of documents submitted in this response by only providing the applicable items that changed; the exception to this rule is when items did not change but were part of a larger series of independent documents, some of which did change. In these circumstances, PADEP requested that the entire series of documents be resubmitted. In this Table of Contents a RED asterisk (\*) denotes files that did not change but have been provided to complete a full series of documents. Items not provided in this submission were not changed from the previous submission.

## 00-00-00\_ESCPG3\_TOC\_Rev2

## 00-00-00\_ESCPG3\_Response\_to\_Tech Def 2

00-00-01\_ESCPG3 Response\_Att A\_Rip\_Rest\_Mpbk\_ABAN\_Rev2

00-00-01\_ESCPG3 Response\_Att A\_Rip\_Rest\_Mpbk\_MOD\_1\_OF\_2\_Rev2

00-00-01\_Elk\_ESCPG3 Response\_Att A\_Rip\_Rest\_Mpbk\_MOD\_2\_OF\_2\_FINAL\*

## 01-01-00\_E&S\_Application\_2020\_FINAL (each county)

## 01-02-00\_ESCGP-3\_NOI\_20201217\_Rev2

## 01-03-00\_ESCGP-3\_Fee Calculations

01-03-01\_ESCGP-3\_Fee\_Calculations\_FINAL (each county)

01-03-02\_PADEP\_Disturbed\_Acre\_Fee (each county)

01-03-03\_PADEP\_Individual\_Permit\_Fee (each county)

## 01-04-00\_Project\_Overview\_Map\_20201207\_Rev2

## 01-05-00\_Township Act 14 Municipal Notification with receipt

01-05-01\_Muni Land Use Notice Letters\_FINAL (each municipality)

01-05-02\_Muni Land Use Letters\_Certified Receipts\_FINAL (each municipality)

## 01-06-00\_PHMC-PNDI-USFWS\_correspondence\_CSI

01-06-01\_Q21AC\_PHMC\_All\_Correspondence\_CSI\_FINAL\*

01-06-02\_PNDI\_USFWS\_PGC\_PDCNR\_PFBC\_Consultation\_Rev2

## 01-07-00\_Spill Prevention and Response Plan\_FINAL

## 02-01-00\_ESCGP-3\_Narrative\_20201218\_Rev2

## 02-01-01\_Appx A\_Table 2.2-1\_Waterbodies\_Rev3

02-01-01.a\_Appx A\_Table 2.2-1A\_Waterbodies\_Rev3

02-01-01.b\_Appx A\_Table 2.2-1B\_Wetlands\_Rev3

02-01-01.c\_Appx A\_Table 2.2-1C\_Floodways\_Rev3

02-01-01.d\_Appx A\_Table 2.2-1D\_FINAL\*

## 02-01-02\_Appx B - PADEP Standard E&S Worksheet

02-01-02\_Appx\_B\_Worksheet\_Abandonment\_8-31-2020\_FINAL (each county)

02-01-02\_Appx\_C\_Worksheet\_Modification\_8-31-2020\_FINAL (each county)

## 02-01-03\_Appx C - Clean Water Diversions (appl. counties)

02-01-03A\_Appx\_C\_Modernization\_McKean\_8-31-2020\_FINAL

02-01-03B\_Appx\_C\_Modernization\_Potter\_8-31-2020\_FINAL

## 02-01-04\_Appx D\_RollMax\_NAG\_Specifications\_FINAL

## 02-01-05\_Appx E\_Geologic Units\_Crossed\_by\_Project\_FINAL

## 02-01-06\_Appx F\_Worksheet\_22\_Plan Preparer\_FINAL

## 02-01-07\_Appx G\_ECSAMP\_20201210\_Rev2

## 02-01-08\_Appx H\_Blasting Plan\_FINAL

## 02-01-09\_Appx I\_Geohazard Review\_FINAL

## 02-02.a-00\_E&S Drawings (Abandonment)\_Rev2

02-02-01\_ABAN\_E&S\_Cover\_Sheet\_12-18-2020\_Rev2

02-02-02\_ABAN\_E&S\_Notes\_09-09-2020\_FINAL\*

02-02-03\_ABAN\_E&S\_Soils\_09-02-2020\_FINAL\*

02-02-04\_ABAN\_E&S\_Index\_09-11-2020\_FINAL\*

02-02-05\_ABAN\_E&S\_Topo\_Index\_09-03-2020\_FINAL\*

02-02-06a\_ABAN\_E&S\_Alignments\_1 - 5\_12-17-2020\_Rev2

02-02-06b\_ABAN\_E&S\_Alignments\_6 - 10\_12-15-2020\_Rev2

02-02-06c\_ABAN\_E&S\_Alignments\_11 - 15\_12-15-2020\_Rev2

02-02-06d\_ABAN\_E&S\_Alignments\_16 - 20\_12-15-2020\_Rev2

02-02-06e\_ABAN\_E&S\_Access\_Roads\_09-08-2020\_FINAL\*

02-02-07\_ABAN\_E&S\_Details\_09-11-2020\_FINAL\*

## 02-02.b-00\_E&S Drawings (Modernization)\_FINAL

02-02-01\_FM100\_MOD\_E&S\_Cover\_Sheet\_09-03-2020\_FINAL

02-02-02\_FM100\_MOD\_E&S\_Notes\_09-09-2020\_FINAL

02-02\_03\_FM100\_MOD\_E&S\_Soils\_09-02-2020\_FINAL

02-02\_04\_FM100\_MOD\_E&S\_Index\_09-11-2020\_FINAL

02-02\_05\_FM100\_MOD\_E&S\_Topo\_Index\_09-03-2020\_FINAL

02-02\_06a\_FM100\_MOD\_E&S\_Alignments\_(1-5)\_09-04-2020\_FINAL

02-02\_06b\_FM100\_MOD\_E&S\_Alignments\_(6-10)\_09-04-2020\_FINAL

02-02\_06c\_FM100\_MOD\_E&S\_Alignments\_(11-15)\_09-04-2020\_FINAL

02-02\_06d\_FM100\_MOD\_E&S\_Alignments\_(16-20)\_09-04-2020\_FINAL

02-02\_06f\_FM100\_MOD\_E&S\_Alignments\_(26-31)\_09-04-2020\_FINAL

02-02\_06g\_FM100\_MOD\_E&S\_Access\_Roads\_(1-5)\_09-08-2020\_FINAL

02-02\_06h\_FM100\_MOD\_E&S\_Access\_Roads\_(6-10)\_09-08-2020\_FINAL  
02-02\_06i\_FM100\_MOD\_E&S\_Access\_Roads\_(11-15)\_09-08-2020\_FINAL  
02-02\_06j\_FM100\_MOD\_E&S\_Access\_Roads\_(16-20)\_09-08-2020\_FINAL  
02-02\_06k\_FM100\_MOD\_E&S\_Access\_Roads\_(21-25)\_09-09-2020\_FINAL  
02-02\_06l\_FM100\_MOD\_E&S\_Staging\_Areas\_(1-3)\_09-08-2020\_FINAL  
02-02\_07\_FM100\_MOD\_E&S\_Details\_09-11-2020\_FINAL

## 02-03-00\_Facility E&S Reports\_FINAL

02-03-00\_Marvingdale\_CS\_E+S\_Report\_8-20-19\_(SIGNED)\_FINAL  
02-03-00\_Tamarack\_CS\_E+S\_Report\_8-25-2020\_(SIGNED)\_FINAL

## 03-02-00\_Facility PCSM Plans\_Rev2

03-02-01\_NFG\_FM100\_Carpenter\_Hollow\_OPP\_PCSM\_Drawings\_09-04-2020\_(Signed)\_FINAL  
03-02-02\_NFG\_FM100\_KL\_Valve\_Set\_PCSM\_Drawings\_09-04-2020\_(Signed)\_FINAL  
03-02-03\_Marvindale\_CS\_Drawings\_8-25-2020\_(SIGNED)\_FINAL  
03-02-04\_NFG\_FM100\_MLV-1\_PCSM\_Drawings\_09-04-2020\_(Signed)\_FINAL  
03-02-05\_NFG\_FM100\_MLV-2\_PCSM\_Drawings\_09-04-2020\_(Signed)\_FINAL  
03-02-06\_NFG\_FM100\_MLV-3\_PCSM\_Drawings\_09-04-2020\_(Signed)\_FINAL  
03-02-07\_NFG\_FM100\_MLV-4\_PCSM\_Drawings\_09-04-2020\_(Signed)\_FINAL  
03-02-08\_Tamarack\_CS\_Drawings\_12-18-2020\_(SIGNED)\_Rev2

## 03-03-00\_Site Restoration Narrative\_Rev2\_12-17-2020\_STAMPED

## 03-04A-00\_Site Restoration Plans (Modernization)\_FINAL

03-04-04\_FM100\_MOD\_Site\_Restoration\_Index\_09-11-2020\_FINAL  
03-04-05\_FM100\_MOD\_Site\_Restoration\_Topo\_Index\_09-03-2020\_FINAL  
03-04-06a\_FM100\_MOD\_Site\_Restoration\_Alignments\_(1-5)\_09-08-2020\_FINAL  
03-04-06b\_FM100\_MOD\_Site\_Restoration\_Alignments\_(6-10)\_09-08-2020\_FINAL  
03-04-06c\_FM100\_MOD\_Site\_Restoration\_Alignments\_(11-15)\_09-08-2020\_FINAL  
03-04-06d\_FM100\_MOD\_Site\_Restoration\_Alignments\_(16-20)\_09-08-2020\_FINAL  
03-04-06f\_FM100\_MOD\_Site\_Restoration\_Alignments\_(26-31)\_09-08-2020\_FINAL  
03-04-06g\_FM100\_MOD\_Site\_Restoration\_Access\_Roads\_(1-5)\_09-08-2020\_FINAL  
03-04-06h\_FM100\_MOD\_Site\_Restoration\_Access\_Roads\_(6-10)\_09-08-2020\_FINAL  
03-04-06i\_FM100\_MOD\_Site\_Restoration\_Access\_Roads\_(11-15)\_09-08-2020\_FINAL  
03-04-06j\_FM100\_MOD\_Site\_Restoration\_Access\_Roads\_(16-20)\_09-08-2020\_FINAL  
03-04-06k\_FM100\_MOD\_Site\_Restoration\_Access\_Roads\_(21-25)\_09-09-2020\_FINAL  
03-04-06l\_FM100\_MOD\_Site\_Restoration\_Staging\_Areas\_(1-3)\_09-08-2020\_FINAL  
03-04-07\_FM100\_MOD\_Site\_Restoration\_Details\_09-08-2020\_FINAL

## 03-04B-00\_Site Restoration Plans (Abandonment)\_Rev2

03-04b-01\_FM100\_ABAN\_Site\_Restoration\_Cover\_Sheet\_12-18-2020\_Rev2  
03-04b-02\_FM100\_ABAN\_Site\_Restoration\_Notes\_09-02-2020\_FINAL\*  
03-04b-03\_FM100\_ABAN\_Site\_Restoration\_Soils\_09-02-2020\_FINAL\*

03-04b-04\_FM100\_ABAN\_Site\_Restoration\_Index\_09-11-2020\_FINAL\*

03-04b-05\_FM100\_ABAN\_Site\_Restoration\_Topo\_Index\_09-03-2020\_FINAL\*

03-04b-06a\_FM100\_ABAN\_Site\_Restoration\_Alignments\_(1-5)\_09-08-2020\_FINAL\*

03-04b-06b\_FM100\_ABAN\_Site\_Restoration\_Alignments\_(6-10)\_12-18-2020\_Rev2

03-04b-06c\_FM100\_ABAN\_Site\_Restoration\_Alignments\_(11-15)\_12-17-2020\_Rev2

03-04b-06d\_FM100\_ABAN\_Site\_Restoration\_Alignments\_(16-20)\_09-08-2020\_FINAL\*

03-04b-06e\_FM100\_ABAN\_Site\_Restoration\_Access\_Road\_(1)\_09-08-2020\_FINAL\*

03-04b-07\_FM100\_ABAN\_Site\_Restoration\_Details\_09-08-2020\_FINAL\*



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF WATER PROGRAMS  
OFFICE OF OIL AND GAS MANAGEMENT

## OFFICIAL USE ONLY

ID # \_\_\_\_\_  
Date Received \_\_\_\_\_  
AUTH \_\_\_\_\_  
SITE \_\_\_\_\_  
CLNT \_\_\_\_\_  
APS \_\_\_\_\_  
Fee \_\_\_\_\_  
Check No. \_\_\_\_\_  
Check Date \_\_\_\_\_

**NOTICE OF INTENT (NOI) FOR COVERAGE UNDER THE EROSION AND SEDIMENT CONTROL  
GENERAL PERMIT (ESCGP-3) FOR EARTH DISTURBANCE ASSOCIATED WITH OIL AND GAS  
EXPLORATION, PRODUCTION, PROCESSING, OR TREATMENT OPERATIONS OR  
TRANSMISSION FACILITIES**

READ THE INSTRUCTIONS PROVIDED IN THIS PERMIT APPLICATION PACKAGE BEFORE COMPLETING THIS FORM. PLEASE PRINT OR TYPE INFORMATION IN BLACK OR BLUE INK.

