

Commonwealth of Pennsylvania
Department of Environmental Protection
Waterways and Wetlands Program
Northcentral Regional Office

WATER OBSTRUCTION AND ENCROACHMENT PERMIT

The Department of Environmental Protection ("Department"), established by the Act of December 3, 1970, P.L. 834 (71 P.S. §§510.1 et seq.) and empowered to exercise certain powers and perform certain duties under and by virtue of the Act of November 26, 1978, P.L. 1375, as amended by the Act of October 23, 1979, P.L. 204 (32 P.S. §§693.1 et seq.) known as the "Dam Safety and Encroachments Act"; Act of October 4, 1978, P.L. 851, (32 P.S. §§679.101 et seq.) known as the "Flood Plain Management Act"; Act of June 22, 1937, P.L. 1987, (35 P.S. §§691.1 et seq.), known as "The Clean Streams Law"; and the Administrative Code, Act of April 9, 1929, P.L. 177, as amended, which empowers the Department to exercise certain powers and perform certain duties by law vested in and imposed upon the Water Supply Commission of Pennsylvania and the Water and Power Resources Board, hereby issues this Permit to:

**Transcontinental Gas Pipe Line Company, LLC
2800 Post Oak Boulevard, Level 6, Houston, TX 77056**

giving its consent to:

construct, operate and maintain approximately five (5) miles of thirty-inch (30") diameter pipeline and appurtenant structures associated with the Columbia County portion of the Atlantic Sunrise Pipeline Project Central Penn Line North (CPLN) and approximately 34.3 miles of forty-two (42") inch diameter pipeline and appurtenant structures associated with the Columbia County portion of the Atlantic Sunrise Pipeline Project Central Penn Line South (CPLS). The combined (CPLN and CPLS) project impacts in Columbia County include a total of 6523 linear feet of temporary stream impacts, a total of 784 linear feet of permanent stream impacts, 48.80 acres of temporary floodway impacts, 3.23 acres of permanent floodway impacts, 4.94 acres of temporary impacts to Palustrine Emergent (PEM), Palustrine Forested (PFO) and Palustrine Scrub-Shrub (PSS) wetlands, and 0.89 acres of permanent impacts to PEM, PFO and PSS wetlands, 0.18 acres of temporary lacustrine impacts, 0.03 acres of permanent lacustrine impacts. Specific impacts are shown in Appendix 1- Project Impacts. The permittee is required to compensate for the proposed project impacts in Columbia County by providing 2.03 acres of successful wetland creation and wetland enhancement at the Swatara Creek mitigation site located in Pine Grove Township, Schuylkill County off of State Route 443 (40° 31' 50.52" N, 76° 24' 51.10" W). This mitigation site shall compensate for the proposed permanent project impacts in Columbia, Northumberland and Schuylkill Counties by creating a total of 5.36 acres of wetland creation and enhancement of existing wetlands.

This Permit also authorizes the construction of the Briar Creek Mitigation Site for associated impacts in Luzerne County. 8.94 acres of wetland enhancement and vegetative management shall be constructed for the proposed 3.76 acres of impact within Luzerne County. Briar Creek Mitigation Site is located along Fowlersville Road in North Centre Township, Columbia County (41° 3' 20.4" N, 76° 20' 4.7" W). The proposed Columbia County CPLN and CPLS project starts at 0.35 miles south on Hynick Road from the intersection of Hynick Road and SR 118 (Red Rock, PA Quadrangle N: 40°, 17', 2.17"; W: 76°, 18', 48.68") and ends at 0.22 mile north on Happy Valley Road from the intersection with Monroe Drive (Shamokin, PA Quadrangle N: 40°, 50', 23.7"; W: 76°, 30', 27.13") Sugarloaf, Cleveland, Franklin, Montour, Hemlock, Mount Pleasant, Orange, Greenwood, and Jackson Townships, Columbia County, PA.

If this work authorized by this permit is not completed on or before the **31st** day of **December A.D. 2020**, this permit, if not previously revoked or specifically extended by the Department in writing, shall become void without further notification.

This permit is issued in response to an application filed with the Department of Environmental Protection on the **31st** day of **August A.D. 2015**, and with the understanding that the work shall be performed in accordance with the maps, plans, profiles and specifications filed with and made a part of the application on **December 3, 2015, September 26, 2016, November 21, 2016, February 10, 2017, April 6, 2017, April 21, 2017, May 5, 2017, August 1, 2017, August 14, 2017 and August 21, 2017**, subject, however, to the provisions of the Dam Safety and Encroachments Act, the Flood Plain Management Act, the Clean Streams Law, the Administrative Code, the rules and regulations promulgated thereunder and the following conditions and restrictions:

1. The permittee shall sign the Acknowledgement of Appraisal of Permit Conditions thereby expressly certifying the permittee's acceptance of, and agreement to comply with, the terms and conditions of this permit. The permittee shall return a signed copy of the Acknowledgement of Appraisal of Permit Conditions to the Department. Unless the Acknowledgement of Appraisal of Permit Conditions form is completed and filed with the Department, this permit is void;
2. The Department, in issuing this permit, has relied on the information and data which the permittee has provided in connection with his permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and the Department may, in addition, institute appropriate legal proceedings;
3. This permit does not give any property rights, either in real estate or material, nor any exclusive privileges, nor shall it be construed to grant or confer any right, title, easement, or interest in, to, or over any land belonging to the Commonwealth of Pennsylvania; neither does it authorize any injury to private property or invasion of private rights, nor any infringement of Federal, State, or Local laws or regulations; nor does it obviate the necessity of obtaining Federal assent when necessary;

4. The work shall at all times be subject to supervision and inspection by representatives of the Department, and no changes in the maps, plans, profiles, and specifications as approved shall be made except with the written consent of the Department. The Department, however, reserves the right to require such changes or modifications in the maps, plans, profiles, and specifications as may be considered necessary. The Department further reserves the right to suspend or revoke this permit if in its opinion the best interest of the Commonwealth will be sub served thereby;
5. This permit authorizes the construction, operation, maintenance and normal repair of the permitted structures conducted within the original specifications for the water obstruction or encroachment, and in accordance with the regulations of the Department and term and conditions of this permit. Any repairs or maintenance involving modifications of the water obstruction or encroachment from its original specifications, and any repairs or reconstruction involving a substantial portion of the structure as defined by regulations of the Department shall require the prior written approval and permit of the Department;
6. All construction debris, excavated material, brush, rocks, and refuse incidental to this work shall be removed entirely from the stream channel and placed either on shore above the influence of flood waters, or at such dumping ground as may be approved by the Department;
7. There shall be no unreasonable interference with the free discharge of the river or stream or navigation during construction;
8. If future operations by the Commonwealth of Pennsylvania require modification of the structure or work, or if, in the opinion of the Department of Environmental Protection, the structure or work shall cause unreasonable obstruction to the free passage of floodwaters or navigation, the permittee shall, upon due notice, remove or alter the structures, work or obstructions caused thereby, without expense to the Commonwealth of Pennsylvania, so as to increase the flood carrying capacity of the channel or render navigation reasonably free, easy, and unobstructed, in such manner as the Department may require. No claim shall be made against the Commonwealth of Pennsylvania on account of any such removal or alteration;
9. The permittee shall notify the Department, in writing, of the proposed time for commencement of work at least 15 days prior to the commencement of construction;
10. If construction work has not been completed within the time specified in this permit and the time limit specified in this permit has not been extended in writing by the Department or if this permit has been revoked for any reason, the permittee shall, at his own expense and in a manner that the Department may prescribe, remove all or any portion of the work as the Department requires and restore the watercourse and floodplain to their former condition;
11. The permittee shall fully inform the engineer or contractor, responsible for the supervision and conduct of the work, of the terms, conditions, restrictions and covenants of this permit.

Prior to the commencement of construction, the permittee shall file with the Department in writing, on a form provided by the Department, a statement signed by the permittee and an individual responsible for the supervision or conduct of the work acknowledging and accepting the general and special conditions contained in this permit. Unless the acknowledgment and acceptance have been filed, this permit is void. A copy of this permit and the acknowledgment shall be available at the work site for inspection upon request by an officer or agent of the Department or another Federal, State, County, or municipal agency;

12. The permittee shall operate and maintain the structure or work authorized herein in a safe condition in accordance with the permit terms and conditions and the approved maps, plans, profiles, and specifications;
13. This permit may not be transferred without prior written approval from the Department, such approval being considered upon receipt of the properly executed "Application of Transfer of Permit" form;
14. If and when the permittee desires to discontinue use or abandon the activity authorized herein, he must remove all or part of the structure or work authorized and take other actions as are necessary to protect safety and the environment in accordance with a permit issued by the Department;
15. If the use of explosives in any waterways is required, the permittee shall secure the prior written permit from the Pennsylvania Fish and Boat Commission, pursuant to the Pennsylvania Fish and Boat Code, Act 1980-175 Title 30 Pennsylvania Consolidated Statutes, Section 2906. Requests should be directed to the Pennsylvania Fish and Boat Commission, Division of Environmental Services, 450 Robinson Lane, Bellefonte, PA 16823-9620, telephone 814-359-5140;
16. Permittee shall implement and monitor Erosion and Sedimentation Control Plan prepared in accordance with Chapter 102 so as to minimize erosion and prevent excessive sedimentation into the receiving watercourse or body of water;
17. The project site shall at all times be available for inspection by authorized officers and employees of the Pennsylvania Fish and Boat Commission. Prior to commencement and upon completion of the work authorized by this permit, the permittee shall notify the Pennsylvania Fish and Boat Commission's Northcentral Regional Office, 466, Robinson Lane, Pleasant Gap, PA 16823-5306;
18. The project site shall at all times be available for inspection by authorized officers and employees of the County Conservation District. Prior to commencement and upon completion of the work authorized by this permit, the permittee shall notify the Columbia County Conservation District, 702 Sawmill Rd # 204, Bloomsburg, PA 17815, Telephone 570-784-1310;
19. **Work may not commence until a signed copy of the Acknowledgement of Appraisal of Permit Conditions is received by the Department.** Any work authorized by this permit

conducted prior to the Department's receipt of a signed copy of the Acknowledgement of Appraisal of Permit Conditions is a violation of the Dam Safety and Encroachments Act and the Clean Streams Law, and you may be subject to fines and penalties pursuant to those Acts.