## SECTION A. APPLICATION TYPE

Check one:

NEW  RENEWAL  MAJOR MODIFICATIONS (Provide ESCGP number) PHASED  (check only if applicable; *note: Most projects are not submitted as phased projects*)Check one: EXPEDITED  STANDARD 

If an Expedited Review Process being requested, be advised that the Expedited Review is not available for all projects. Refer to Section D - Expedited Review Process of the ESCGP-3 NOI Instructions to determine if the project is eligible.

## SECTION B. CLIENT INFORMATION

Applicant's Last Name (If applicable) Kittka	First Name Jeffery	MI	Telephone No. (814) 871-8625
Organization Name or Registered Fictitious Name National Fuel Gas Supply Corporation			Telephone No.
DEP Client ID No. 74892			
Headquarters Mailing Address 6363 Main Street	City Williamsville	State NY	ZIP Code 14221
Email Address kittkaj@natfuel.com			
Co-Applicant's Last Name (If applicable)	First Name	MI	Telephone No.
Organization Name or Registered Fictitious Name			Telephone No.
Address	City	State	ZIP Code
Email Address			

**SECTION C. SITE INFORMATION**

Is there an existing ESCGP associated with this site?  Yes  No If yes, Permit No. \_\_\_\_\_

Has a well permit application been submitted for this site?  Yes  No If yes, Permit No. \_\_\_\_\_

Does this site have a 911 address?  Yes  No If yes, provide site location address. 128 Kin Foks Lane  
Mount Jewett, PA 16740

Site Name  
 FM100 Modernization Project / Abandonment Project

Site Location See Section 1-4 of this ESCGP-3 Application	Site No. (if another permit has been issued for the site)
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Site Location – City See Section 1-4 of this ESCGP-3 Application	State	ZIP Code
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**Detailed Written Directions to Site**

Line KL/Line YM58 Begin (Sergeant Twp, McKean County): Take Grand Army of the Republic - Route 6 to Clermont Rd. Head south on Clermont Rd for ~3 miles to Kin Foks Ln.

Line YM224 Begin (Hebron Twp, Potter County): Take State Route 44 N to South Branch Rd. Follow South Branch Rd ~2 miles to Carmer Ln.

Existing Line FM100 Abandonment Begin (Huston Twp, Clearfield County): Access driveway via Bennetts Valley Hwy 255 (~1 mile NE of crossing with State Park Rd 153.

Tamarack Compressor Station (Leidy Twp, Clinton County): Take Tamarack Rd 144 to Stewart Hill Rd. Follow Stewart Hill Rd ~1.5 miles NE to access driveway.

Primary Location	County See Attachment 1	Municipality See Attachment 1	City <input type="checkbox"/>	Boro <input checked="" type="checkbox"/>	Twp. <input checked="" type="checkbox"/>
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**SECTION D. EXPEDITED REVIEW**

**I. Expedited Review Eligibility**

1. Is any part of the project in the watershed of a surface water with an existing or designated use of exceptional value or high quality pursuant to Chapter 93 (relating to water quality standards), in an exceptional value wetland in accordance with 25 Pa. Code § 105.17, or in the watershed of an impaired surface water where the cause of the impairment is identified as siltation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Will the project in which the well pad will be constructed be in or on a floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Is any earth disturbance located or proposed to be located on land known to be contaminated by the release of regulated substances as defined in Section 103 of Act 2, 35 P.S. § 6026.103?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4. Will naturally occurring geologic formations or soil conditions provide hazards to the project or surrounding environment or have the potential to cause or contribute to pollution when disturbed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Do any unresolved non-compliance issues exist with the applicant or the facility?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6. Is the project a transmission project?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

**If yes to any of the above questions the project is not eligible for Expedited Review; If the project is eligible for Expedited Review, all the following items must be completed.**

**II. Expedited Review Process**

1. Is the technically and administratively complete and accurate NOI package prepared and certified by a licensed professional?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Are E&S and PCSM/Site Restoration Plan drawings and narrative prepared and sealed by a licensed professional? <i>(Include interim restoration details when needed)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. Include a Resource Delineation Report and answer the following questions: (If the answer to question a. is "Yes" then skip to #4. If the answer to a. is "No" the applicant must answer "Yes" to at least one of the questions, b. through d. to be eligible for expedited review.)	
a. Were all wetland resources delineated during the growing season?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. If not during the growing season, was a follow-up visit conducted during the growing season to verify/adjust boundaries and look for potentially missed resources?	<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Was a quality assurance field review conducted at a later date by an independent qualified wetland professional to verify boundaries and look for potentially missed resources? (If yes, attach Quality Assurance Field Review Report)	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. Was a Jurisdictional Determination (JD) or Preliminary JD conducted by the US Army Corps of Engineers on the whole project? (If yes, attach Preliminary or Jurisdictional Determination Report)	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. If applicable, have you included PNDI clearance letters or other documentation from applicable resource agencies?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5. If the project site contains, is along, or within 100 feet of a river, stream, creek, lake, pond or reservoir, will you establish new or preserve existing riparian forest buffer at least 100 feet in width between the top of streambank or normal pool elevation of a lake, pond or reservoir and areas of earth disturbances. If no, will a waiver be obtained? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
6. Name of Licensed Professional	
Company	
Address	
Phone	

**SECTION E. PROJECT INFORMATION**

1. Total Project Area/Project Site (Ac):	538.1	Total Disturbed Area (Ac):	538.1
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Increased disturbed acreage (for permit modification only)

Fee: (For additional information regarding fees, refer to NOI Instructions #3 Permit NOI Filing Fees.) \$ See Section 1-3 of this ESCGP-3 Application

2. Project Name: FM100 Modernization Project / Abandonment Project

3. Project Type (Check all that apply)
- |  |   |
|--|---|
| <input type="checkbox"/> Oil/Gas Well <sup>1</sup>     | <input checked="" type="checkbox"/> Transmission Facility         |
| <input type="checkbox"/> Gathering Facility            | <input type="checkbox"/> Processing Facility                      |
| <input type="checkbox"/> Treatment Facility            | <input type="checkbox"/> Well Development Impoundment             |
| <input checked="" type="checkbox"/> Compressor Station | <input type="checkbox"/> Non-FERC regulated Transmission Facility |
| <input checked="" type="checkbox"/> Pipeline           | <input type="checkbox"/> Ground/Surface Water Withdrawal Site     |
| <input type="checkbox"/> Storage Field Facility        |   |
| <input type="checkbox"/> Other                         |   |

<sup>1</sup> If Oil/Gas Well; is the well conventional or unconventional?  Conventional  Unconventional

Project Description  
 See Section 2-1 of this ESCGP-3 Application

Provide the date of pre-application meeting (if conducted with the Department)

4. Provide the latitude and longitude coordinates for the center of the project. The coordinates should be in Decimal degrees and North American Datum 1983. The coordinates must meet the current DEP policy regarding locational accuracy. For linear projects provide the project's termini.

Line KL Begin / End: 41.703, -78.500 / 41.705, -78.494  
 Line YM58 Begin / End: 41.702, -78.499 / 41.857, -78.017  
 Line YM 224 Begin / End: 41.878, -77.975 / 41.886, -77.950  
 Existing Line FM100 Abandonment Begin / End: 41.220, -78.559 / 41.590, -78.058  
 Tamarack Compressor Station: 41.436, -77.836

Horizontal Collection Method:  GPS  Interpolated from U.S.G.S. Topographic Map  DEP's eMAP

5. U.S.G.S. 7.5 min. topographic quadrangle Name See Section 1-4 of this ESCGP-3 Application  
 (Include a copy of the project area on the 7.5 min quad map)

6. Will the project be conducted as a phased permit project?  Yes  No  
 If Yes, Include Master Site Plan Estimated Timetable for Phased Projects.  Additional sheet(s) attached.

Phase No. or Name	Description	Total Area	Disturbed Area	Start Date	End Date

7. List existing and previous land use for a minimum of the previous 5 years. See Section 2-1 of this ESCGP-3 Application
8. Other Pollutants: Will the stormwater discharge contain polluttional substances other than sediment? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, explain and provide any available quantitative data.
9. Will fuels, chemicals, solvents, other hazardous waste or materials be used or stored on site during earth disturbance activities or will Horizontal Directional Drilling (HDD) activities be conducted? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <b>(If yes, Preparedness, Prevention and Contingency (PPC) Plan must be maintained on site during earth disturbance. See NOI Instructions, E.9 PPC Plan Guidance for further information.)</b>
10. Is the project in the watershed of an impaired surface water where the cause of the impairment is identified as siltation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <b>(If yes, show how the project will not result in a net change in volume, rate or water quality. See section I below, and E.10 of NOI instructions.)</b>
11. Are there potentially hazardous naturally occurring geological or soil conditions in any portion of the project or surrounding area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, do the potentially hazardous geologic or soil conditions have the potential to cause or contribute to pollution as a result of the proposed earth disturbance activities? No. If no, provide an explanation. See Section 2.5.5 of the ESCGP-3 Narrative (Section 2-1 of this Application) If yes, Geologic Hazard Mitigation Plan must be attached and explain where in this application details are provided.
12. Has the Act 14 Municipal Notification and proof of receipt of notification been attached to the NOI? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <b>(If not, the NOI is not complete, see E.12 and #4 Municipal Notification in the NOI Instructions for additional guidance.)</b>
13. Has the PNDI receipt been attached to the NOI? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <b>(If not, the NOI is not complete, see E.13 and #5 PNHP in the NOI Instructions for additional guidance.)</b>
14. Have the E&S Plan and PCSM/SR Plan been planned and designed to be consistent? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
15. Have existing and/or proposed Riparian Forest Buffers been identified? Yes <input checked="" type="checkbox"/> N/A <input type="checkbox"/> <b>(If yes, they must be shown on the E&amp;S Plan as well as the PCSM/SR Plans.)</b>
16. Have antidegradation implementation requirements for special protection waters been addressed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> <b>(If yes, antidegradation requirements must be included in the plan.)</b>
17. Has the seasonal high groundwater level been identified and 20-inch separation established at all excavation locations for pits for conventional operations and Well Development Impoundments for unconventional operations? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

<p><b>18. Receiving Waters</b></p> <p>Watersheds crossed (See ESCGP-3 Section 2-2A and 2-2B for locations in plan view):</p> <p>Allegheny Portage Creek (TSF), Allegheny River (CWF), Baker Hollow (CWF), Bear Creek (CWF), Bemis Hollow (HQ), Bennett Branch Sinnemahoning Creek (CWF), Bennett Branch Sinnemahoning Creek (WWF), Benson Hollow (CWF), Berge Run (EV), Boyer Brook (HQ), Browns Mill Hollow (CWF), Coalbed Hollow (HQ), Coleman Hollow (CWF), Combs Creek (CWF), Deloy Hollow (EV), Donley Fork (HQ), Driftwood Branch Sinnemahoning Cr. (EV), Drury Run (EV), Dry Hollow (CWF), East Branch Fishing Creek (HQ), Ernst Hollow (CWF), First Fork Sinnemahoning Creek (EV), Fishing Creek (CWF), Fishing Creek (CWF), Fisk Hollow (CWF), Gifford Hollow (CWF), Green Hollow (CWF), Grove Run (HQ-CWF), Irons Hollow (CWF), Johnson Run (EV), Jordan Hollow (CWF), Lamb Hollow (CWF), Larson Hollow (CWF), Laurel Run (HQ-CWF), Lick Island Run (EV), Little Bailey Run (HQ), Medix Run (HQ-CWF), Mix Run (HQ-CWF), Oswayo Creek (CWF), Potato Creek (TSF), Red Mill Brook (CWF), Right Fork Big Run (EV), Right Fork Brooks Run (EV), Robbins Brook (HQ), Sartwell Creek (CWF), Saunders Run (HQ-CWF), Skinner Creek (HQ), South Branch Oswayo Creek (EV), Sullivan Run (HQ), Walcott Brook (CWF), Warner Brook (HQ), Wernwag Hollow (HQ), White Hollow (CWF), Whitney Creek (EV), Wiemer Hollow (CWF), Young Hollow (EV)</p> <p>See ESCGP-3 Section 2-1 for full list of receiving waters crossed by the Project</p>	<p><b>Chapter 93, Designated Use Stream Classification</b></p> <p><input checked="" type="checkbox"/> HQ <input checked="" type="checkbox"/> EV <input checked="" type="checkbox"/> Other <u>TSF, CWF</u></p> <p><input type="checkbox"/> Siltation-impaired</p> <p><input type="checkbox"/> HQ <input type="checkbox"/> EV <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Siltation-impaired</p> <p><input type="checkbox"/> HQ <input type="checkbox"/> EV <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Siltation-impaired</p> <p><input type="checkbox"/> HQ <input type="checkbox"/> EV <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Siltation-impaired</p> <p><input type="checkbox"/> HQ <input type="checkbox"/> EV <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Siltation-impaired</p>	<p><b>Chapter 93, Existing Use Stream Classification</b></p> <p><input type="checkbox"/> HQ <input checked="" type="checkbox"/> EV <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Siltation-impaired</p> <p><input type="checkbox"/> HQ <input type="checkbox"/> EV <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Siltation-impaired</p> <p><input type="checkbox"/> HQ <input type="checkbox"/> EV <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Siltation-impaired</p> <p><input type="checkbox"/> HQ <input type="checkbox"/> EV <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Siltation-impaired</p>
<p><b>Secondary Receiving Water</b></p>	<p><b>Secondary Chapter 93, Designated Use</b></p>	<p><b>Secondary Existing Use</b></p>
<p>Name of Municipal or Private Separate Storm Sewer Operator, if applicable.</p> <p>N/A</p>		
<p>Non-Surface Receiving Water: (include off-site discharges)</p> <p>N/A</p>		

**SECTION F. EROSION AND SEDIMENT CONTROL (E&S) PLAN**  
**See the attached Instructions for additional guidance with E&S Plans**

Erosion and Sediment Control Plan BMPs should be designed to minimize accelerated erosion and sedimentation through limiting the extent and duration of earth disturbance, protection of existing drainage and vegetation, limiting soil compaction and controlling the generation of increased runoff. The Department recommends the use of the *Pennsylvania Erosion & Sedimentation Pollution Control Program Manual (E&S Manual)* (363-2134-008) to achieve this goal. The E&S Plan must meet the requirements of Pa. Code § 102.4(b) and submitted with the NOI. Also, see section 2. of the NOI instruction for detailed information on completing the E&S plan and additional requirements.

**a. E&S Plan Summary**

Provide a summary of proposed E&S BMPs and their performance to manage E&S for the project.

Typical pipeline BMPs that are proposed include waterbars, trench plugs, sediment barriers (compost filter socks), rock filter outlets, erosion control blanket, rock construction entrances, temporary equipment bridges, timber mats, mulch, and seed. An appropriate sediment removal device (filter bag, dewatering structure) and well-vegetated area will be utilized for trench and hydrostatic test dewatering. Antidegradation Best Available Combination of Technologies (ABACT) BMPs, including compost filter socks and extended rock construction entrances with daily maintenance, will be utilized in HQ/EV watersheds. Additional information about the proposed BMPs are discussed in the Erosion and Sediment Control Plan.

**b. E&S Plan BMP Design**

Check those that apply:

- E&S Plan is designed using BMPs in the *E&S Manual*.
- E&S Plan is designed using an alternative BMP or design standard approved by DEP.

*Note: NOI packages submitted with alternate BMPs not approved by the Department will be returned to the Applicant.*

c. Do you have any information regarding riparian buffer which differs from Section G, Riparian Buffer?

Yes  No

Explain:

**d. Thermal Impacts Analysis**

Explain how thermal impacts associated with this project were avoided, minimized, or mitigated.

Pipeline

Clearing and grading associated with the pipeline construction may result in temporary loss of tree canopy and riparian vegetation along surface waters and wetlands, potentially resulting in thermal impacts from the loss of shading. However, the thermal impacts will be minimized by limiting the construction ROW to 75 feet, where possible, at wetlands and limiting the maintained permanent ROW to 10 feet at wetlands.

In streams and wetlands, trees and brush will be cut just above or to ground level, leaving the stumps and root systems intact. Tree stumps will be preserved to the maximum extent practicable and will be removed only over the trenchline and where the stumps present a safety hazard for construction. Leaving stumps and root systems in this manner will promote re-growth in some species.

Facilities

Clearing and grading associated with the site development for aboveground facilities was limited to the least amount of space required for safe construction. Runoff from the site will flow over long stretches of vegetated areas before reaching receiving streams, which will provide for additional cooling and infiltration. Additionally, shade areas will be preserved to the greatest extent possible.

**e. Off-Site Discharge Analysis**

Does the activity propose any off-site discharges to areas other than surface waters?  Yes  No

If yes, it is the applicant's responsibility to ensure that they have legal authority for any off-site discharge to neighboring properties.

The applicant must provide a demonstration in both E&S and PCSM/SR plans that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

Please refer to Appendix D of the Tamarack CS E&S Plan for the off-site discharge analysis (ESGP-3 Application Section 2-3).

**SECTION G. RIPARIAN BUFFER**

1. Will you be protecting, converting or establishing a voluntary riparian forest buffer as part of this project?  Yes  No  
If yes, as part of the PCSM/SR Plan, provide a Buffer Management Plan.

2. Will proposed earth disturbance activities be conducted in an EV or HQ watershed AND within 150 feet of a perennial or intermittent river, stream, or creek, or lake, pond, or reservoir?  Yes  No

If no, proceed to the next section/module.

3. Does this project qualify for an exception (see § 102.14(d)(1))?  Yes  No

If yes, indicate below the type of project for which the exception applies by marking the appropriate box.

Oil and gas activities for which site reclamation or restoration is part of the permit authorization in Chapter 78 and 78a.

Road maintenance activities.

The repair or maintenance of existing pipelines and utilities.

Other (see §102.14(d)(1))

If exceptions are checked, explain how existing riparian buffer will be undisturbed to the extent practicable. Provide a demonstration that the requirements of §102.14(b) are met, or provide the necessary information to request a riparian buffer waiver.

4. Are you requesting a riparian buffer waiver for this project (see § 102.14(d)(2))?  Yes  No

If yes, indicate below the type of project for which you are requesting a waiver by marking the appropriate box.

Linear project that may include pipelines, public roadways, rail lines, or utility lines.

Project is of a temporary nature where the site will be fully restored to its preexisting conditions during the ESCGP permit term.

Project where compliance with mandatory riparian buffers is not appropriate or feasible due to site characteristics or existing structures at the project site.

Other (see §102.14(d)(2)):

If waivers are checked, explain how existing riparian buffers will be undisturbed to the extent practicable.

Note: If "Yes" to #2 **AND** "No" to #3 and #4, provide an attachment to demonstrate how the requirements of §102.14 are met.

Please refer to Section 2-1 of this ESCGP-3 Application for Riparian Buffer Waiver Request

**SECTION H. POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) AND/OR SITE RESTORATION(SR) PLAN**

**See NOI Instructions for additional guidance with PCSM Plans**

PCSM/SR BMPs should be designed to use natural measures to eliminate pollution, infiltrate runoff, not require extensive construction/maintenance, promote pollutant reduction, and preserve the integrity of stream channels. All PCSM/SR BMPs proposed in the PCSM/SR Plan must be designed in accordance with Ch. 102, Ch. 78a for unconventional operations, Ch. 78 for conventional operations and the *Pennsylvania Stormwater Best Management Practices Manual (Stormwater BMP Manual)* (363-0300-002). If alternate design criteria are utilized for the proposed project, they must have prior approval by the Department, or the NOI Application will be returned to the Applicant.

After construction is completed, how much of the entire disturbed area will be restored to meadow in good condition or better, or existing conditions?  All  Partial  None

Include PCSM narrative and drawings for remaining impervious area. Also include a map showing the proposed contours of the site restoration plan.

If there are additional stages of the project prior to permit termination or expiration, list the stages and provide the documents required by subsection 'a' to section 'g' for each stage (e.g. partial restoration or changes to the amount of compacted areas, gravel, and/or impervious areas). Upload a narrative for each additional stage in addition to the drawings.

**EXAMPLE**

Stage No	Stage Name	PCSM Plan	SR Plan
Stage 1		<input type="checkbox"/>	<input type="checkbox"/>
Stage 2		<input type="checkbox"/>	<input type="checkbox"/>
Stage 3		<input type="checkbox"/>	<input type="checkbox"/>
Stage 4		<input type="checkbox"/>	<input type="checkbox"/>

**Act 167 Consistency.** Check those that apply.

Is there an Act 167 Plan?  Yes  No

The attached PCSM/SR Plan is consistent with an applicable approved Act 167 Plan.

Complete the following for all approved Act 167 Stormwater Management Plans. (Use additional sheets if necessary)

Act 167 Plan Name	Date Adopted	Consistency Letter Included	Verification Report Included
<u>McKean County Act 167 Stormwater Management Plan</u>	<u>June 2010</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Potter County Act 167 Stormwater Management Plan</u>	<u>May 2010</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

*Note: A consistency letter is not required if a verification report is provided. See NOI Instructions. The PCSM/SR Plan must satisfy either sub paragraph 1, 2, or 3 below. Check those that apply.*

- Act 167 Plan approvals on or after January 2005 – The attached PCSM/SR Plan, in its entirety, is consistent with all requirements pertaining to rate, volume, and water quality from an Act 167 Stormwater Management Plan approved by DEP on or after January 2005. Box 1 must be checked if a current, DEP approved Act 167 plan exists.
- The PCSM/SR Plan meets the standard design criteria from sections 102.8(g)(2) and (3) and the *Stormwater BMP Manual*. For projects involving oil and gas activities authorized by a permit issued under Chapter 78 or Chapter 78a (well pads) or pipelines and other similar utility infrastructure, post construction stormwater management requirements are met for all areas that are restored to preconstruction conditions or to a condition of meadow in good condition or better. [Note: PCSM plans must meet both the volume and rate requirements in the regulations, which are provided in the 2 sections mentioned in this paragraph].
- Alternative Design Standard – The attached PCSM/SR Plan was developed using approaches as provided in 102.8(g)(2)(iv) and 102.8(g)(3)(iii). Demonstrate/explain in the space provided below how this standard will be either more protective than what is required in 102.8(g)(2) and 102.8(g)(3) or will maintain and protect existing water quality and existing and designated uses.

**PCSM/SR BMP Alternative Standards:**

Has the alternative BMP or design standard been approved by the Department? NOT APPLICABLE

Yes

No – Do not submit the ESCGP-3 application and see Section (H) of the NOI Instructions concerning the alternative BMP approval process.

**Water Quality Compliance:**

Does the PCSM/SR plan comply with requirements for volume control?  Yes  No

If yes, is at least 90% of the disturbed area controlled by a PCSM BMP?  Yes  No

If yes, do you have the Standard PCSM Worksheet # 10 attached to show water quality compliance has achieved?

Yes  No

If no, attach Standard PCSM Worksheets # 12 and #13 to show water quality compliance has achieved.

If PCSM/SR plan is not complying with the requirements for volume control, attach Standard PCSM Worksheets # 11, # 12 and #13 to show water quality compliance has achieved.

**a. PCSM/SR Plan Summary**

Provide a summary of proposed BMPs and their performance to manage PCSM/SR for the project.

Along the mainline pipeline, typical E&S BMPs such as permanent waterbars and erosion control blanket will be left in place as part of site restoration for the project. At the aboveground facility sites, typical PCSM BMPs such as infiltration trenches, infiltration berms, infiltration basins, and retentive berms will be used and left in place as part of site restoration for facility sites. refer to the PCSM/SR Plans for additional information.

Check all that apply  PCSM BMPs  SR BMPs

**b. Do you have any information regarding riparian buffer which differs from what was submitted in the Section G, Riparian Buffer?**

Yes  No

Explain:

**c. Thermal Impacts Analysis**

Explain how thermal impacts associated with this project were avoided, minimized, or mitigated.

Aboveground Facilities

Infiltration of runoff collected in the PCSM facilities will mitigate thermal impacts from post construction stormwater. Further, it is not expected that runoff collected in stormwater infiltration basins and discharged overland to the receiving water will be retained for more than 24 hours, thus providing additional mitigation of potential thermal impacts of discharge from the PCSM facilities. Existing shade trees will be preserved to the greatest extent possible, and excessive riprapping and installation of concrete channels is avoided, which will minimize the transfer of heat to the runoff.

Pipeline

Once pipeline construction activities are complete, disturbed areas will be restored to pre-construction contours and seeded as described in the E&SCP. Temporary workspace disturbed for construction will be allowed to re-establish with woody and herbaceous vegetation species.

**d. Off-Site Discharge Analysis.**

Does the activity propose any off-site discharges to areas other than surface waters?  Yes  No

If yes, it is the applicant's responsibility to ensure that they have legal authority for any off-site discharge to neighboring properties.

The Applicant must provide a demonstration in both the E&S and PCSM/SR Plans that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

For Tamarack CS: Refer to Appendix D of the Tamarack CS E&S Plan for the off-site discharge analysis (ESCGP-3 Application Section 2-3).

For Carpenter Hollow OPP, KL Valve Set, MLV-1, MLV-2, MLV-3, and MLV-4: Refer to Section 5 of each PCSM Report (ESCGP-3 Section 3-1) for off-site discharge analysis; Refer to each PCSM drawing package (ESCGP-3 Section 3-2) for the Off-site Stormwater Discharge Plan.

## Carpenter Hollow OPP

**e. Summary Table for Supporting Calculation and Measurement Data**  
(See NOI Instructions for additional guidance with this section)

The remainder of this section (Summary Table for Calculation and Measurement Data) does not need to be completed for areas of projects involving oil and gas activities authorized by Chapter 78 or Chapter 78a (well pads) or pipelines and other similar utility infrastructure which will be restored to meadow in good condition or better or existing conditions.