20. SPECIAL CONDITIONS: Permittee shall be responsible for compliance with each of the following special conditions. The Pennsylvania Department of Environmental Protection shall be referred to hereinafter as either "DEP" or the "Department."

SPECIAL CONDITIONS

Water Supplies:

- A. At least 72 hours in advance of beginning any construction activities, the permittee shall directly notify all identified public and private water supplies owners identified in Appendix A of the Well and Spring Monitoring Plan (August 2017).
- B. If the project results in a pollution event or other adverse impact to any public or private water supplies, the permittee shall immediately notify the Department and the potentially affected public or private water supplies of the pollution event, and implement the mitigation measures specified in the Well and Spring Monitoring Plan (August 2017).
- C. In the event the permittee's work causes adverse impacts to a public or private water supply source, the permittee shall address the restoration or replacement of the impacted water supply and mitigate and/or remediate any pollution resulting from the project in accordance with applicable legal requirements.
- D. At least 72 hours in advance of beginning construction activities, the permittee shall notify all owners of surface water intakes within one mile downstream from each stream crossing, including but not limited to, drinking water users and industrial and commercial users.
- E. The permittee shall immediately notify a landowner with a water supply within 450 feet of an HDD of any discharge of pollution associated with the project.
- F. If a public or private drinking water source not previously identified by the permittee is discovered by the permittee during construction, the permittee shall immediately notify the Department of the identified water source and shall notify the source owner of the permittee's construction activities.

Historic, Cultural or Archaeological Resources:

- G. The permittee and its agents shall visually inspect for historic, cultural, and archaeological resources that may be encountered during construction of the project and shall immediately cease earth disturbance activities in the vicinity of the archaeological artifacts upon encountering such potential artifacts.

- H. If potential historic, cultural, and archaeological resources are discovered, the permittee shall immediately notify the DEP Regional Office in the DEP region where the artifacts are found and shall concurrently notify the Pennsylvania Historical and Museum Commission (PHMC) at P.O. Box 1026, Harrisburg, PA 17120-1026, telephone 717.783.8947.
- I. The permittee shall not adversely impact any historic, cultural, and archaeological resources that are identified by the latest published version of the Pennsylvania Inventory of Historical Places and the National Register of Historical Places.
- J. The permittee shall comply with all terms and conditions of the Submerged Lands License Agreement (SLLA) entered into between the Department and the permittee for the natural gas pipeline crossing of Fishing Creek, Susquehanna River, Green Creek and Little Fishing Creek. Said SLLA is incorporated herein by reference.

Temporary Road Crossings:

- K. All temporary road crossings of streams and wetlands must meet all of the following conditions:
 - 1. The permittee shall restore and stabilize all temporary crossing sites immediately after termination of its permitted use.
 - 2. Permittee shall at all times ensure that all culverts have a waterway opening sufficient to adequately convey the normal flow of the watercourse or stream, and that culverts are of sufficient length to extend beyond the toe of the clean rock fill.
 - 3. Permittee shall ensure that culverts are installed in such manner that overtopping of the roadway will occur within the stream channel. This can be accomplished by providing a depressed roadway embankment within the stream channel.
 - 4. Permittee shall minimize excessive fill and excavation of stream banks by utilizing culverts with as large a diameter as possible. The minimum diameter size of a culvert to be used is no less than 12 inches.
 - 5. Road and causeway embankments shall be constructed of clean rock material in order to minimize stream channel sedimentation during placement, removal, and periods of overtopping.
 - 6. All temporary bridges shall be of single span construction from top of bank to top of bank and must be structurally stable.
 - 7. Approach roads to temporary road crossings shall utilize original grades. However, clean rock material or gravel to a depth of six inches above original grade can be utilized for approaches, as necessary.
 - 8. Causeways shall not extend streamward a distance greater than one-half the width of the stream channel.

9. Temporary road crossings shall be kept open and functioning at all times by maintaining the crossings free of debris and other obstructions.
10. The permittee shall promptly repair any damage resulting from increased backwater caused by a temporary road crossing. The permittee shall remove temporary road crossings in the event of high waters to prevent increased backwater.
11. If permittee cannot avoid a wetland crossing, all wetland crossings shall be located at the narrowest practicable point of the wetlands.
12. All wetland crossings shall be installed in accordance with plan specifications.
13. Temporary embankments for roads across wetlands shall be installed to maintain the hydrology of the wetland.
14. The discharge of pollution to any water of the Commonwealth is prohibited.
15. Access roads should not approach the stream channel directly downslope, but should traverse the slope obliquely to prevent high velocity road drainage flows from directly entering the stream channel. Road drainage shall include proper erosion and sediment control Best Management Practices.
16. The permittee shall remove all or any portion of a temporary road crossing upon written notification from the Department in the event the project is causing an adverse impact on public health, safety or the environment or in any other manner violates the requirements of the Pennsylvania Clean Streams Law, Dam Safety and Encroachments Act 25 Pa. Code 105.1 *et seq.*, or both.
17. The permittee shall be responsible for determining and documenting which method of crossing is appropriate for each resource. This documentation shall be provided to the Department with the pre- and post-construction photographs. The permittee shall submit this documentation to the respective DEP Regional Office within ninety (90) days after completion of work under the respective permit.

Site Field Verification, Restoration and Monitoring:

- L. Prior to installation of all pipeline crossings, the permittee shall take new pre-construction photographs at each of the crossing areas depicting the existing conditions. The permittee shall prepare and maintain a record of pre- and post- conditions of each stream and wetland crossing. The permittee shall submit this documentation to the respective DEP Regional Office within ninety (90) days after completion of work under the respective permit.
- M. All wetlands within the project area shall be accurately field-delineated prior to the start of construction activities and until the earth disturbance activities are completed and the site has been stabilized. An acceptable means of field-identification of wetlands includes, but is not limited to, the use of an orange construction safety fence and/or flags.

- N. For a period of 5 years following construction, the permittee shall monitor for secondary impacts to hydrology, i.e., the loss of hydrology, to all watercourses with a drainage area of less than 100 acres, including those watercourses that originate within the project right-of-way (ROW). Reports shall be submitted to DEP in the spring and fall for the first two (2) calendar years following construction and annually for three (3) years thereafter.
1. The monitoring reports shall contain information describing the presence or absence of hydrology at the time of inspection, a narrative comparison to hydrology present in the watercourse during pre-permitting field investigation(s), and photographs of the watercourse.
 2. If the monitoring identifies a diminution or complete loss of hydrology, the permittee shall evaluate whether the activities authorized by this Permit caused the loss of hydrology and submit this evaluation to the Department for review.
 3. If the Department determines that the activities authorized by this Permit are contributing to the loss of hydrology, the permittee shall prepare a written plan to correct the loss of hydrology to the watercourse (Plan). The permittee shall submit the Plan to DEP for review and approval. If DEP identifies any deficiencies with permittee's Plan, then the permittee shall provide DEP a written response to address the stated deficiencies within 15 days of receiving written notice of DEP's deficiencies, unless DEP extends that timeframe in writing.
 4. The permittee shall implement the DEP-approved Plan to address the loss of hydrology to a water course within ninety (90) days of receiving written approval from DEP, unless DEP extends that timeframe in writing.
 5. In the event that loss of hydrology from activities conducted under this Permit cannot be restored, the permittee shall submit a mitigation plan to DEP that sets forth the manner in which full loss of hydrology and associated water will be compensated for (Mitigation Plan). If DEP identifies any deficiencies with the permittee's Mitigation Plan, then the permittee shall provide DEP a written response to address the stated deficiencies within 15 days of receiving written notice of DEP's deficiencies, unless DEP extends that timeframe in writing. The permittee shall implement the DEP-approved Mitigation Plan within 90 days of receiving written approval from DEP, unless DEP extends that timeframe in writing.
 6. Monitoring may be terminated or extended in writing by DEP based upon monitoring reports submitted.
- O. For wetland excavations, the permittee shall segregate the soil horizons and replace the soil horizons to match pre-construction conditions. For areas where bore pits are proposed in or adjacent to wetlands, or if a restrictive layer, including but not limited to clay or fragipans, is encountered during the trench excavation, the permittee shall have a knowledgeable wetlands scientist on the Environmental Inspection Team that shall oversee backfilling of the trench and installation of trench plugs, in order to maintain wetland hydrology.
- P. Topsoil shall be segregated from subsoil in all wetland areas.

- Q. All disturbed areas are to be restored, stabilized and shall be replanted with indigenous plant species. Excess fill from disturbed areas and construction activities shall be located outside of the floodway, floodplain and wetlands. The permittee is responsible for stabilizing any excess materials spoiled onsite or offsite, whether the permittee owns the site or others own the site.
- R. Rock riprap shall be used in the stream bed only where a shear stress analysis has determined that scour protection is necessary to ensure stability of the resource.
- S. A trench in which the pipeline will be laid shall be backfilled in a manner that does not create the formation of a permanent ridge in a streambed or wetland.
- T. Each stream channel shall be restored by using a minimum of six (6) inches of native stream bed material. For streams where riprap is necessary to prevent scour, the riprap shall be depressed sufficiently to allow six (6) inches of native stream bed material over the riprap.
- U. All Palustrine Forested (PFO) and Palustrine Scrub-Shrub (PSS) wetlands within the temporary ROW shall be replanted with woody species present in the wetland prior to the permittee conducting construction activities. The plantings need not mirror pre-construction maturity.
- V. In accordance with the Riparian Area Replanting Plan in Attachment L, Appendix L-2 of the permit application, forested riparian areas in the temporary ROW along watercourses shall be replanted with native tree species for a minimum distance of fifty feet (50') or the Federal Emergency Management Agency (FEMA) mapped 100-year floodplain, whichever is greater, landward from the top of both banks of non-special protection streams and 150 feet (150') from HQ/EV streams, in a similar density as the trees existed prior to the permittee conducting construction activities. The density of replanted trees shall be similar to the density that existed prior to the permittee conducting construction activities but shall provide no less than sixty percent (60%) uniform canopy cover upon maturation and shall be appropriate to the geographic location. Maintenance and inspections shall ensure survival and growth of plantings and protection from competing plants and animals, including noxious weeds and invasive species, over a 5-year establishment period to ensure proper functioning of riparian forest buffers.
- W. Each stream channel shall be restored and properly stabilized upon completion of the associated stream crossing. Where riprap is proposed, the riprap shall be depressed and covered with a minimum of 6-inches of streambed material. The restored streambed elevation shall not exceed the pre-existing streambed elevation.
- X. The permittee shall avoid wetland impacts, to the extent practicable, and minimize any such impacts. The permittee shall immediately restore all disturbed wetland areas to original contours, and replant with indigenous wetland vegetation in accordance with the restoration plans as presented in the permit application. Wetland disturbances shall be minimized and stabilized with indigenous vegetation within ten (10) calendar days of final earthmoving to prevent erosion and provide cover, shading, and food source for aquatic life. Any temporary wetland crossings shall be constructed using low ground pressure machinery and wetland mats or similar devices. Excess fill shall not be deposited in any wetland, watercourse, floodway, floodplain, or other body of water.
- Y. For a period of five (5) years, the permittee shall monitor the stream and wetland plantings in the permanent ROW. Monitoring reports shall be submitted to the respective DEP Regional Office in

the spring (May 15) and fall (November 15) for the first two (2) calendar years following construction and annually (November 15) for three (3) years thereafter.

1. The monitoring reports shall describe the status of the site at the time of each inspection including, but not limited to, an inventory of the surviving plant species and percent areal coverage, photographs of the replacement site with plans showing the location and orientation of each of the photographs, and a written plan to correct any deficiencies identified during the monitoring phase.
 2. Monitoring may be terminated or extended in writing by DEP based upon monitoring reports submitted.
- Z. Permittee shall ensure at least an eighty-five percent (85%) survival rate of wetland plantings during the five (5) year monitoring period. Additional wetland plantings and or reports in subsequent years beyond the initial five (5) years may be required if an eighty-five percent (85%) survivability of planted species is not achieved.
- AA. Streambank disturbance shall be minimized and stabilized with indigenous vegetation within 24 (24) hours upon completion of final earthmoving to prevent erosion and to provide cover, shading, and food source for aquatic life.

Wetland Compensatory Mitigation and Monitoring:

- BB. The permittee shall mitigate for PFO wetlands and PSS wetlands in accordance with their "Permittee-Responsible Compensatory Wetland Mitigation Plan" in Attachment Q of the permit application to compensate for the function and value loss associated with permanently converting 0.59 acres of PFO wetlands to Palustrine Emergent (PEM) wetlands and to account for the temporal loss of 0.45 acres of PFO wetlands temporarily impacted along the ROW during construction.
- CC. For at least five (5) years after the restoration activities are completed, the permittee shall monitor the Permittee Responsible Mitigation Sites. Within sixty (60) days of completing construction, the permittee shall submit "as-built" drawings for the mitigation sites to the DEP. Monitoring reports shall be submitted to the respective DEP Regional Office where the mitigation project(s) is(are) located at a frequency of every six (6) months for the first two (2) years after mitigation site construction and annually for at least three (3) years thereafter.
1. The monitoring reports shall contain information describing the success of the site at the time of inspection, an inventory of the surviving plant species and percent aerial coverage, photographs of each site with plans showing the location and orientation of each of the photographs, and a written plan to correct any deficiencies identified during the monitoring phase.
 2. If the Permittee Responsible Mitigation Sites have not achieved design objectives within the monitoring period, the permittee will undertake remedial work to assure establishment of functional wetland habitats.

- DD. Permittee Responsible Mitigation Sites shall be considered successful when they meet the design objectives.
- EE. Construction of the Permittee Responsible Mitigation Sites shall commence prior to or concurrently with wetland impacts requiring compensation as authorized by this permit.
- FF. Permittee Responsible Mitigation Sites shall be completed within one (1) growing season from the commencement of the activities authorized by this permit. Within thirty (30) days of completion, the permittee shall submit as-built drawings to the respective DEP Regional Office if as-built conditions vary from the original approved plans. If the DEP determines there is a significant difference from the approved plans, revised plans shall be submitted, and a permit amendment may be required.
- GG. The permittee shall provide copies of the recorded deed restrictions or conservation easements for the compensatory wetland mitigation sites within sixty (60) days after permit issuance. Time-stamped copies of the recorded instruments shall be sent to the respective DEP Regional Office.

Horizontal Directional Drilling:

- HH. Fifteen days before Horizontal Directional Drilling (HDD) operations start at an HDD location, the permittee will notify all landowners within 450 feet of HDD alignments, (by US Postal Service Certified Mail and First Class Mail) and offer such landowners the opportunity to have their water supplies within 450 feet of the HDD alignment sampled before, during and after the HDD operation in accordance with the parameters in the Transco Well and Spring Monitoring Plan (August 2017).
- II. The permittee shall construct and operate the HDD crossings at wetlands, streams and floodways in a manner to prevent a release of drilling fluid to "waters of the Commonwealth," as that term is defined in the Clean Streams Law, 35 P.S. § 691.1. The permittee shall immediately notify the Department at (570)327-3636 in the event of an Inadvertent Return and immediately activate and implement the Horizontal Directional Drilling Contingency Plan to prevent any impacts to waters of the Commonwealth and other natural resources.
- JJ. The permittee shall take measures to avoid drilling activities in the vicinity of mine voids and utilities.
- KK. The permittee shall visually monitor the ground surface and within waters of the Commonwealth generally along the path of the HDD while drilling operations are occurring. This monitoring shall include walking, wading and use of a boat, as necessary to effectively observe and monitor for any return to the surface of materials associated with waters of the Commonwealth. If loss of circulation of drilling fluid occurs or drilling fluid pressure is lost, the permittee shall immediately investigate the drilling pathway and general surrounding area for an inadvertent return. If an inadvertent return is discovered, then drilling shall immediately cease.
 - 1. If an inadvertent return occurs, HDD can only resume after a Registered Professional Geologist or Registered Professional Engineer inspects and evaluates the site for the likelihood of another inadvertent return. Drilling will only be allowed to continue following consultation with and written approval from the DEP.

2. For those HDD sites that do not have an approved contingency crossing method, the permittee shall submit a permit modification to the DEP for review and approval prior to commencing an alternate crossing method.

LL. Inadvertent returns that impact or discharge to streams, floodways or wetlands during HDD operations shall be remediated in compliance with the Horizontal Directional Drilling Contingency Plan. If clean-up operations differ from the submitted plans, prior approval from the respective DEP Regional Office will be necessary for any modifications to the Horizontal Directional Drilling Contingency Plan.

MM. HDD additives which are certified for conformance with ANSI/NSF Standard 60 (Drinking Water Treatment Chemicals - Health Effects) are deemed acceptable to DEP, when used in strict compliance with the manner indicated in the certification of the additive. All conditions included as part of the additive's certification must be followed. A current listing of certified drilling fluids is maintained by NSF at <http://www.nsf.org/Certified/PwsChemicals/Listings.asp?ProductFunction=Drilling+Fluid&>. Use of drilling additives certified for conformance with ANSI/NSF Standard 60 does not relieve operators from the requirement to obtain the necessary permits to conduct HDD operations. Use of certified additives does not relieve the operator of liability should an inadvertent return or other pollution of waters of the Commonwealth occur as a result of drilling operations.

Habitat Conservation Plans and Threatened and Endangered Species Protection:

NN. The permittee shall comply with all applicable avoidance and conservation measures and other recommendations by the U.S. Fish and Wildlife Service (USFWS), PA Game Commission (PGC), PA Fish and Boat Commission (PFBC) and PA Department of Conservation and Natural Resources (DCNR) to protect federal and state listed species.