**Watershed Name:** South Branch Oswayo Creek

Volume Control design storm frequency <u>2-year</u> Rainfall amount <u>2.41</u> inches	Pre-construction	Post Construction	Net Change
Impervious area (acres)	0.000	0.356	+0.356
Volume of stormwater runoff (acre-feet) without planned stormwater BMPs	0.056	0.080	+0.024
Volume of stormwater runoff (acre-feet) with planned stormwater BMPs		0.000	-0.056
Stormwater discharge rate for the design frequency storm	Pre-construction	Post Construction	Net Change
1) 2-Year/24-Hour	0.697 cfs	0.000 cfs	-0.697 cfs
2) 10-Year/24-Hour	1.472 cfs	0.036 cfs	-1.436 cfs
3) 50-year/24-Hour	2.651 cfs	0.742 cfs	-1.909 cfs
4) 100-year/24-Hour	3.339 cfs	2.065 cfs	-1.274 cfs

**f. Summary Description of PCSM/SR BMPs**

In the lists below, check the BMPs identified in the PCSM Plan. The primary function(s) of the BMP listed in the functions column (infiltration/recharge; detention/retention; water quality). Additional functions may be added if applicable to that BMP. List the stormwater volume and area of runoff to be treated by each BMP type when calculations are required. If any BMP in the PCSM/SR Plan is not listed below, describe it in the space provided after "Other". A summary table with infiltration testing information (Attachment E, included in the NOI Instructions) must be submitted for all Bio-infiltration BMPs included in PCSM/SR plan.

For Rate control provide the volume of stormwater treated and acres treated for the 100-year/24-hour storm event.

For volume control and water quality provide the volume of stormwater treated and acres treated for the 2-year/24-hour storm event.

Key for BMP purpose(s): VC = Volume Control; RC = Rate Control; and WQ = Water Quality

BMP	Function(s)	Purpose(s)	Volume of stormwater treated	Acres treated
<b>Site Restoration ONLY</b> <input type="checkbox"/> Restore Site to Meadow in Good Condition or Better, or Existing Conditions	Infiltration/Recharge Detention/WQ Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____	_____
<b>Bio-infiltration areas</b> <input checked="" type="checkbox"/> Infiltration Trench <input type="checkbox"/> Infiltration Bed <input type="checkbox"/> Infiltration Basin <input type="checkbox"/> Rain Garden/ Bioretention <input type="checkbox"/> Infiltration Berm	Infiltration/Recharge	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	VC/WC: 3,778; RC: 6,581	1.109

<b>Natural Area Conservation</b> <input type="checkbox"/> Streamside Buffer Zone <input type="checkbox"/> Wetland Buffer Zone <input type="checkbox"/> Sensitive Area Buffer Zone <input type="checkbox"/> Pre-Construction Drainage Pattern Intact	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____
<b>Stormwater Retention</b> <input type="checkbox"/> Constructed Wetlands <input type="checkbox"/> Wet Ponds <input type="checkbox"/> Retention Basin	Detention/Retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Sediment and Pollutant Removal</b> <input type="checkbox"/> Vegetated Filter Strips <input type="checkbox"/> Compost Filter Sock <input type="checkbox"/> Detention Basins	Water Quality Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Access Road Design</b> <input type="checkbox"/> Road Crowning <input type="checkbox"/> Ditches <input type="checkbox"/> Turnouts <input type="checkbox"/> Culverts <input type="checkbox"/> Roadside Vegetated Filter Strips	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
<b>Stormwater Energy Dissipaters</b> <input type="checkbox"/> Level Spreaders <input type="checkbox"/> Riprap Aprons <input type="checkbox"/> Upslope Diversions <input type="checkbox"/> Other _____	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____

**g. Critical PCSM Plan stages**

Identify and list critical stages of implementation of the PCSM Plan for which a licensed professional or designee shall be present on site.

1. Engineer shall inspect the subsurface infiltration facilities prior to backfilling.
2. Engineer shall inspect final stabilization prior to removal of temporary measures.

## KL Valve Set

**e. Summary Table for Supporting Calculation and Measurement Data**  
 (See NOI Instructions for additional guidance with this section)

The remainder of this section (Summary Table for Calculation and Measurement Data) does not need to be completed for areas of projects involving oil and gas activities authorized by Chapter 78 or Chapter 78a (well pads) or pipelines and other similar utility infrastructure which will be restored to meadow in good condition or better or existing conditions.

**Watershed Name:** Warner Brook

Volume Control design storm frequency <u>2-year</u> Rainfall amount <u>2.50</u> inches	Pre-construction	Post Construction	Net Change
Impervious area (acres)	0.000	0.107	+0.107
Volume of stormwater runoff (acre-feet) without planned stormwater BMPs	0.033	0.378	+0.345
Volume of stormwater runoff (acre-feet) with planned stormwater BMPs		0.000	-0.033
Stormwater discharge rate for the design frequency storm	Pre-construction	Post Construction	Net Change
1) 2-Year/24-Hour	0.559 cfs	0.000 cfs	-0.559 cfs
2) 10-Year/24-Hour	1.057 cfs	0.026 cfs	-1.031 cfs
3) 50-year/24-Hour	1.699 cfs	0.441 cfs	-1.258 cfs
4) 100-year/24-Hour	2.020 cfs	1.485 cfs	-0.535 cfs

**f. Summary Description of PCSM/SR BMPs**

In the lists below, check the BMPs identified in the PCSM Plan. The primary function(s) of the BMP listed in the functions column (infiltration/recharge; detention/retention; water quality). Additional functions may be added if applicable to that BMP. List the stormwater volume and area of runoff to be treated by each BMP type when calculations are required. If any BMP in the PCSM/SR Plan is not listed below, describe it in the space provided after "Other". A summary table with infiltration testing information (Attachment E, included in the NOI Instructions) must be submitted for all Bio-infiltration BMPs included in PCSM/SR plan.

For Rate control provide the volume of stormwater treated and acres treated for the 100-year/24-hour storm event.

For volume control and water quality provide the volume of stormwater treated and acres treated for the 2-year/24-hour storm event.

Key for BMP purpose(s): VC = Volume Control; RC = Rate Control; and WQ = Water Quality

BMP	Function(s)	Purpose(s)	Volume of stormwater treated	Acres treated
<b>Site Restoration ONLY</b> <input type="checkbox"/> Restore Site to Meadow in Good Condition or Better, or Existing Conditions	Infiltration/Recharge Detention/WQ Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____	_____
<b>Bio-infiltration areas</b> <input checked="" type="checkbox"/> Infiltration Trench <input type="checkbox"/> Infiltration Bed <input type="checkbox"/> Infiltration Basin <input type="checkbox"/> Rain Garden/ Bioretention <input type="checkbox"/> Infiltration Berm	Infiltration/Recharge	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	VC/WQ: 1,585; RC: <u>2,406</u>	<u>0.431</u> _____ _____ _____

<b>Natural Area Conservation</b> <input type="checkbox"/> Streamside Buffer Zone <input type="checkbox"/> Wetland Buffer Zone <input type="checkbox"/> Sensitive Area Buffer Zone <input type="checkbox"/> Pre-Construction Drainage Pattern Intact	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____
<b>Stormwater Retention</b> <input type="checkbox"/> Constructed Wetlands <input type="checkbox"/> Wet Ponds <input type="checkbox"/> Retention Basin	Detention/Retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Sediment and Pollutant Removal</b> <input type="checkbox"/> Vegetated Filter Strips <input type="checkbox"/> Compost Filter Sock <input type="checkbox"/> Detention Basins	Water Quality Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Access Road Design</b> <input type="checkbox"/> Road Crowning <input type="checkbox"/> Ditches <input type="checkbox"/> Turnouts <input type="checkbox"/> Culverts <input type="checkbox"/> Roadside Vegetated Filter Strips	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
<b>Stormwater Energy Dissipaters</b> <input type="checkbox"/> Level Spreaders <input type="checkbox"/> Riprap Aprons <input type="checkbox"/> Upslope Diversions <input type="checkbox"/> Other _____	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____

**g. Critical PCSM Plan stages**

Identify and list critical stages of implementation of the PCSM Plan for which a licensed professional or designee shall be present on site.

1. Engineer shall inspect the subsurface infiltration facilities prior to backfilling.
2. Engineer shall inspect final stabilization prior to removal of temporary measures.

**e. Summary Table for Supporting Calculation and Measurement Data**  
 (See NOI Instructions for additional guidance with this section)

The remainder of this section (Summary Table for Calculation and Measurement Data) does not need to be completed for areas of projects involving oil and gas activities authorized by Chapter 78 or Chapter 78a (well pads) or pipelines and other similar utility infrastructure which will be restored to meadow in good condition or better or existing conditions.

**Watershed Name:** White Hollow

Volume Control design storm frequency <u>2-year</u> Rainfall amount <u>2.43</u> inches	Pre-construction	Post Construction	Net Change
Impervious area (acres)	0.000	0.094	+0.094
Volume of stormwater runoff (acre-feet) without planned stormwater BMPs	0.006	0.155	+0.149
Volume of stormwater runoff (acre-feet) with planned stormwater BMPs		0.000	-0.006
Stormwater discharge rate for the design frequency storm	Pre-construction	Post Construction	Net Change
1) 2-Year/24-Hour	0.491 cfs	0.375 cfs	-0.116 cfs
2) 10-Year/24-Hour	1.472 cfs	1.124 cfs	-0.348 cfs
3) 50-year/24-Hour	2.447 cfs	1.869 cfs	-0.578 cfs
4) 100-year/24-Hour	2.951 cfs	2.378 cfs	-0.573 cfs

**f. Summary Description of PCSM/SR BMPs**

In the lists below, check the BMPs identified in the PCSM Plan. The primary function(s) of the BMP listed in the functions column (infiltration/recharge; detention/retention; water quality). Additional functions may be added if applicable to that BMP. List the stormwater volume and area of runoff to be treated by each BMP type when calculations are required. If any BMP in the PCSM/SR Plan is not listed below, describe it in the space provided after "Other". A summary table with infiltration testing information (Attachment E, included in the NOI Instructions) must be submitted for all Bio-infiltration BMPs included in PCSM/SR plan.

For Rate control provide the volume of stormwater treated and acres treated for the 100-year/24-hour storm event.

For volume control and water quality provide the volume of stormwater treated and acres treated for the 2-year/24-hour storm event.

Key for BMP purpose(s): VC = Volume Control; RC = Rate Control; and WQ = Water Quality

BMP	Function(s)	Purpose(s)	Volume of stormwater treated	Acres treated
<b>Site Restoration ONLY</b> <input type="checkbox"/> Restore Site to Meadow in Good Condition or Better, or Existing Conditions	Infiltration/Recharge Detention/WQ Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____	_____
<b>Bio-infiltration areas</b> <input checked="" type="checkbox"/> Infiltration Trench <input type="checkbox"/> Infiltration Bed <input type="checkbox"/> Infiltration Basin <input type="checkbox"/> Rain Garden/ Bioretention <input type="checkbox"/> Infiltration Berm	Infiltration/Recharge	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	VC/WQ: 873; RC: 1,278 _____ _____ _____	<u>0.155</u> _____ _____ _____

<b>Natural Area Conservation</b> <input type="checkbox"/> Streamside Buffer Zone <input type="checkbox"/> Wetland Buffer Zone <input type="checkbox"/> Sensitive Area Buffer Zone <input type="checkbox"/> Pre-Construction Drainage Pattern Intact	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____
<b>Stormwater Retention</b> <input type="checkbox"/> Constructed Wetlands <input type="checkbox"/> Wet Ponds <input type="checkbox"/> Retention Basin	Detention/Retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Sediment and Pollutant Removal</b> <input type="checkbox"/> Vegetated Filter Strips <input type="checkbox"/> Compost Filter Sock <input type="checkbox"/> Detention Basins	Water Quality Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Access Road Design</b> <input type="checkbox"/> Road Crowning <input type="checkbox"/> Ditches <input type="checkbox"/> Turnouts <input type="checkbox"/> Culverts <input type="checkbox"/> Roadside Vegetated Filter Strips	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
<b>Stormwater Energy Dissipaters</b> <input type="checkbox"/> Level Spreaders <input type="checkbox"/> Riprap Aprons <input type="checkbox"/> Upslope Diversions <input type="checkbox"/> Other _____	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____

**g. Critical PCSM Plan stages**

Identify and list critical stages of implementation of the PCSM Plan for which a licensed professional or designee shall be present on site.

1. Engineer shall inspect the subsurface infiltration facilities prior to backfilling.
2. Engineer shall inspect final stabilization prior to removal of temporary measures.

**e. Summary Table for Supporting Calculation and Measurement Data**  
 (See NOI Instructions for additional guidance with this section)

The remainder of this section (Summary Table for Calculation and Measurement Data) does not need to be completed for areas of projects involving oil and gas activities authorized by Chapter 78 or Chapter 78a (well pads) or pipelines and other similar utility infrastructure which will be restored to meadow in good condition or better or existing conditions.

**Watershed Name:** Allegheny River

Volume Control design storm frequency <u>2-year</u> Rainfall amount <u>2.43</u> inches	Pre-construction	Post Construction	Net Change
Impervious area (acres)	0.000	0.048	+0.048
Volume of stormwater runoff (acre-feet) without planned stormwater BMPs	0.000	0.007	+0.007
Volume of stormwater runoff (acre-feet) with planned stormwater BMPs		0.000	+0.000
Stormwater discharge rate for the design frequency storm	Pre-construction	Post Construction	Net Change
1) 2-Year/24-Hour	0.000 cfs	0.000 cfs	-0.000 cfs
2) 10-Year/24-Hour	0.000 cfs	0.000 cfs	-0.000 cfs
3) 50-year/24-Hour	0.000 cfs	0.000 cfs	-0.000 cfs
4) 100-year/24-Hour	0.003 cfs	0.002 cfs	-0.001 cfs

**f. Summary Description of PCSM/SR BMPs**

In the lists below, check the BMPs identified in the PCSM Plan. The primary function(s) of the BMP listed in the functions column (infiltration/recharge; detention/retention; water quality). Additional functions may be added if applicable to that BMP. List the stormwater volume and area of runoff to be treated by each BMP type when calculations are required. If any BMP in the PCSM/SR Plan is not listed below, describe it in the space provided after "Other". A summary table with infiltration testing information (Attachment E, included in the NOI Instructions) must be submitted for all Bio-infiltration BMPs included in PCSM/SR plan.

For Rate control provide the volume of stormwater treated and acres treated for the 100-year/24-hour storm event.

For volume control and water quality provide the volume of stormwater treated and acres treated for the 2-year/24-hour storm event.

Key for BMP purpose(s): VC = Volume Control; RC = Rate Control; and WQ = Water Quality

BMP	Function(s)	Purpose(s)	Volume of stormwater treated	Acres treated
<b>Site Restoration ONLY</b> <input type="checkbox"/> Restore Site to Meadow in Good Condition or Better, or Existing Conditions	Infiltration/Recharge Detention/WQ Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____	_____
<b>Bio-infiltration areas</b> <input checked="" type="checkbox"/> Infiltration Trench <input type="checkbox"/> Infiltration Bed <input type="checkbox"/> Infiltration Basin <input type="checkbox"/> Rain Garden/ Bioretention <input type="checkbox"/> Infiltration Berm	Infiltration/Recharge	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	VC/WQ: 402; RC: 1,084 _____ _____ _____	0.268 _____ _____ _____

<b>Natural Area Conservation</b> <input type="checkbox"/> Streamside Buffer Zone <input type="checkbox"/> Wetland Buffer Zone <input type="checkbox"/> Sensitive Area Buffer Zone <input type="checkbox"/> Pre-Construction Drainage Pattern Intact	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____
<b>Stormwater Retention</b> <input type="checkbox"/> Constructed Wetlands <input type="checkbox"/> Wet Ponds <input type="checkbox"/> Retention Basin	Detention/Retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Sediment and Pollutant Removal</b> <input type="checkbox"/> Vegetated Filter Strips <input type="checkbox"/> Compost Filter Sock <input type="checkbox"/> Detention Basins	Water Quality Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Access Road Design</b> <input type="checkbox"/> Road Crowning <input type="checkbox"/> Ditches <input type="checkbox"/> Turnouts <input type="checkbox"/> Culverts <input type="checkbox"/> Roadside Vegetated Filter Strips	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
<b>Stormwater Energy Dissipaters</b> <input type="checkbox"/> Level Spreaders <input type="checkbox"/> Riprap Aprons <input type="checkbox"/> Upslope Diversions <input type="checkbox"/> Other _____	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____

**g. Critical PCSM Plan stages**

Identify and list critical stages of implementation of the PCSM Plan for which a licensed professional or designee shall be present on site.

1. Engineer shall inspect the subsurface infiltration facilities prior to backfilling.
2. Engineer shall inspect final stabilization prior to removal of temporary measures.
3. Engineer shall inspect inlet installation prior to backfilling.

**e. Summary Table for Supporting Calculation and Measurement Data**  
(See NOI Instructions for additional guidance with this section)

The remainder of this section (Summary Table for Calculation and Measurement Data) does not need to be completed for areas of projects involving oil and gas activities authorized by Chapter 78 or Chapter 78a (well pads) or pipelines and other similar utility infrastructure which will be restored to meadow in good condition or better or existing conditions.

**Watershed Name:** South Branch Oswayo Creek

Volume Control design storm frequency <u>2-year</u> Rainfall amount <u>2.39</u> inches	Pre-construction	Post Construction	Net Change
Impervious area (acres)	0.000	0.071	+0.071
Volume of stormwater runoff (acre-feet) without planned stormwater BMPs	0.000	0.005	+0.005
Volume of stormwater runoff (acre-feet) with planned stormwater BMPs		0.000	+0.000
Stormwater discharge rate for the design frequency storm	Pre-construction	Post Construction	Net Change
1) 2-Year/24-Hour	0.000 cfs	0.000 cfs	+0.000 cfs
2) 10-Year/24-Hour	0.000 cfs	0.000 cfs	+0.000 cfs
3) 50-year/24-Hour	0.000 cfs	0.000 cfs	+0.000 cfs
4) 100-year/24-Hour	0.003 cfs	0.000 cfs	-0.003 cfs

**f. Summary Description of PCSM/SR BMPs**

In the lists below, check the BMPs identified in the PCSM Plan. The primary function(s) of the BMP listed in the functions column (infiltration/recharge; detention/retention; water quality). Additional functions may be added if applicable to that BMP. List the stormwater volume and area of runoff to be treated by each BMP type when calculations are required. If any BMP in the PCSM/SR Plan is not listed below, describe it in the space provided after "Other". A summary table with infiltration testing information (Attachment E, included in the NOI Instructions) must be submitted for all Bio-infiltration BMPs included in PCSM/SR plan.

For Rate control provide the volume of stormwater treated and acres treated for the 100-year/24-hour storm event.

For volume control and water quality provide the volume of stormwater treated and acres treated for the 2-year/24-hour storm event.

Key for BMP purpose(s): VC = Volume Control; RC = Rate Control; and WQ = Water Quality

BMP	Function(s)	Purpose(s)	Volume of stormwater treated	Acres treated
<b>Site Restoration ONLY</b> <input type="checkbox"/> Restore Site to Meadow in Good Condition or Better, or Existing Conditions	Infiltration/Recharge Detention/WQ Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____	_____
<b>Bio-infiltration areas</b> <input checked="" type="checkbox"/> Infiltration Trench <input type="checkbox"/> Infiltration Bed <input type="checkbox"/> Infiltration Basin <input type="checkbox"/> Rain Garden/ Bioretention <input type="checkbox"/> Infiltration Berm	Infiltration/Recharge	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	VC/WQ: 249; RC: 994 _____ _____ _____	<u>0.517</u> _____ _____

<b>Natural Area Conservation</b> <input type="checkbox"/> Streamside Buffer Zone <input type="checkbox"/> Wetland Buffer Zone <input type="checkbox"/> Sensitive Area Buffer Zone <input type="checkbox"/> Pre-Construction Drainage Pattern Intact	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____
<b>Stormwater Retention</b> <input type="checkbox"/> Constructed Wetlands <input type="checkbox"/> Wet Ponds <input type="checkbox"/> Retention Basin	Detention/Retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Sediment and Pollutant Removal</b> <input type="checkbox"/> Vegetated Filter Strips <input type="checkbox"/> Compost Filter Sock <input type="checkbox"/> Detention Basins	Water Quality Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Access Road Design</b> <input type="checkbox"/> Road Crowning <input type="checkbox"/> Ditches <input type="checkbox"/> Turnouts <input type="checkbox"/> Culverts <input type="checkbox"/> Roadside Vegetated Filter Strips	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
<b>Stormwater Energy Dissipaters</b> <input type="checkbox"/> Level Spreaders <input type="checkbox"/> Riprap Aprons <input type="checkbox"/> Upslope Diversions <input type="checkbox"/> Other _____	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____

**g. Critical PCSM Plan stages**

Identify and list critical stages of implementation of the PCSM Plan for which a licensed professional or designee shall be present on site.

1. Engineer shall inspect the subsurface infiltration facilities prior to backfilling.
2. Engineer shall inspect final stabilization prior to removal of temporary measures.
3. Engineer shall inspect inlet installation prior to backfilling.

**e. Summary Table for Supporting Calculation and Measurement Data**  
(See NOI Instructions for additional guidance with this section)

The remainder of this section (Summary Table for Calculation and Measurement Data) does not need to be completed for areas of projects involving oil and gas activities authorized by Chapter 78 or Chapter 78a (well pads) or pipelines and other similar utility infrastructure which will be restored to meadow in good condition or better or existing conditions.

**Watershed Name:** Oswayo Creek

Volume Control design storm frequency <u>2-year</u> Rainfall amount <u>2.39</u> inches	Pre-construction	Post Construction	Net Change
Impervious area (acres)	0.00	0.090	+0.090
Volume of stormwater runoff (acre-feet) without planned stormwater BMPs	0.069	0.077	+0.008
Volume of stormwater runoff (acre-feet) with planned stormwater BMPs		0.000	-0.069
Stormwater discharge rate for the design frequency storm	Pre-construction	Post Construction	Net Change
1) 2-Year/24-Hour	0.046 cfs	0.042 cfs	-0.004 cfs
2) 10-Year/24-Hour	0.098 cfs	0.091 cfs	-0.007 cfs
3) 50-year/24-Hour	0.178 cfs	0.168 cfs	-0.010 cfs
4) 100-year/24-Hour	0.225 cfs	0.212 cfs	-0.013 cfs

**f. Summary Description of PCSM/SR BMPs**

In the lists below, check the BMPs identified in the PCSM Plan. The primary function(s) of the BMP listed in the functions column (infiltration/recharge; detention/retention; water quality). Additional functions may be added if applicable to that BMP. List the stormwater volume and area of runoff to be treated by each BMP type when calculations are required. If any BMP in the PCSM/SR Plan is not listed below, describe it in the space provided after "Other". A summary table with infiltration testing information (Attachment E, included in the NOI Instructions) must be submitted for all Bio-infiltration BMPs included in PCSM/SR plan.

For Rate control provide the volume of stormwater treated and acres treated for the 100-year/24-hour storm event.

For volume control and water quality provide the volume of stormwater treated and acres treated for the 2-year/24-hour storm event.

Key for BMP purpose(s): VC = Volume Control; RC = Rate Control; and WQ = Water Quality

BMP	Function(s)	Purpose(s)	Volume of stormwater treated	Acres treated
<b>Site Restoration ONLY</b> <input type="checkbox"/> Restore Site to Meadow in Good Condition or Better, or Existing Conditions	Infiltration/Recharge Detention/WQ Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____	_____
<b>Bio-infiltration areas</b> <input checked="" type="checkbox"/> Infiltration Trench <input type="checkbox"/> Infiltration Bed <input type="checkbox"/> Infiltration Basin <input type="checkbox"/> Rain Garden/ Bioretention <input type="checkbox"/> Infiltration Berm	Infiltration/Recharge	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	VC/WQ: 402; RC: 1,146 _____ _____ _____ _____	1.39 _____ _____ _____ _____

<b>Natural Area Conservation</b> <input type="checkbox"/> Streamside Buffer Zone <input type="checkbox"/> Wetland Buffer Zone <input type="checkbox"/> Sensitive Area Buffer Zone <input type="checkbox"/> Pre-Construction Drainage Pattern Intact	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____
<b>Stormwater Retention</b> <input type="checkbox"/> Constructed Wetlands <input type="checkbox"/> Wet Ponds <input type="checkbox"/> Retention Basin	Detention/Retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Sediment and Pollutant Removal</b> <input type="checkbox"/> Vegetated Filter Strips <input type="checkbox"/> Compost Filter Sock <input type="checkbox"/> Detention Basins	Water Quality Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Access Road Design</b> <input type="checkbox"/> Road Crowning <input type="checkbox"/> Ditches <input type="checkbox"/> Turnouts <input type="checkbox"/> Culverts <input type="checkbox"/> Roadside Vegetated Filter Strips	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
<b>Stormwater Energy Dissipaters</b> <input type="checkbox"/> Level Spreaders <input type="checkbox"/> Riprap Aprons <input type="checkbox"/> Upslope Diversions <input type="checkbox"/> Other _____	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____

**g. Critical PCSM Plan stages**

Identify and list critical stages of implementation of the PCSM Plan for which a licensed professional or designee shall be present on site.

1. Engineer shall inspect the subsurface infiltration facilities prior to backfilling.
2. Engineer shall inspect final stabilization prior to removal of temporary measures.
3. Engineer shall inspect inlet installation prior to backfilling.

## Marvindale Compressor Station

**e. Summary Table for Supporting Calculation and Measurement Data**  
(See NOI Instructions for additional guidance with this section)

The remainder of this section (Summary Table for Calculation and Measurement Data) does not need to be completed for areas of projects involving oil and gas activities authorized by Chapter 78 or Chapter 78a (well pads) or pipelines and other similar utility infrastructure which will be restored to meadow in good condition or better or existing conditions.