OO. The permittee shall implement all Avoidance Measures identified by the jurisdictional resource agencies for any threatened or endangered species or species of special concern.

PP. Prior to conducting any future maintenance activities on the pipeline or right of way which involve earth disturbance, the Permittee shall conduct a then-current Pennsylvania Natural Diversity Inventory search, shall obtain clearance(s) for any species or resource where a potential impact is identified, provide the avoidance and mitigation plan to the Department prior to initiating such maintenance work and shall implement and adhere to all avoidance measures outlined in such clearance(s).

Seasonal Restrictions:

QQ. The permittee shall not perform any in-stream work in waters listed by the PFBC as trout stocked streams and their tributaries between March 1 and June 15 without the prior written approval from the PFBC's Division of Environmental Services, 450 Robinson Lane, Bellefonte, PA 16823-9620; telephone 814.359.5147.

RR. The permittee shall not perform any in-stream work in waters listed by the PFBC as Class A wild trout fishery streams and their tributaries between October 1 and April 1 without the prior written

approval of the PFBC's Division of Environmental Services, 450 Robinson Lane, Bellefonte, PA 16823-9620; telephone 814.359.5147.

- SS. The permittee shall not perform any in-stream work in waters listed by the PFBC as "other wild trout streams or their tributaries" between October 1 and December 31 without the prior written approval of the PFBC's Division of Environmental Services, 450 Robinson Lane, Bellefonte, PA 16823-9620; telephone 814.359.5147.
- TT. Permittee shall comply with other seasonal restrictions stated in the various Habitat Conservation Plans unless a written variance is issued by the appropriate resource agency.

Miscellaneous:

- UU. Herbicide spraying of wetlands is not authorized by this Permit. Additionally, with the exception of a 10-foot wide area centered over the pipeline, maintenance mowing of wetlands is not authorized by this Permit. The permittee shall place and maintain signs or other demarcation around the boundary of each wetland to clearly delineate the areas where this maintenance is not authorized. The permittee shall place the signs or other demarcations when all restoration work is completed and prior to permit termination.
- VV. This Permit does not convey any real property rights or interests or authorization to trespass on privately-owned riparian land. By accepting this Permit, the permittee certifies that he/she holds title, easement, right or other real interest in the riparian land. Any dispute over ownership of this land is solely a matter for private litigation.
- WW. Riprap and stone used throughout the project, including the construction of causeways and coffer dams, shall be free of fines and silts, or other non-erodible material.
- XX. All temporary water withdrawal intake structures and all appurtenant works shall be removed from the watercourse, body of water, floodway, and floodplains within sixty (60) days of initial placement, unless otherwise extended in writing by the Department.
- YY. Trench plugs shall be placed at each of the following locations:
1. At ten feet (10') from the top of each bank of a stream
 2. At fifty feet (50') from the top of each bank of a stream
 3. At ten feet (10') from the edge of a wetland
 4. At fifty feet (50') from the edge of a wetland
- ZZ. Place a minimum of one (1) trench plug at a maximum spacing of one hundred feet (100') between trench plugs within a wetland. Wetland crossings of less than fifty feet (50') do not require an internal trench plug.
- AAA. If during excavation a groundwater seep is encountered, a trench plug shall be placed at ten feet (10') from each side of the seep.
- BBB. All french drains associated with the project shall be removed or otherwise rendered inoperable prior to final site restoration.

- CCC. Water pumped from any construction area shall be diverted into a sediment trap, basin, or a filter bag discharging into an appropriate vegetated filter area to prevent sediment from being discharged into any waters of the Commonwealth.
- DDD. Open Trench Crossings: The permittee shall construct open trench pipeline crossings in dry conditions by constructing during periods of no water flow and/or by installing stream flow bypass systems (flumed or pumped) through the affected area.
1. Each crossing shall be conducted in an uninterrupted process as quickly as possible. Impacts to waters of the Commonwealth shall be avoided, to the extent practicable, and if not practicable, then minimized in accordance with the permittee's approved plans.
 2. The permittee may cross dry channels, swales and ephemeral streams without the use of stream flow bypass systems if the channel has no flow and the stream crossing and stabilization can be completed in dry conditions and within twenty-four (24) hours. Standby sandbag dams and pumps shall be located on-site and installed in the event of precipitation resulting in channel flow.
- EEE. The permittee shall cross intermittent and perennial streams using trenchless methods (HDD or Direct Boring DB) or through the use of stream flow bypass systems. Bypass systems must stay in use until streambeds and banks are adequately stabilized. Downstream flow must be maintained during the construction.
- FFF. Depth of Pipeline in Stream Bed: The permittee shall locate all pipelines under stream beds with a minimum of three feet (3') of cover between the top of the pipe or encasement and the lowest point in the stream bed, unless the pipeline is in rock, where a minimum cover of one foot (1') shall be provided.
- GGG. Aids to Navigation Plan: The permittee shall implement the approved Aids to Navigation (ATON) Plan as received under the Fish and Boat Code, 30 Pa. C.S. §§ 5121-5124, and 58 Pa. Code Chapter 113, 58 Pa. Code § 113.1 *et seq.*
- HHH. This Permit authorizes specific impacts to waters of the Commonwealth that were specifically described in the permit applications and revisions. Any proposed changes regarding the specific impacts will require a permit modification.
- III. Any additional impacts to waters of the Commonwealth from water obstruction or encroachment activities including, but not limited to, temporary access roads, lay-down areas, staging areas, or temporary work spaces, that have not been specifically identified in the permit application are not authorized by this Permit.
- JJJ. No deviation from the construction methodology or project design that is shown on the approved drawings is authorized under this Permit unless approved by the Department in writing.
- KKK. This Permit does not relieve the permittee of the obligation to comply with any Federal or State laws.

LLL. The permittee shall follow the measures specified in the Environmental Construction Plan (April 2017) during construction.

MMM. The permittee shall maintain a copy of the Environmental Construction Plan (April 2017) on-site at all times during construction. The permittee shall train all staff to use and implement this Plan. The permittee shall produce the Environmental Construction Plan (April 2017) to any Department representative upon request.

NNN. All synthetic erosion control features (e.g., silt fencing, netting, mats), which are intended for temporary use during construction, will be completely removed and properly disposed of in a timely manner. Only natural fiber materials which will degrade over time will be used as permanent erosion control measures, or if used temporarily, may be abandoned in place.

DEPARTMENT OF ENVIRONMENTAL PROTECTION



David W. Garg, P.E.
Environmental Program Manager
Waterways and Wetlands Program

August 30, 2017
Issue Date

Appendix 1 – Project Impacts

Stream Impact Table: Columbia County

Impact Number	Identification		Location				Stream Impacts			Floodway Impacts		Crossing Information				
	Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type ^b	Crossing Method ^c	Trout Identification ^d
3, 4, 5	WW-T91-15001	UNT to West Creek	CWF, MF	41.27300	76.40286	Sugarloaf	Elk Grove	27.46	0.00	0.00340	0.00000	0.00740	0.00002	GAS	V	WT
11, 12, 13, 14	WW-T02-15002	UNT to Fishing Creek	CWF, MF	41.27303	76.39555	Sugarloaf	Elk Grove	94.70	5.57	0.02056	0.00006	0.18740	0.01306	GAS	I	WT
17, 18	WW-T02-15004	UNT to Fishing Creek	CWF, MF	41.27317	76.38875	Sugarloaf	Elk Grove	103.27	32.70	0.01625	0.00305	0.00000	0.00000	GAS	I	WT
19, 20	WW-T02-15003	UNT to Fishing Creek	CWF, MF	41.27327	76.38864	Sugarloaf	Elk Grove	0.00	0.00	0.00000	0.00000	0.02050	0.00106	GAS	IV	WT
21	WW-T02-15005	UNT to Fishing Creek	CWF, MF	41.27319	76.38627	Sugarloaf	Elk Grove	0.00	0.00	0.00000	0.00000	0.00520	0.00000	GAS	IV	WT
24	WW-T91-15003	UNT to Fishing Creek	CWF, MF	41.27345	76.38519	Sugarloaf	Elk Grove	0.00	0.00	0.00000	0.00000	0.00020	0.00000	GAS	IV	WT
25, 26, 27, 28	WW-T02-15006	UNT to Fishing Creek	CWF, MF	41.27303	76.38469	Sugarloaf	Elk Grove	86.77	5.04	0.03583	0.00203	0.07440	0.00409	GAS	I	WT
31, 32, 33, 34	WW-T92-15001B	UNT to Fishing Creek	CWF, MF	41.27292	76.38284	Sugarloaf	Elk Grove	75.13	5.33	0.03822	0.00102	0.09130	0.00606	GAS	I	WT