**Watershed Name:** Warner Brook

Volume Control design storm frequency <u>2-year</u> Rainfall amount <u>2.50</u> inches	Pre-construction	Post Construction	Net Change
Impervious area (acres)	0.58	4.87	+4.29
Volume of stormwater runoff (acre-feet) without planned stormwater BMPs	0.78	1.39	+0.61
Volume of stormwater runoff (acre-feet) with planned stormwater BMPs		0.77	-0.01
Stormwater discharge rate for the design frequency storm	Pre-construction	Post Construction	Net Change
1) 2-Year/24-Hour	0.03 cfs	0.00 cfs	-0.03 cfs
2) 10-Year/24-Hour	0.54 cfs	0.21 cfs	-0.34 cfs
3) 50-year/24-Hour	5.31 cfs	2.65 cfs	-2.66 cfs
4) 100-year/24-Hour	10.00 cfs	9.18 cfs	-0.82 cfs

**f. Summary Description of PCSM/SR BMPs**

In the lists below, check the BMPs identified in the PCSM Plan. The primary function(s) of the BMP listed in the functions column (infiltration/recharge; detention/retention; water quality). Additional functions may be added if applicable to that BMP. List the stormwater volume and area of runoff to be treated by each BMP type when calculations are required. If any BMP in the PCSM/SR Plan is not listed below, describe it in the space provided after "Other". A summary table with infiltration testing information (Attachment E, included in the NOI Instructions) must be submitted for all Bio-infiltration BMPs included in PCSM/SR plan.

For Rate control provide the volume of stormwater treated and acres treated for the 100-year/24-hour storm event.

For volume control and water quality provide the volume of stormwater treated and acres treated for the 2-year/24-hour storm event.

Key for BMP purpose(s): VC = Volume Control; RC = Rate Control; and WQ = Water Quality

BMP	Function(s)	Purpose(s)	Volume of stormwater treated	Acres treated
<b>Site Restoration ONLY</b> <input checked="" type="checkbox"/> Restore Site to Meadow in Good Condition or Better, or Existing Conditions	Infiltration/Recharge Detention/WQ Treatment	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	_____	<u>4.6</u>
<b>Bio-infiltration areas</b> <input type="checkbox"/> Infiltration Trench <input type="checkbox"/> Infiltration Bed <input type="checkbox"/> Infiltration Basin <input type="checkbox"/> Rain Garden/ Bioretention <input checked="" type="checkbox"/> Infiltration Berm	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	_____ _____ _____ 26,734 cf (2-yr) 88,310 cf (100-yr)	_____ _____ _____ _____ <u>7.4</u>

<b>Natural Area Conservation</b> <input type="checkbox"/> Streamside Buffer Zone <input type="checkbox"/> Wetland Buffer Zone <input type="checkbox"/> Sensitive Area Buffer Zone <input type="checkbox"/> Pre-Construction Drainage Pattern Intact	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____
<b>Stormwater Retention</b> <input type="checkbox"/> Constructed Wetlands <input type="checkbox"/> Wet Ponds <input type="checkbox"/> Retention Basin	Detention/Retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Sediment and Pollutant Removal</b> <input type="checkbox"/> Vegetated Filter Strips <input checked="" type="checkbox"/> Compost Filter Sock <input type="checkbox"/> Detention Basins	Water Quality Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Access Road Design</b> <input type="checkbox"/> Road Crowning <input checked="" type="checkbox"/> Ditches <input type="checkbox"/> Turnouts <input checked="" type="checkbox"/> Culverts <input type="checkbox"/> Roadside Vegetated Filter Strips	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____ _____	_____ <u>0.3</u> _____ <u>13.8</u> _____
<b>Stormwater Energy Dissipaters</b> <input type="checkbox"/> Level Spreaders <input checked="" type="checkbox"/> Riprap Aprons <input type="checkbox"/> Upslope Diversions <input type="checkbox"/> Other _____	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ <u>14.1</u> _____ _____

**g. Critical PCSM Plan stages**

Identify and list critical stages of implementation of the PCSM Plan for which a licensed professional or designee shall be present on site.

1. A licensed professional or designee shall be present on site during installation of bioretention sock infiltration/retention berms to verify that the BMP is being implemented in accordance with the approved plan.
2. Upon completion of construction, a licensed professional or designee shall complete an inspection to verify that BMPs are in place and functioning as designed.
3. After the first growing season, a licensed professional or designee shall perform an inspection to verify that BMPs continue to function as designed and verify that permanent vegetative stabilization has been established.

## Tamarack Compressor Station

**e. Summary Table for Supporting Calculation and Measurement Data**  
*(See NOI Instructions for additional guidance with this section)*

The remainder of this section (Summary Table for Calculation and Measurement Data) does not need to be completed for areas of projects involving oil and gas activities authorized by Chapter 78 or Chapter 78a (well pads) or pipelines and other similar utility infrastructure which will be restored to meadow in good condition or better or existing conditions.

**Watershed Name:** Drury Run - North Watershed

Volume Control design storm frequency <u>2 year/24 hour</u> Rainfall amount <u>2.50</u> inches	Pre-construction	Post Construction	Net Change
Impervious area (acres)	0.00	0.40	+0.40
Volume of stormwater runoff (acre-feet) without planned stormwater BMPs	0.11	0.17	+0.06
Volume of stormwater runoff (acre-feet) with planned stormwater BMPs		0.03	-0.08
Stormwater discharge rate for the design frequency storm	Pre-construction	Post Construction	Net Change
1) 2-Year/24-Hour	1.55	1.17	-0.38
2) 10-Year/24-Hour	5.17	3.75	-1.42
3) 50-year/24-Hour	11.18	8.21	-2.97
4) 100-year/24-Hour	14.60	10.77	-3.83

**Watershed Name:** Drury Run - South Watershed

Volume Control design storm frequency <u>2 year/24 hour</u> Rainfall amount <u>2.50</u> inches	Pre-construction	Post Construction	Net Change
Impervious area (acres)	0.00	4.56	+4.56
Volume of stormwater runoff (acre-feet) without planned stormwater BMPs	0.57	1.18	+0.61
Volume of stormwater runoff (acre-feet) with planned stormwater BMPs		0.54	-0.03
Stormwater discharge rate for the design frequency storm	Pre-construction	Post Construction	Net Change
1) 2-Year/24-Hour	6.34	4.34	-2.00
2) 10-Year/24-Hour	19.92	14.18	-5.74
3) 50-year/24-Hour	41.95	33.90	-8.05
4) 100-year/24-Hour	54.43	45.17	-9.26

**f. Summary Description of PCSM/SR BMPs**

In the lists below, check the BMPs identified in the PCSM Plan. The primary function(s) of the BMP listed in the functions column (infiltration/recharge; detention/retention; water quality). Additional functions may be added if applicable to that BMP. List the stormwater volume and area of runoff to be treated by each BMP type when calculations are required. If any BMP in the PCSM/SR Plan is not listed below, describe it in the space provided after "Other". A summary table with infiltration testing information (Attachment E, included in the NOI Instructions) must be submitted for all Bio-infiltration BMPs included in PCSM/SR plan.

For Rate control provide the volume of stormwater treated and acres treated for the 100-year/24-hour storm event.

For volume control and water quality provide the volume of stormwater treated and acres treated for the 2-year/24-hour storm event.

Key for BMP purpose(s): VC = Volume Control; RC = Rate Control; and WQ = Water Quality

BMP	Function(s)	Purpose(s)	Volume of stormwater treated	Acres treated
<b>Site Restoration ONLY</b> <input checked="" type="checkbox"/> Restore Site to Meadow in Good Condition or Better, or Existing Conditions	Infiltration/Recharge Detention/WQ Treatment	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	_____	<u>10.7</u>
<b>Bio-infiltration areas</b> <input type="checkbox"/> Infiltration Trench <input type="checkbox"/> Infiltration Bed <input checked="" type="checkbox"/> Infiltration Basin <input type="checkbox"/> Rain Garden/ Bioretention <input checked="" type="checkbox"/> Infiltration Berm	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	_____ 28,090 cf (2-yr) 114,115 cf (100-yr) _____ 5,928 cf (2-yr) 26,387 cf (100-yr) _____	_____ _____ <u>7.9</u> _____ <u>2.5</u> _____
<b>Natural Area Conservation</b> <input type="checkbox"/> Streamside Buffer Zone <input type="checkbox"/> Wetland Buffer Zone <input type="checkbox"/> Sensitive Area Buffer Zone <input type="checkbox"/> Pre-Construction Drainage Pattern Intact	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ _____ _____
<b>Stormwater Retention</b> <input type="checkbox"/> Constructed Wetlands <input type="checkbox"/> Wet Ponds <input type="checkbox"/> Retention Basin	Detention/Retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Sediment and Pollutant Removal</b> <input type="checkbox"/> Vegetated Filter Strips <input checked="" type="checkbox"/> Compost Filter Sock <input type="checkbox"/> Detention Basins	Water Quality Treatment	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____	_____ _____ _____
<b>Access Road Design</b> <input type="checkbox"/> Road Crowning <input type="checkbox"/> Ditches <input type="checkbox"/> Turnouts <input type="checkbox"/> Culverts <input type="checkbox"/> Roadside Vegetated Filter Strips	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____

<b>Stormwater Energy Dissipaters</b> <input type="checkbox"/> Level Spreaders <input type="checkbox"/> Riprap Aprons <input checked="" type="checkbox"/> Upslope Diversions <input type="checkbox"/> Other	Infiltration/Recharge	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ <input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	_____ _____ _____ _____	_____ _____ <u>38.8</u> _____
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**g. Critical PCSM Plan stages**

Identify and list critical stages of implementation of the PCSM Plan for which a licensed professional or designee shall be present on site.

1. A licensed professional or designee shall be present on site during installation of the bioretention sock infiltration berm and the conversion of the sediment basin into a wet pond to verify that the BMPs are being implemented in accordance with the approved plan.
2. Upon completion of construction, a licensed professional or designee shall complete an inspection to verify that BMPs are in place and functioning as designed.
3. After the first growing season, a licensed professional or designee shall perform an inspection to verify that BMPs continue to function as designed and verify that permanent vegetative stabilization has been established.

**SECTION I. ANTIDegradation ANALYSIS**

**This section must be completed where earth disturbance activities will be conducted in the watershed of a surface water with an existing or designated use of exceptional value or high quality pursuant to Chapter 93 (relating to water quality standards), projects where any part is located in an exceptional value wetland in accordance with 25 Pa. Code § 105.17, and projects where any part is located in the watershed of an impaired surface water where the cause of impairment is identified as siltation.**

**Part 1 - NONDISCHARGE ALTERNATIVES EVALUATION**

The applicant must consider and describe any and all non-discharge alternatives for the entire project area which are environmentally sound and will:

- Minimize accelerated erosion and sedimentation during the earth disturbance activity
- Achieve no net change from pre-development to post-development volume, rate and concentration of pollutants in water quality

**E & S Plan**

**PCSM/SR Plan**

Check off the environmentally sound nondischarge Best Management Practices (BMPs) listed below to be used prior to, during, and after earth disturbance activities that have been incorporated into your E & S Plan based on the site analysis. For non-discharge BMPs not checked, provide an explanation of why they were not utilized. Also for BMPs checked, provide an explanation of why they were utilized. (Provide the analysis and attach additional sheets if necessary)

Check off the environmentally sound nondischarge Best Management Practices (BMPs) listed below to be used after construction that have been incorporated into the PCSM/SR Plan based on your site analysis. For non-discharge BMPs not checked, provide an explanation of why they were not utilized. Also for BMPs checked, provide an explanation of why they were utilized. (Provide the analysis and attach additional sheets if necessary)

**Nondischarge BMPs**

- Alternative Siting
  - Alternative location
  - Alternative configuration
  - Alternative location of discharge
- Limited Disturbed Area
- Limiting Extent & Duration of Disturbance (Phasing, Sequencing)
- Riparian Buffers (150 ft. min.)
- Riparian Forest Buffer (150 ft. min.)
- Other \_\_\_\_\_

**Nondischarge BMPs**

- Alternative Siting
  - Alternative location
  - Alternative configuration
  - Alternative location of discharge
- Low Impact Development (LID / BSD)
- Riparian Buffers (150 ft. min.)
- Riparian Forest Buffer (150 ft. min.)
- Infiltration
- Water Reuse
- Other \_\_\_\_\_

Will the non-discharge alternative BMPs eliminate the net change in rate, volume and quality during construction?  
 Yes  No

If yes, antidegradation analysis is complete.  
 If no, proceed to Part 2.

Will the non-discharge alternative BMPs eliminate the net change in rate, volume and quality after construction?  
 Yes  No

If yes, antidegradation analysis is complete.  
 If no, proceed to Part 2.

**PART 2 - ANTIDegradation BEST AVAILABLE COMBINATION OF TECHNOLOGIES (ABACT)**

If the net change in stormwater discharge from or after construction is not fully managed by nondischarge BMPs, the applicant must utilize ABACT BMPs to manage the difference. The Applicant must specify whether the discharge will occur during construction, post-construction or both, and identify the technologies that will be used to ensure that the discharge will be a non-degrading discharge. ABACT BMPs include but are not limited to:

E & S Plan	PCSM/SR Plan
<p><input checked="" type="checkbox"/> <b>Treatment BMPs:</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Sediment basin with skimmer</li> <li><input type="checkbox"/> Sediment basin ratio of 4:1 or greater (flow length to basin width)</li> <li><input checked="" type="checkbox"/> Sediment basin with 4-7 day detention</li> <li><input type="checkbox"/> Flocculants</li> <li><input checked="" type="checkbox"/> Compost Filter Socks</li> <li><input type="checkbox"/> Compost Filter Sock Sediment Basin</li> <li><input type="checkbox"/> RCE w/ Wash Rack</li> </ul> <p><input checked="" type="checkbox"/> <b>Land disposal:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Vegetated filters</li> <li><input type="checkbox"/> Riparian buffers &lt;150ft.</li> <li><input type="checkbox"/> Riparian Forest Buffer &lt;150ft.</li> <li><input checked="" type="checkbox"/> Immediate stabilization</li> </ul> <p><input checked="" type="checkbox"/> <b>Pollution prevention:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> PPC Plans</li> <li><input checked="" type="checkbox"/> Street sweeping</li> <li><input checked="" type="checkbox"/> Channels, collectors and diversions lined with permanent vegetation, rock, geotextile or other non-erosive materials</li> </ul> <p><input type="checkbox"/> <b>Stormwater reuse technologies:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Sediment basin water for dust control</li> <li><input type="checkbox"/> Sediment basin water for irrigation</li> </ul> <p><input checked="" type="checkbox"/> <b>Other</b> <u>100-ft long rock construction entrances with street sweeping</u></p>	<p><input checked="" type="checkbox"/> <b>Treatment BMPs:</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Infiltration Practices</li> <li><input type="checkbox"/> Wet ponds</li> <li><input type="checkbox"/> Created wetland treatment systems</li> <li><input type="checkbox"/> Vegetated swales</li> <li><input type="checkbox"/> Manufactured devices</li> <li><input type="checkbox"/> Bio-retention/infiltration</li> <li><input type="checkbox"/> Green Roofs</li> </ul> <p><input type="checkbox"/> <b>Land disposal:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Vegetated filters</li> <li><input type="checkbox"/> Riparian Buffers &lt;150ft.</li> <li><input type="checkbox"/> Riparian Forest Buffer &lt;150ft.</li> <li><input type="checkbox"/> Disconnection of roof drainage</li> <li><input type="checkbox"/> Bio-retention/bio-infiltration</li> </ul> <p><input checked="" type="checkbox"/> <b>Pollution prevention:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Street sweeping</li> <li><input type="checkbox"/> Nutrient, pesticide, herbicide or other chemical application plan alternatives</li> <li><input type="checkbox"/> PPC Plans</li> <li><input checked="" type="checkbox"/> Non-structural Practices</li> <li><input checked="" type="checkbox"/> Restoration BMPs</li> </ul> <p><input type="checkbox"/> <b>Stormwater reuse technologies:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Divert rainwater into impoundment</li> <li><input type="checkbox"/> Underground storage</li> </ul> <p><input type="checkbox"/> Spray/Drip Irrigation</p> <p><input type="checkbox"/> <b>Other</b> _____</p>
<p>Are the ABACT BMPs selected sufficient to minimize E&amp;S discharges to the extent that existing or designated surface water uses are protected?</p> <p><input checked="" type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>If yes, Antidegradation analysis is complete.              If no, NOI Application will be returned to the Applicant.</p>	<p>Are the ABACT BMPs selected sufficient to achieve no net change and assure that existing or designated surface water uses are protected?</p> <p><input checked="" type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>If yes, Antidegradation analysis is complete.              If no, NOI Application will be returned to the Applicant.</p>

**SECTION J. COMPLIANCE HISTORY REVIEW**

Is/was the applicant(s) in violation of any Department regulation, order, schedule of compliance or permit or in violation of any department regulated activities within the past five years?

Yes     No

If yes, provide the permit number or facility name, a brief description of the violation, the compliance schedule (including dates and steps to achieve compliance) and the current compliance status. (Attach additional information on a separate sheet, when necessary)

**Permit Program or Activity:** \_\_\_\_\_ **Permit Number (if applicable):** \_\_\_\_\_

**Brief Description of non-compliance:**

Steps taken to achieve compliance

Date(s) compliance achieved


Current Compliance Status:  In-Compliance     In Non-Compliance

If in non-compliance, attach schedule for achieving compliance.

PERSON PREPARING E&S PLANS

**SECTION K. CERTIFICATION BY PERSON PREPARING E&S AND PCSM/SR PLANS**

I do hereby certify to the best of my knowledge, information, and belief, that the Erosion and Sediment Control and PCSM/Site Restoration Plans are true and correct, represent actual field conditions, and are in accordance with the 25 Pa. Code Chapters 78/78a and 102 of the Department's rules and regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Print Name	Michael DeNichilo	Signature	
Company	Mott MacDonald		
Address	111 Wood Avenue South, Iselin, NJ 08830-4112		
Phone	(973)379-3400		
Most Recent DEP Training Attended	Location	Date	
-	-	-	
e-Mail Address	michael.denichilo@mottmac.com		



**EXPEDITED REVIEW PROCESS**

In addition to the certification required above, applicants using the expedited permit review process must attach an E&S and PCSM/Site Restoration Plans developed and sealed by a licensed professional engineer, surveyor or professional geologist. The plans shall contain the following certification:

*I do hereby certify to the best of my knowledge, information, and belief, that the E & S Control and PCSM/SR BMPs are true and correct, represent actual field conditions and are in accordance with the 25 Pa. Code Chapters 78 / 78a and 102 of the Department's rules and regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

**SECTION L. APPLICANT CERTIFICATION**

Applicant Certification

I certify under penalty of law, as provided by 18 Pa. C.S.A. § 4904, that this application and all related attachments were prepared by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my own knowledge and on inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. The responsible official's signature also verifies that the activity is eligible to participate in the ESCGP, and that the applicant agrees to abide by the terms and conditions of the permit. BMP's, E&S Plan, PPC Plan, PCSM Plan, and other controls are being or will be, implemented to ensure that water quality standards and effluent limits are attained.

I grant permission to the agencies responsible for the permitting of this work, or their duly authorized representative to enter the project site for inspection purposes. I will abide by the conditions of the permit if issued and will not begin work prior to permit issuance.

(For individuals no indication of title is necessary, choose the box below. All others proceed to the next paragraph)

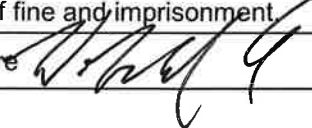
**Individual; proceed to signature portion.**

I hereby certify under penalty of law, as provided by 18 Pa. C.S.A. § 4904, that I am the person who is responsible for decision-making regarding environmental compliance functions for Enter Entity name, the manager of one or more manufacturing, production, or operating facilities of the applicant and am authorized to make management decisions which govern the operation of regulated facility including having explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure the applicant's long term environmental compliance with environmental laws and regulations; and I am responsible for ensuring that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements.

PERSON PREPARING PCSM PLANS FOR MARVINDALE INTERCONNECT,  
 CARPENTER HOLLOW OPP, MLV-1, MLV-2, MLV-3, MLV-4

**SECTION K. CERTIFICATION BY PERSON PREPARING E&S AND PCSM/SR PLANS**

I do hereby certify to the best of my knowledge, information, and belief, that the Erosion and Sediment Control and PCSM/Site Restoration Plans are true and correct, represent actual field conditions, and are in accordance with the 25 Pa. Code Chapters 78/78a and 102 of the Department's rules and regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Print Name	W. Michael Clark	Signature	
Company	Mott MacDonald		
Address	111 Wood Avenue South, Iselin, NJ 08830-4112		
Phone	(973) 379-3400		
Most Recent DEP Training Attended	Location	Date	
-	-	-	
e-Mail Address	michael.clark@mottmac.com		



**EXPEDITED REVIEW PROCESS**

In addition to the certification required above, applicants using the expedited permit review process must attach an E&S and PCSM/Site Restoration Plans developed and sealed by a licensed professional engineer, surveyor or professional geologist. The plans shall contain the following certification:

*I do hereby certify to the best of my knowledge, information, and belief, that the E & S Control and PCSM/SR BMPs are true and correct, represent actual field conditions and are in accordance with the 25 Pa. Code Chapters 78 / 78a and 102 of the Department's rules and regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

**SECTION L. APPLICANT CERTIFICATION**

Applicant Certification

I certify under penalty of law, as provided by 18 Pa. C.S.A. § 4904, that this application and all related attachments were prepared by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my own knowledge and on inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. The responsible official's signature also verifies that the activity is eligible to participate in the ESCGP, and that the applicant agrees to abide by the terms and conditions of the permit. BMP's, E&S Plan, PPC Plan, PCSM Plan, and other controls are being or will be, implemented to ensure that water quality standards and effluent limits are attained.

I grant permission to the agencies responsible for the permitting of this work, or their duly authorized representative to enter the project site for inspection purposes. I will abide by the conditions of the permit if issued and will not begin work prior to permit issuance.

(For individuals no indication of title is necessary, choose the box below. All others proceed to the next paragraph)


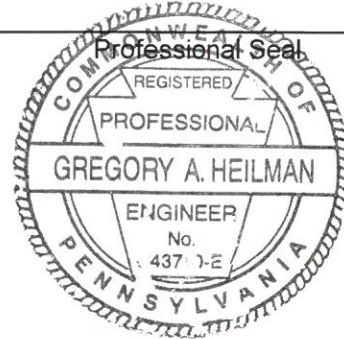
**Individual; proceed to signature portion.**

I hereby certify under penalty of law, as provided by 18 Pa. C.S.A. § 4904, that I am the person who is responsible for decision-making regarding environmental compliance functions for Enter Entity name, the manager of one or more manufacturing, production, or operating facilities of the applicant and am authorized to make management decisions which govern the operation of regulated facility including having explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure the applicant's long term environmental compliance with environmental laws and regulations; and I am responsible for ensuring that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements.

**PERSON PREPARING E&S AND PCSM PLANS FOR  
 MARVINDALE COMPRESSOR STATION AND TAMARACK  
 COMPRESSOR STATION**

**SECTION K. CERTIFICATION BY PERSON PREPARING E&S AND PCSM/SR PLANS**

I do hereby certify to the best of my knowledge, information, and belief, that the Erosion and Sediment Control and PCSM/Site Restoration Plans are true and correct, represent actual field conditions, and are in accordance with the 25 Pa. Code Chapters 78/78a and 102 of the Department's rules and regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Print Name Gregory Heilman, P.E.	Signature 		
Company Michael Baker International			
Address 100 Airside Drive, Moon Township, PA 15108			
Phone 412-269-6096			
Most Recent DEP Training Attended	Location		Date
DEP Oil and Gas Training	Greentree, PA		12/2017
e-Mail Address <u>gheilman@mbakerintl.com</u>			

**EXPEDITED REVIEW PROCESS**

In addition to the certification required above, applicants using the expedited permit review process must attach an E&S and PCSM/Site Restoration Plans developed and sealed by a licensed professional engineer, surveyor or professional geologist. The plans shall contain the following certification:

*I do hereby certify to the best of my knowledge, information, and belief, that the E & S Control and PCSM/SR BMPs are true and correct, represent actual field conditions and are in accordance with the 25 Pa. Code Chapters 78 / 78a and 102 of the Department's rules and regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

**SECTION L. APPLICANT CERTIFICATION**

Applicant Certification

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I grant permission to the agencies responsible for the permitting of this work, or their duly authorized representative to enter the project site for inspection purposes. I will abide by the conditions of the permit if issued and will not begin work prior to permit issuance.

(For individuals no indication of title is necessary, choose the box below. All others proceed to the next paragraph)

**Individual; proceed to signature portion.**

I hereby certify under penalty of law, as provided by 18 Pa. C.S.A. § 4904, that I am the person who is responsible for decision-making regarding environmental compliance functions for National Fuel Supply Corporation, the manager of one or more manufacturing, production, or operating facilities of the applicant and am authorized to make management decisions which govern the operation of regulated facility including having explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure the applicant's long term environmental compliance with environmental laws and regulations; and I am responsible for ensuring that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements.