Impact Number	Identification		Location			Stream Impacts			Floodway Impacts		Crossing Information					
	Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type ^b	Crossing Method ^c	Trout Identification ^d
37, 38 39, 40	WW-T02-15007	Fishing Creek	CWF, MF	41.2729 1	76.3819 7	Sugarloaf	Elk Grove	105.93	5.98	0.2352	0.0137	4.3951	0.1247	GAS	I	WT
41, 42 43, 44	WW-T02-15008	UNT to East Branch Fishing Creek	HQ-CWF, MF	41.2749 7	76.3692 9	Sugarloaf	Red Rock	70.96	10.14	0.0307	0.0047	0.1792	0.0231	GAS	I	WT
45, 46 47, 48	WW-T91-15004	UNT to Coles Creek	CWF, MF	41.2755 8	76.3643 1	Sugarloaf	Red Rock	97.31	11.91	0.0219	0.0025	0.2461	0.0263	GAS	I	WT
51, 52 53, 54	WW-T02-15009	UNT to Coles Creek	CWF, MF	41.2761 5	76.3635 1	Sugarloaf	Red Rock	79.36	7.04	0.0125	0.0009	0.0918	0.0002	GAS	I	WT
57, 58 59, 60	WW-T02-15010	Hess Hollow	HQ-CWF	41.2779 9	76.3527 9	Sugarloaf	Red Rock	82.01	5.29	0.0146	0.0007	0.0488	0.0034	GAS	I	CA
61, 62	WW-T92-15001	UNT to Hess Hollow	HQ-CWF	41.2780 4	76.3527 1	Sugarloaf	Red Rock	90.84	5.18	0.0101	0.0006	0.0000	0.0000	GAS	I	CA, WT
67, 68 69, 70	WW-T02-15011	UNT to Hess Hollow	HQ-CWF	41.2781 2	76.3519 3	Sugarloaf	Red Rock	92.35	5.01	0.0291	0.0015	0.0769	0.0010	GAS	I	CA, WT
73, 74, 75, 76	WW-T02-15013	UNT to Coles Creek	CWF, MF	41.2794 7	76.3437 6	Sugarloaf	Red Rock	90.12	5.20	0.0597	0.0035	0.1989	0.0148	GAS	I	WT
81, 82 83, 84	WW-T02-15014	Ashelman Run	CWF, MF	41.2807 5	76.3349 6	Sugarloaf	Red Rock	87.30	5.02	0.0263	0.0012	0.1869	0.0134	GAS	I	WT
89, 90	WW-T02-15012C	UNT to Coles Creek	HQ-CWF, MF	41.2816 9	76.3292 7	Sugarloaf	Red Rock	82.82	5.40	0.0347	0.0030	0.0000	0.0000	GAS	I	WT

Impact Number		Stream Identification		Location				Stream Impacts				Floodway Impacts		Crossing Information		Trout Identification
Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type	Crossing Method		
91, 92, 93, 94	WW-T02-15012 Coles Creek	HQ-CWF, MF	41.28169	76.32906	Sugarloaf	Red Rock	108.51	11.84	0.05528	0.0048	0.38851	0.0251	GAS	I		WT
99, 100, 101	WW-T92-15002 UNT to Coles Creek	HQ-CWF, MF	41.28192	76.32739	Sugarloaf	Red Rock	61.38	0.00	0.00730	0.0000	0.14057	0.0017	GAS	V		WT
105, 106	WW-T02-15015 UNT to Marsh Run	CWF, MF	41.28332	76.31907	Sugarloaf	Red Rock	0.00	0.00	0.00000	0.0000	0.02320	0.0040	GAS	IV		WT
107, 108, 109	WW-T93-15001 UNT to Marsh Run	CWF, MF	41.28365	76.31644	Sugarloaf	Red Rock	0.27	0.00	0.00030	0.0000	0.04991	0.0011	GAS	V		WT
110, 111, 112, 113	WW-T45-11001 South Branch Roaring Creek	HQ-CWF, MF	40.83992	76.50717	Ralpho	Shamokin	80.44	10.05	0.09467	0.0127	0.05933	0.0073	GAS	I		CA
114, 115, 116, 117	WW-T51-11001 UNT to South Branch Roaring Creek	HQ-CWF, MF	40.84003	76.50668	Cleveland	Shamokin	83.56	10.32	0.00962	0.0012	0.18608	0.0168	GAS	I		CA
120	WW-T47-1101A UNT to South Branch Roaring Creek	HQ-CWF, MF	40.84901	76.50311	Cleveland	Shamokin	0.00	0.00	0.00000	0.0000	0.02200	0.0000	GAS	IV		CA

Impact Number	Identification		Location				Stream Impacts				Floodway Impacts		Crossing Information		Trout Identification	
	Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type		Crossing Method
121, 122, 123, 124	WW-T47-11001	UNT to South Branch Roaring Creek	HQ-CWF, MF	40.84917	76.50304	Cleveland	Shamokin	90.49	10.03	0.0614	0.0068	0.2658	0.0262	GAS	I	CA
125, 126, 127, 128	WW-T44-11001	South Branch Roaring Creek	HQ-CWF, MF	40.85479	76.49852	Cleveland	Mount Carmel	90.09	10.01	0.1294	0.0150	0.5610	0.0492	GAS	I	CA
129, 130, 131, 132	WW-T31-11001	UNT to Mugser Run	HQ-CWF, MF	40.87439	76.48443	Cleveland	Mount Carmel	94.48	10.60	0.0350	0.0051	0.2446	0.0250	GAS	I	WT, ST
133, 134, 135, 136	WW-T04-11001	Mugser Run	HQ-CWF, MF	40.87835	76.48641	Cleveland	Catawissa	84.96	10.69	0.0455	0.0065	2.2649	0.1666	GAS	I	WT, ST
137, 138	WW-T04-11001A	UNT to Mugser Run	HQ-CWF, MF	40.87840	76.48630	Cleveland	Catawissa	33.54	11.24	0.0070	0.0030	0.0000	0.0000	GAS	I	WT, ST
139, 140, 141, 142	WW-T04-11002	UNT to Roaring Creek	TSE, MF	40.88601	76.48611	Cleveland	Catawissa	85.98	12.12	0.0225	0.0027	0.6972	0.0258	GAS	III	WT
143, 144, 145, 146	WW-T28-12005	UNT to Roaring Creek	TSE, MF	40.89054	76.48736	Cleveland	Catawissa	81.14	10.33	0.0251	0.0027	0.2082	0.0234	GAS	I	WT

Impact Number	Identification		Location				Stream Impacts			Floodway Impacts		Crossing Information		Trout Identification ^d		
	Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)		Crossing Type ^b	Crossing Method ^c
147, 148 149, 150	WW-T28-12004	UNT to Roaring Creek	TSF, MF	40.89266	76.48730	Franklin	Catawissa	80.60	10.08	0.0333	0.0039	0.2096	0.0234	GAS	I	WT, ST
153, 154 155, 156	WW-T35-11001	Roaring Creek	TSF, MF	40.89862	76.48735	Franklin	Catawissa	96.30	11.11	0.1072	0.0137	1.4504	0.1372	GAS	I	WT, ST
157, 158 159, 160	WW-T04-12001	Susquehanna River	WWF	40.95034	76.48490	Montour	Catawissa	426.89	10.95	8.8319	0.2303	3.1729	0.0840	GAS	II ^e	WWC W
167	WW-T28-12002	UNT to Montour Run	CWF, MF	40.97476	76.49657	Montour	Catawissa	0.00	0.00	0.0000	0.0000	0.0074	0.0000	GAS	IV	WT
172, 173 174, 175	WW-04-12002	UNT to Montour Run	CWF, MF	40.97652	76.49814	Montour	Catawissa	91.37	10.74	0.0290	0.0066	0.3565	0.0518	GAS	I	None
176	WW-04-12003	UNT to Montour Run	CWF, MF	40.97662	76.49811	Montour	Catawissa	2.55	0.00	0.0065	0.0000	0.0000	0.0000	GAS	V	None
177	WW-04-12004	UNT to Montour Run	CWF, MF	40.97666	76.49816	Montour	Catawissa	32.21	0.00	0.0044	0.0000	0.0000	0.0000	GAS	V	None
178, 179 180, 181	WW-04-12005	UNT to Montour Run	CWF, MF	40.97699	76.49838	Montour	Catawissa	148.71	11.67	0.0700	0.0030	0.1677	0.0259	GAS	I	None

Impact Number		Identification			Location				Stream Impacts				Floodway Impacts		Crossing Information		Trout Identification
Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type	Crossing Method			
184, 185, 186, 187	UNT to Montour Run	CWF, MF	40.97743	76.49869	Montour	Catawissa	84.77	11.10	0.0414	0.0044	0.2131	0.0257	GAS	I			None
190, 191	UNT to Montour Run	CWF, MF	40.98194	76.49921	Montour	Catawissa	49.69	21.10	0.0084	0.0038	0.0000	0.0000	GAS	I			None
192, 193, 194, 195	UNT to Montour Run	CWF, MF	40.98219	76.49921	Montour	Catawissa	139.12	22.18	0.0431	0.0057	0.4293	0.0449	GAS	I			None
196, 197, 198, 199	UNT to Montour Run	CWF, MF	40.98807	76.49796	Montour	Catawissa	100.88	15.64	0.0333	0.0057	0.2332	0.0259	GAS	I			None
200	UNT to Hemlock Creek	CWF, MF	41.00328	76.49409	Hemlock	Bloomsburg	0.00	0.00	0.0000	0.0000	0.0001	0.0000	GAS	IV			WT
201, 202, 203, 204	Hemlock Creek	CWF, MF	41.00323	76.49337	Hemlock	Bloomsburg	83.31	10.55	0.0788	0.0099	0.3256	0.0389	GAS	I			WT
209	UNT to Hemlock Creek	CWF, MF	41.00507	76.49128	Hemlock	Bloomsburg	0.00	0.00	0.0000	0.0000	0.0733	0.0000	GAS	IV			WT
212, 213, 214, 215	UNT to Fishing Creek	CWF, MF	41.01534	76.47647	Hemlock	Bloomsburg	97.72	10.46	0.0496	0.0053	0.1760	0.0150	GAS	I			None

Impact Number ^a		Identification			Location				Stream Impacts				Floodway Impacts		Crossing Information		Trout Identification ^d
Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type ^b	Crossing Method ^c	
218, 219	WW-T70-12010-1	Little Fishing Creek	CWF, MF	41.01918	76.47750	Hemlock	Bloomsburg	51.37	13.85	0.0703	0.0182	0.0000	0.0000	0.0000	GAS	II ^e	WWC W
222, 223	WW-T70-12006	Fishing Creek	WWF, MF	41.01647	76.47557	Hemlock	Bloomsburg	0.00	0.00	0.0000	0.0000	10.6348	0.5133	0.0000	GAS	IV	WWC W
226, 227	WW-T70-12010-1	Little Fishing Creek	CWF, MF	41.02292	76.47919	Hemlock	Bloomsburg	96.68	10.68	0.1583	0.0183	0.0000	0.0000	0.0000	GAS	I	WWC W
228, 229, 230, 231	WW-T70-12012	UNT to Little Fishing Creek	CWF, MF	41.02413	76.48294	Hemlock	Bloomsburg	104.96	12.43	0.0524	0.0051	0.0304	0.2480	0.0304	GAS	I	None
234, 235, 236, 237	WW-T01-12005	UNT to Little Fishing Creek	CWF, MF	41.03610	76.49025	Hemlock	Bloomsburg	81.59	10.58	0.0093	0.0012	0.0230	0.2132	0.0230	GAS	I	None
238	WW-T01-12006	UNT to Little Fishing Creek	CWF, MF	41.03974	76.48685	Hemlock	Bloomsburg	0.00	0.00	0.0000	0.0000	0.1734	0.0000	0.0000	GAS	IV	None
239, 240, 241, 242	WW-T81-13001	Little Fishing Creek	CWF, MF	41.04131	76.48522	Mount Pleasant	Bloomsburg	92.02	10.05	0.1272	0.0143	8.2384	0.7202	0.0000	GAS	I	None
245, 246	WW-T52-13001C	UNT to Little Fishing Creek	CWF, MF	41.04715	76.48764	Mount Pleasant	Bloomsburg	90.36	19.11	0.0085	0.0011	0.0000	0.0000	0.0000	GAS	I	None

Impact Number	Identification		Location				Stream Impacts				Floodway Impacts		Crossing Information		Trot Identification ^d	
	Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type ^b		Crossing Method ^c
247, 248, 249	WW-T52-13001	UNT to Little Fishing Creek	CWF, MF	41.04721	76.48758	Mount Pleasant	Bloomsburg	104.40	26.08	0.0246	0.0071	0.0079	0.0000	GAS	I	None
250, 251, 252, 253	WW-T01-13002	UNT to Little Fishing Creek	CWF, MF	41.06160	76.47782	Mount Pleasant	Bloomsburg	101.88	13.75	0.0759	0.0092	0.2910	0.0322	GAS	I	None
254, 255, 256, 257	WW-T01-13003	UNT to Little Fishing Creek	CWF, MF	41.06261	76.47819	Mount Pleasant	Bloomsburg	97.81	11.58	0.0290	0.0027	0.2497	0.0258	GAS	I	None
258, 259, 260, 261	WW-T01-13004	UNT to Little Fishing Creek	CWF, MF	41.06753	76.47391	Mount Pleasant	Bloomsburg	132.40	69.29	0.1062	0.0149	0.3194	0.0251	GAS	I	None
262, 263, 264, 265	WW-T06-13001	UNT to Deerick Run	CWF, MF	41.07602	76.46863	Mount Pleasant	Bloomsburg	106.64	17.87	0.0148	0.0026	0.2942	0.0347	GAS	I	WT
268, 269, 270, 271	WW-T06-13002	UNT to Deerick Run	CWF, MF	41.07998	76.46833	Mount Pleasant	Bloomsburg	123.40	11.73	0.0299	0.0029	0.2418	0.0291	GAS	I	WT
277, 278	WW-T90-13001	UNT to Deerick Run	CWF, MF	41.08450	76.46796	Mount Pleasant	Bloomsburg	0.00	0.00	0.0000	0.0000	0.1814	0.0454	GAS	IV	WT

Impact Number ^a	Identification		Location				Stream Impacts				Floodway Impacts		Crossing Information		Trout Identification ^d	
	Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type ^b		Crossing Method ^c
283, 284 285, 286	WW-T35-13002	Deerlick Run	CWF, MF	41.094622	76.46469	Mount Pleasant	Bloomsburg	67.07	10.01	0.0231	0.0032	0.1581	0.0209	GAS	I	WT
289, 290 291, 292	WW-T35-13001	UNT to Deerlick Run	CWF, MF	41.09849	76.46082	Mount Pleasant	Bloomsburg	85.86	13.97	0.0913	0.0155	0.2264	0.0351	GAS	I	WT
295, 296 297, 298	WW-T90-14003	UNT to Mud Run	TSE, MF	41.11917	76.45154	Greenwood	Bloomsburg	77.66	12.67	0.0146	0.0028	0.1986	0.0237	GAS	I	WT
302, 303 304, 305	WW-T21-13001	Mud Run	TSE, MF	41.11986	76.45089	Greenwood	Bloomsburg	83.58	10.66	0.0557	0.0064	0.6618	0.0670	GAS	I	WT
306, 307 308, 309	WW-T21-13001A	UNT to Mud Run	TSE, MF	41.12093	76.44939	Greenwood	Bloomsburg	80.37	10.08	0.0445	0.0053	1.2988	0.1036	GAS	I	WT
312, 313 314, 315	WW-T16-14003	Little Green Creek	TSE, MF	41.14463	76.43665	Greenwood	Benton	81.09	10.15	0.0610	0.0073	0.6236	0.0742	GAS	I	WT
319, 320 321	WW-T16-14001	UNT to Green Creek	TSE, MF	41.15234	76.43391	Greenwood	Benton	83.11	0.00	0.0094	0.0000	0.2252	0.0223	GAS	V	WT

Impact Number	Identification		Location				Stream Impacts				Floodway Impacts		Crossing Information		Trout Identification	
	Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type		Crossing Method
326, 327, 328, 329	WW-T16-14002	UNT to Green Creek	TSE, MF	41.18094	76.43643	Greenwood	Benton	69.99	11.78	0.0228	0.0045	0.2029	0.0138	GAS	I	WT
330	WW-T15-14002	UNT to Green Creek	TSE, MF	41.19701	76.43353	Jackson	Benton	0.00	0.00	0.0000	0.0000	0.0277	0.0000	GAS	IV	WT
331, 332, 333, 334	WW-T15-14003	UNT to Green Creek	TSE, MF	41.19815	76.43368	Jackson	Benton	94.25	10.23	0.0269	0.0032	0.2260	0.0256	GAS	I	WT
335, 336	WW-T15-14006	UNT to Green Creek	TSE, MF	41.20650	76.43252	Jackson	Benton	84.87	10.62	0.0293	0.0036	0.0000	0.0000	GAS	I	WT
337, 338, 339, 340	WW-T15-14005	UNT to Green Creek	TSE, MF	41.20657	76.43254	Jackson	Benton	84.03	10.47	0.0245	0.0017	0.1929	0.0238	GAS	I	WT
343, 344, 345, 346	WW-T15-14007	Green Creek	TSE, MF	41.20818	76.42977	Jackson	Benton	98.45	10.06	0.0377	0.0033	0.2435	0.0273	GAS	I	WT
347	WW-T15-14007A	UNT to Green Creek	TSE, MF	41.20823	76.42973	Jackson	Benton	33.27	0.00	0.0083	0.0000	0.0000	0.0000	GAS	V	WT
348, 349, 350, 351	WW-T15-14008	UNT to Green Creek	TSE, MF	41.22369	76.42678	Jackson	Benton	81.54	12.49	0.0120	0.0022	0.2139	0.0245	GAS	I	WT

Impact Number	Identification		Location				Stream Impacts				Floodway Impacts		Crossing Information		Trout Identification	
	Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type		Crossing Method
354, 355, 356, 357	WW-T17-14001	UNT to York Hollow	CWF, MF	41.24264	76.42670	Jackson	Benton	114.32	10.60	0.0266	0.0035	0.2940	0.0350	GAS	I	WT
358, 359, 360, 361	WW-T17-14002	UNT to York Hollow	CWF, MF	41.24974	76.42543	Jackson	Benton	81.55	10.22	0.0166	0.0020	0.2319	0.0235	GAS	I	WT
362, 363, 364, 365	WW-T17-14003	York Hollow	CWF, MF	41.25045	76.42414	Jackson	Benton	99.30	15.27	0.0178	0.0020	0.3372	0.0275	GAS	I	WT
366	WW-T02-14001	UNT to York Hollow	CWF, MF	41.25219	76.42445	Jackson	Elk Grove	0.00	0.00	0.0000	0.0000	0.0017	0.0000	GAS	IV	WT
369, 370, 371, 372	WW-T06-14002	West Creek	CWF, MF	41.26642	76.41164	Jackson	Elk Grove	83.03	10.03	0.0699	0.0093	0.1007	0.0119	GAS	I	WT
373, 374, 375, 376	WW-T06-14001	UNT to West Creek	CWF, MF	41.26719	76.41055	Jackson	Elk Grove	89.31	10.50	0.0403	0.0043	1.2574	0.1110	GAS	I	WT
379	WW-T01-12002	UNT to Frozen Run	CWF, MF	41.00328	76.50411	Hemlock	Millville	0.00	0.00	0.0000	0.0000	0.0327	0.0000	TEMPRD	IV	None
380	WW-T70-12003	Hemlock Creek	CWF, MF	41.00471	76.49467	Hemlock	Bloomsburg	0.00	0.00	0.0000	0.0000	0.0537	0.0000	TEMPRD	IV	WT