(choose one of the following; not applicable for individuals):

- The responsible corporate officer  president  vice president  secretary
- treasure of NATIONAL FUEL GAS SUPPLY Corporation Company  
Entity name
- The  member or  manager of \_\_\_\_\_ LLC  
Entity name
- The general partner of \_\_\_\_\_ partnership/LP/LLP  
Entity name
- The principal executive officer or ranking elected official of \_\_\_\_\_ Municipality/State/Federal/other public agency  
Entity name
- Power of Attorney/delegation of contractual authority (documentation supporting delegation of contracting authority must be provided) for \_\_\_\_\_  
Entity name

JEFFERY J. KITTKA, VICE PRESIDENT  
Print Name and Title of Applicant

[Signature]  
Signature of Applicant

11/5/19  
Date Application Signed

\_\_\_\_\_  
Print Name and Title of Co-Applicant (if applicable)

\_\_\_\_\_  
Signature of Co-Applicant

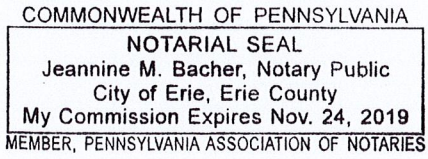
\_\_\_\_\_  
Date Application Signed

**Notarization**  
Sworn to and subscribed to before me this  
5th day of November, 2019

Jeannine M. Bacher  
Notary Public

AFFIX SEAL

Commonwealth of Pennsylvania  
County of \_\_\_\_\_  
My Commission expires \_\_\_\_\_



SECTION M. ADDITIONAL CONTACT INFORMATION			
Contact's Last Name Gibbons	First Name Douglas	MI	Phone (801) 571-6522
			FAX
Mailing Address 5295 S. Commerce Drive	City Murray	State UT	ZIP + 4 84107-4719
e-Mail Address douglas.gibbons@mottmac.com			

Summary of Bio-Infiltration BMPs														
Proposed Structural bio-Infiltration BMPs (site specific)	Infiltration Information					Drainage Information				BMP Information				
	Measured Infiltration Rate <sup>1</sup> (in./hr)	Factor of safety (min. of 2)	Design Infiltration rate (in./hr)	De-watering time <sup>2</sup> (hr)	Elevation of limiting zone-water table bedrock, etc. <sup>3</sup>	Total drainage area to BMP (sq. ft)	Total impervious drainage area to BMP (sq. ft)	Infiltration BMP Surface area (sq. ft)	Volume of runoff tributary to BMP during the 2yr/24 hr design storm <sup>4</sup> (cf)	Calculated removed volume (cf)	Maximum water surface elevation in BMP from 2yr storm <sup>6</sup>	Infiltration elevation bottom of bed/basin <sup>6</sup>	Elevation of infiltration test <sup>7</sup>	Elevation of E&S sediment basin bottom (if applies)
CARPENTER HOLLOW OPP INFILTRATION TRENCH	0.125 IN/HR	2	0.063 IN/HR	22.41 HR	>2 FT	1.109 ACRES	0.356 ACRES	0.356 ACRES	3,778 CF	3,778 CF	2,269.36	2,268.30	2,269.75	N/A
KL VALVE SET TRENCH	0.38 IN/HR	2	0.19 IN/HR	39.40 HR	>2 FT	0.431 ACRES	0.107 ACRES	0.067 ACRES	1,585 CF	1,585 CF	2,091.16	2,089.10	2,092	N/A
MLV 1 INFILTRATION TRENCH	8.31 IN/HR	2	4.16 IN/HR	2.76 HR	>2 FT	0.155 ACRES	0.094 ACRES	0.036 ACRES	873 CF	873 CF	1,585.53	1,583.50	1,584	N/A
MLV 2 INFILTRATION TRENCH	10.28 IN/HR	2	5.14 IN/HR	11.94 HR	>2 FT	0.268 ACRES	0.048 ACRES	0.036 ACRES	402 CF	402 CF	1,513.22	1,511.50	1,514	N/A
MLV 3 INFILTRATION TRENCH	4.50 IN/HR	2	2.50 IN/HR	27.54 HR	>2 FT	0.517 ACRES	0.071 ACRES	0.071 ACRES	249 CF	249 CF	2,232.99	2,232	2,234	N/A
MLV 4 INFILTRATION TRENCH - 1	3.00 IN/HR	2	1.50 IN/HR	6.20 HR	>2 FT	1.354 ACRES	0.057 ACRES	0.057 ACRES	143 CF	143 CF	2,280.00	2,279.50	2,274	N/A
MLV 4 INFILTRATION TRENCH - 2	3.00 IN/HR	2	1.50 IN/HR	9.40 HR	>2 FT	0.033 ACRES	0.033 ACRES	0.033 ACRES	259 CF	259 CF	2,271.13	2,270.00	2,274	N/A

All information should be based on the 2-yr/24-hr storm.

Provide page numbers from the stormwater narrative identifying the location of the above information.

<sup>1</sup>The infiltration testing information should be located on the plan view of the PCSM plan and should include infiltration test elevation and rate

<sup>2</sup>Can include active infiltration time-dewatering time should not exceed 72 hours after the 2-yr/24-hr storm

<sup>3</sup>Depth to limiting zone is recommended to be at least 2 ft below infiltration

<sup>4</sup>The value should be greater than or equal to the volume to be infiltrated or managed by the BMP

<sup>6</sup>A maximum of 2 ft hydraulic head is recommended

<sup>7</sup>Provide supporting field notes/documentation from soil evaluation

Any deviation from the recommendations above should be adequately justified by a qualified professional and included with the application.

**Note: This chart is for summary purposes only and should be consistent with all design calculations and worksheets.**

Summary of Bio-Infiltration BMPs														
Proposed Structural bio-Infiltration BMPs (site specific)	Infiltration Information					Drainage Information				BMP Information				
	Measured Infiltration Rate <sup>1</sup> (in./hr)	Factor of safety (min. of 2)	Design Infiltration rate (in./hr)	De-watering time <sup>2</sup> (hr)	Elevation of limiting zone-water table bedrock, etc. <sup>3</sup>	Total drainage area to BMP (sq. ft)	Total impervious drainage area to BMP (sq. ft)	Infiltration BMP Surface area (sq. ft)	Volume of runoff tributary to BMP during the 2yr/24 hr design storm <sup>4</sup> (cf)	Calculated removed volume (cf)	Maximum water surface elevation in BMP from 2yr storm <sup>6</sup>	Infiltration elevation bottom of bed/basin <sup>6</sup>	Elevation of infiltration test <sup>7</sup>	Elevation of E&S sediment basin bottom (if applies)
Infiltration Berm	4.5	2	2.2	5.0	> 2 ft.	111,513	12,632	7,055	5,928	5,928	1741.0	1739.0	1739.0	N/A
Infiltration Basin	2.0 & 0.9	5 & 2	0.4	51.9	> 2 ft.	341,946	211,581	14,437	36,490	28,090	1710.8	1708.0	1708.0	1708.5

All information should be based on the 2-yr/24-hr storm.

Provide page numbers from the stormwater narrative identifying the location of the above information.

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Summary of Bio-Infiltration BMPs														
	Infiltration Information					Drainage Information				BMP Information				
Proposed Structural bio-Infiltration BMPs (site specific)	Measured Infiltration Rate <sup>1</sup> (in./hr)	Factor of safety (min. of 2)	Design Infiltration rate (in./hr)	De-watering time <sup>2</sup> (hr)	Elevation of limiting zone-water table bedrock, etc. <sup>3</sup>	Total drainage area to BMP (sq. ft)	Total impervious drainage area to BMP (sq. ft)	Infiltration BMP Surface area (sq. ft)	Volume of runoff tributary to BMP during the 2yr/24 hr design storm <sup>4</sup> (cf)	Calculated removed volume (cf)	Maximum water surface elevation in BMP from 2yr storm <sup>6</sup>	Infiltration elevation bottom of bed/basin <sup>6</sup>	Elevation of infiltration test <sup>7</sup>	Elevation of E&S sediment basin bottom (if applies)
Infiltration Berm 1	8.0	2	4.0	3.1	> 2 ft.	175,847	121,104	8,346	16,493	8,684	2103.0	2101.0	2101.0	N/A
Infiltration Berm 2	8.0	2	4.0	2.9	> 2 ft.	245,767**	163,186**	15,591	14,482	14,482	2100.0	2098.0	2098.0	N/A
Infiltration Berm 3	24.0	2	12.0	1.0	> 2 ft.	271,400**	166,440**	12,269	1,185	1,185	2095.4	2095.0	2095.0	N/A
Infiltration Berm 4	6.0	2	3.0	3.8	> 2 ft.	14,384	3,254	1,931	847	847	2087.4	2086.0	2086.0	N/A
Infiltration Berm 5	6.4	2	3.2	3.6	> 2 ft.	15,422	4,292	1,044	827	827	2087.8	2086.0	2086.0	N/A
Infiltration Berm 6	5.3	2	2.6	4.5	> 2 ft.	290,753**	166,440**	12,779	709	709	2092.2	2092.0	2092.0	N/A

All information should be based on the 2-yr/24-hr storm.

Provide page numbers from the stormwater narrative identifying the location of the above information.

<sup>1</sup>The infiltration testing information should be located on the plan view of the PCSM plan and should include infiltration test elevation and rate

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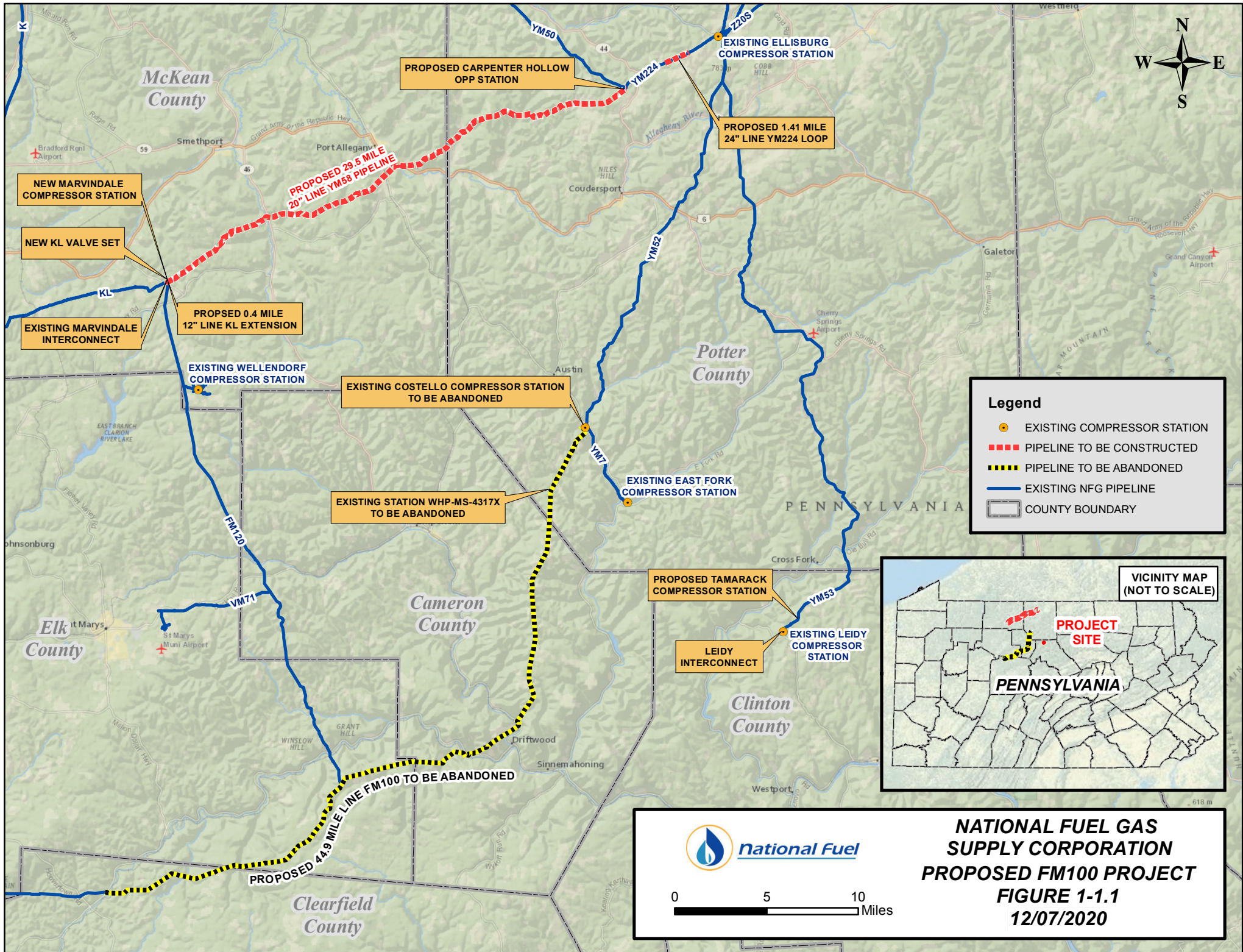
**Note: This chart is for summary purposes only and should be consistent with all design calculations and worksheets.**

**\*\* Berm is in series. Value includes all contributing areas.**

## Attachment 1

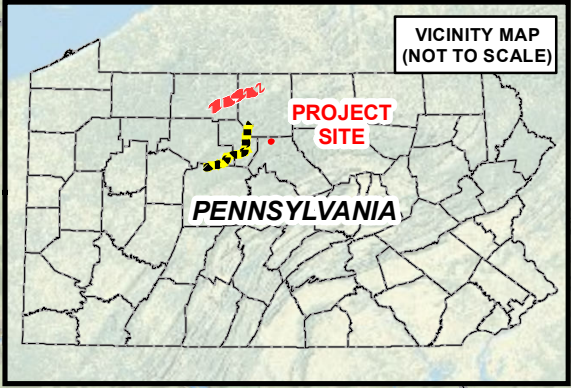
### Municipalities/Counties Impacted by Project

<b>McKean County</b>
Keating Twp Liberty Twp Norwich Twp Sergeant Twp
<b>Potter County</b>
Allegany Twp Clara Twp Hebron Twp Pleasant Valley Twp Portage Twp Roulette Twp Wharton Twp
<b>Cameron County</b>
Driftwood Boro Gibson Twp Grove Twp Lumber Twp
<b>Elk County</b>
Benezette Twp
<b>Clearfield County</b>
Huston Twp Lawrence Twp
<b>Clinton County</b>
Leidy Twp



**Legend**

- EXISTING COMPRESSOR STATION
- PIPELINE TO BE CONSTRUCTED
- PIPELINE TO BE ABANDONED
- EXISTING NFG PIPELINE
- COUNTY BOUNDARY



**NATIONAL FUEL GAS SUPPLY CORPORATION**

**PROPOSED FM100 PROJECT**

**FIGURE 1-1.1**

**12/07/2020**

0 5 10 Miles