Impact Number		Stream Identification		Location			Stream Impacts				Floodway Impacts		Crossing Information		Trout Identification ^d
Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type ^b	Crossing Method ^c	
381	WW-T70-12003A	UNF to Hemlock Creek	41.00343	76.49413	Hemlock	Bloomsburg	0.00	0.00	0.0000	0.000	0.0570	0.000	TEMPR D	IV	WT
382	WW-T70-12006	Fishing Creek	41.01555	76.47570	Hemlock	Bloomsburg	0.00	0.00	0.0000	0.000	0.6912	0.000	TEMPR D	IV	WWC W
383	WW-T70-12006	Fishing Creek	41.02414	76.47776	Mount Pleasant	Bloomsburg	0.00	0.00	0.0000	0.000	0.6069	0.000	TEMPR D	IV	WWC W
384	WW-T81-13001	Little Fishing Creek	41.03924	76.48588	Hemlock	Bloomsburg	0.00	0.00	0.0000	0.000	0.1487	0.000	TEMPR D	IV	WWC W
385	WW-T67-13001	UNF to Green Creek	41.21251	76.42413	Jackson	Benton	0.00	0.00	0.0000	0.000	0.1246	0.000	TEMPR D	IV	WT
386	WW-T67-13002	UNF to Green Creek	41.21243	76.42463	Jackson	Benton	0.00	0.00	0.0000	0.000	0.0630	0.000	TEMPR D	IV	WT
387	WW-T17-14003	York Hollow	41.25027	76.42410	Jackson	Elk Grove	0.00	0.00	0.0000	0.000	0.1229	0.000	TEMPR D	IV	WT
388	WW-T17-14002	UNF to York Hollow	41.24993	76.42415	Jackson	Benton	0.00	0.00	0.0000	0.000	0.0423	0.000	TEMPR D	IV	WT
389	WW-T17-14002	UNF to York Hollow	41.24993	76.42415	Jackson	Benton	0.00	0.00	0.0000	0.000	0.0933	0.000	TEMPR D	IV	WT
390	WW-T04-12001	Susquehanna River	40.95229	76.48139	Montour	Catawissa	0.00	0.00	0.0000	0.000	0.9823	0.000	TEMPR D	IV	WWC W

Impact Number ^a		Identification		Location			Stream Impacts				Floodway Impacts		Crossing Information		Trout Identification ^d
Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Crossing Type ^b	Crossing Method ^c	
391, 392	WW-T70-12006 Fishing Creek	WWF, MF	41.01647	76.47557	Hemlock	Bloomsburg	76.83	0.00	0.0258	0.0000	0.0290	0.0000	WWD	N/A	WWC W
393, 394	WW-T88-004 Susquehanna River	WWF	40.95352	76.46625	Catawissa	Catawissa	95.01	0.00	0.0250	0.0000	0.2046	0.0000	WWD	N/A	WWC W
Totals							65233	7844	11.808	0.570	48.804	3.228			

^a Impact numbers correspond to the impact numbers presented in Attachment E-2 of Transco's Chapter 105 Application.

^b Gas=gas pipeline crossing or floodway impacts, TBC=temporary bridge crossing, TEMPRD = temporary road crossing, WWD=water withdrawal location

^c I=Dry Crossing Method includes Dam & Pump, Flume, or Cofferdam, II=Trenchless Crossing Method - Horizontal Directional Drill, III=Trenchless Crossing Method - Conventional Bore, IV=Floodway Impacts Only; V=Bridge Equipment Crossing

^d PAFBC Designations: ST = Stocked Trout; WT = Wild Trout; CA = Class A Trout; WWCW = WWCW Fisheries

^e This feature will be crossed using a trenchless method. Impacts shown are for the contingency crossing method, which are larger than the primary trenchless method.

Appendix 1 – Project Impacts

Wetland Impact Table: Columbia County

Impact Number ^a	Identification		Location		Wetland Impacts						Crossing Information		State Wetland Classification (Other OR EV)		
	Wetland Identification		Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Impact Area (acres)		Permanent Impact Area (acres)		Crossing Type ^b	Crossing Method ^c			
							PFO	PSS	PEM	PFO	PSS	PEM			
1, 2, 6, 7	W-T02-15001		41.27309	-76.40320	Sugarloaf	Elk Grove	0.0294	0.0000	0.3953	0.0091	0.0000	0.0312	GAS	I	EV
8, 9, 10	W-T02-15003		41.27306	-76.39562	Sugarloaf	Elk Grove	0.0043	0.0000	0.0294	0.0015	0.0000	0.0000	GAS	I	EV
15, 16	W-T02-15004A		41.27322	-76.38923	Sugarloaf	Elk Grove	0.0000	0.0000	0.2459	0.0000	0.0000	0.0553	GAS	I	EV
22, 23	W-T02-15005		41.27313	-76.38558	Sugarloaf	Elk Grove	0.0000	0.0000	0.0433	0.0000	0.0000	0.0030	GAS	I	None
29, 30	W-T02-15006A / W-T02-15006A-1		41.27302	-76.38462	Sugarloaf	Elk Grove	0.0000	0.0000	0.1731	0.0000	0.0000	0.0093	GAS	I	EV
35, 36	W-T02-15007		41.27297	-76.38282	Sugarloaf	Elk Grove	0.0000	0.0000	0.0031	0.0000	0.0000	0.0008	GAS	I	EV
49, 50, 55, 56	W-T02-15009		41.27609	-76.36372	Sugarloaf	Red Rock	0.0286	0.0000	0.1919	0.0033	0.0000	0.0250	GAS	I	EV
63, 64, 65, 66	W-T02-15010		41.27802	-76.35236	Sugarloaf	Red Rock	0.0686	0.0000	0.3599	0.0119	0.0000	0.0415	GAS	I	EV
71, 72	W-T02-15013A		41.27941	-76.34417	Sugarloaf	Red Rock	0.0000	0.0000	0.0596	0.0000	0.0000	0.0030	GAS	I	EV
77, 78, 79, 80	W-T02-15014		41.28065	-76.33580	Sugarloaf	Red Rock	0.0232	0.0000	0.2244	0.0167	0.0000	0.0080	GAS	I	EV
85, 86, 87, 88	W-T02-15015		41.28118	-76.33222	Sugarloaf	Red Rock	0.0458	0.0000	0.4292	0.0011	0.0000	0.0204	GAS	I	EV
95, 96, 97, 98	W-T02-15012		41.28174	-76.32875	Sugarloaf	Red Rock	0.0284	0.0000	0.3492	0.0034	0.0000	0.0183	GAS	I	EV

Impact Number ^a	Identification		Location				Wetland Impacts						Crossing Information		State Wetland Classification (Other OR BV)
	Wetland Identification		Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Impact Area (acres)		Permanent Impact Area (acres)		Crossing Type ^b		Crossing Method ^c		
							PFO	PSS	PEM	PFO	PSS	PEM			
102, 103, 104	W-T02-15016	41.28332	-76.31915	Sugarloaf	Red Rock	0.0012	0.0000	0.3033	0.0000	0.0000	0.0250	0.0000	GAS	I	EV
118, 119	W-T49-11002	40.84012	-76.50646	Cleveland	Shamokin	0.0000	0.0000	0.0841	0.0000	0.0000	0.0143	0.0000	GAS	I	EV
161, 162	W-T04-12001	40.95268	-76.48555	Montour	Catawissa	0.0660	0.0000	0.0000	0.0456	0.0000	0.0000	0.0000	GAS	II*	None
163, 164, 165, 166	W-T74-12001	40.96518	-76.49136	Montour	Catawissa	0.0007	0.0000	0.0026	0.0615	0.0000	0.0001	0.0000	GAS	I	None
168, 169, 170, 171	W-T04-12002	40.97514	-76.49704	Montour	Catawissa	0.1789	0.0000	0.3721	0.2423	0.0000	0.0303	0.0000	GAS	I	None
182, 183	W-T04-12004 / W-T04-12004-1	40.97704	-76.49856	Montour	Catawissa	0.0000	0.0562	0.0000	0.0000	0.0060	0.0000	0.0000	GAS	I	None
205, 206, 207, 208	W-T70-12005	41.00337	-76.49354	Hemlock	Bloomsburg	0.0000	0.0442	0.0937	0.0000	0.0086	0.0128	0.0000	GAS	I	None
210, 211	W-T70-12009	41.00477	-76.48944	Hemlock	Bloomsburg	0.0000	0.0000	0.0060	0.0000	0.0000	0.0008	0.0000	GAS	I	None
216, 217	W-T70-12010A-1 / W-T70-12010A-2	41.01559	-76.47637	Hemlock	Bloomsburg	0.0000	0.0000	0.0535	0.0000	0.0000	0.0192	0.0000	GAS	II	None
220, 221, 224, 225	W-T70-12008	41.01926	-76.47746	Hemlock	Bloomsburg	0.0000	0.0000	0.0111	0.0000	0.0000	0.0007	0.0000	GAS	II	None
232, 233	W-T70-12007	41.02296	-76.47901	Mount Pleasant	Bloomsburg	0.0000	0.0000	0.0194	0.0000	0.0000	0.0033	0.0000	GAS	I	None
	W-T01-12004	41.03608	-76.49024	Hemlock	Bloomsburg	0.0000	0.0000	0.0057	0.0000	0.0000	0.0009	0.0000	GAS	I	None

Impact Number	Wetland Identification	Location			Wetland Impacts						Crossing Information		State Wetland Classification (Other OR EV)	
		Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Impact Area (acres)		Permanent Impact Area (acres)		Crossing Type	Crossing Method			
						PFO	PSS	PEM	PFO	PSS	PEM			
243, 244	W-T61-13001A	41.04254	-76.48574	Mount Pleasant	Bloomsburg	0.0000	0.0000	0.0342	0.0000	0.0000	0.0021	GAS	I	None
266, 267	W-T06-13002	41.07648	-76.46854	Mount Pleasant	Bloomsburg	0.0000	0.0000	0.0421	0.0000	0.0000	0.0156	GAS	I	EV
272, 273														
274, 275	W-T06-13003	41.07985	-76.46839	Mount Pleasant	Bloomsburg	0.0173	0.0058	0.0227	0.0229	0.0000	0.0031	GAS	I	EV
276														
279, 280	W-T06-13005	41.08488	-76.46801	Mount Pleasant	Bloomsburg	0.0000	0.0000	0.0822	0.0000	0.0000	0.0104	GAS	I	EV
281, 282	W-T63-14001	41.09401	-76.46494	Mount Pleasant	Bloomsburg	0.0000	0.0000	0.1131	0.0000	0.0000	0.0190	GAS	I	None
287, 288	W-T35-13002	41.09474	-76.46456	Mount Pleasant	Bloomsburg	0.0000	0.0000	0.0715	0.0000	0.0000	0.0023	GAS	I	EV
293, 294	W-T35-13001	41.09860	-76.46068	Mount Pleasant	Bloomsburg	0.0000	0.0000	0.1497	0.0000	0.0000	0.0224	GAS	I	EV
299, 300	W-T21-13002	41.11914	-76.45155	Greenwood	Bloomsburg	0.0000	0.0292	0.0000	0.0000	0.0029	0.0000	GAS	I	EV
301	W-T21-13001	41.11985	-76.45111	Greenwood	Bloomsburg	0.0000	0.0000	0.0044	0.0000	0.0000	0.0000	GAS	IV	EV
310, 311	W-T90-14005A / W-T90-14005A-1	41.12087	-76.44933	Greenwood	Bloomsburg	0.0000	0.0000	0.0017	0.0000	0.0000	0.0006	GAS	I	EV
316, 317	W-T16-14001A / W-T16-14001A-1	41.14475	-76.43632	Greenwood	Benton	0.0000	0.0000	0.1113	0.0000	0.0000	0.0101	GAS	I	EV
318	W-T44-14001A	41.14544	-76.43575	Greenwood	Benton	0.0000	0.0000	0.0222	0.0000	0.0000	0.0000	GAS	IV	EV
322, 323, 324, 325	W-T10-14001	41.18100	-76.43630	Greenwood	Benton	0.0000	0.0566	0.0207	0.0000	0.0043	0.0077	GAS	I	EV

Impact Number ^a	Wetland Identification		Location		Wetland Impacts						Crossing Information		State Wetland Classification (Other OR EV)		
	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Impact Area (acres)			Permanent Impact Area (acres)			Crossing Type ^b	Crossing Method ^c			
					PFO	PSS	PEM	PFO	PSS	PEM					
341, 342	41.20803	-76.43026	Jackson	Benton	0.0000	0.0000	0.0075	0.0000	0.0000	0.0068		GAS	I	EV	
352, 353	41.22367	-76.42675	Jackson	Benton	0.0000	0.0000	0.0276	0.0000	0.0000	0.0044		GAS	I	EV	
367, 368	41.25240	-76.42429	Jackson	Elk Grove	0.0000	0.0000	0.0695	0.0000	0.0000	0.0143		GAS	I	EV	
377, 378	41.26733	-76.41009	Jackson	Elk Grove	0.0000	0.0000	0.0196	0.0000	0.0000	0.0048		GAS	I	EV	
Totals					0.4924	0.1920	4.2558	0.4193	0.0218	0.4468					

^a Impact numbers correspond to the impact numbers presented in Attachment E-2 of Transco's applications.

^b GAS=gas pipeline, TEMPRD=temporary roadway crossing, AG=agricultural crossing

^c I = Open Cut, II = Trenchless Crossing Method - Horizontal Directional Drill, III = Trenchless Crossing Method - Conventional Bore, IV = Temporary Matting

^d This feature will be crossed using a trenchless method. Impacts shown are for the contingency crossing method, which are larger than the primary trenchless method.

^e This feature will be crossed using a trenchless method. Impacts shown are for the contingency crossing method, which are larger than the primary trenchless method.

Appendix 1 – Project Impacts

Locustrine Impact Table: Columbia County

Impact Number ^a	Identification		Location			Locustrine Impacts				Crossing Information				
	Stream Identification	Stream Name	Chapter 93 Designated Use	Latitude	Longitude	Municipality (Township)	Quadrangle	Temporary Crossing Length (feet)	Permanent Crossing Length (feet)	Temporary Impact Area (acres)	Permanent Impact Area (acres)	Crossing Type ^b	Crossing Method ^c	Trout Identification ^d
151, 152	WB-T35-11001	Unnamed Pond	None	40.898225	-76.487322	Franklin	Catawissa	152.58	42.56	0.0554	0.0083	GAS	I	None
188, 189	WB-T89-001	Unnamed Pond	CWF, MF	40.981657	-76.499342	Montour	Catawissa	92.90	78.19	0.1224	0.0175	GAS	I	None
Totals								245.48	120.75	0.1778	0.0258			

^a Impact numbers correspond to the impact numbers presented in Attachment E-2 of Transco's Chapter 105 Application.

^b Gas= gas pipeline crossing or floodway impacts, TBC=temporary bridge crossing, TEMPRD = temporary road crossing

^c I=Dry Crossing Method includes Dam & Pump, Flume, or Cofferdam, II=Trenchless Crossing Method - Horizontal Directional Drill, III=Trenchless Crossing Method - Conventional Bore, IV=Floodway Impacts Only; V=Bridge Equipment Crossing

^d PAFBC Designations: ST = Stocked Trout; WT = Wild Trout; CA = Class A Trout

Permit No. E19-311

ACKNOWLEDGMENT OF APPRISAL OF PERMIT CONDITIONS

I,

(Permittee name)

and

(Name address and telephone of individual responsible for supervision of work)

acknowledge and accept the general and special conditions of Permit No. E19-311, issued to

**Transcontinental Gas Pipe Line Company, LLC
2800 Post Oak Boulevard, Level 6, Houston, TX 77056**

which authorizes the permittee to:

construct, operate and maintain approximately 5 miles of thirty-inch (30") diameter pipeline and appurtenant structures associated with the Columbia County portion of the Atlantic Sunrise Pipeline Project Central Penn Line North (CPLN) and approximately 34.3 miles of forty-two-inch (42") diameter pipeline and appurtenant structures associated with the Columbia County portion of the Atlantic Sunrise Pipeline Project Central Penn Line South (CPLS). The combined (CPLN and CPLS) project impacts in Columbia County include a total of 6523 linear feet of temporary stream impacts, a total of 784 linear feet of permanent stream impacts, 4.9 acres of temporary floodway impacts, 0.3 acres of permanent floodway impacts, 4.94 acres of temporary impacts to Palustrine Emergent (PEM), Palustrine Forested (PFO) and Palustrine Scrub-Shrub (PSS) wetlands, and 0.89 acres of permanent impacts to PEM, PFO and PSS wetlands, 0.18 acres of temporary lacustrine impacts, and 0.03 acres of permanent lacustrine impacts. Specific impacts are shown in Appendix 1- Project Impacts. The permittee is required to compensate for the proposed project impacts in Columbia County by providing 2.03 acres of successful wetland creation and wetland enhancement at the Swatara Creek mitigation site located in Pine Grove Township, Schuylkill County off of State Route 443 (40° 31' 50.52" N, 76° 24' 51.10" W). This mitigation site shall compensate for the proposed permanent project impacts in Columbia, Northumberland and Schuylkill Counties by creating a total of 5.36 acres of wetland creation and enhancement of existing wetlands. This Permit also authorizes the construction of the Briar Creek Mitigation Site for associated impacts in Luzerne County. 8.94 acres of wetland enhancement and vegetative management shall be constructed for the proposed 3.76 acres of impact within Luzerne County. Briar Creek Mitigation Site is located along

Fowlersville Road in North Centre Township, Columbia County (41° 3' 20.4" N, 76° 20' 4.7" W).

The Columbia County portion of the proposed Central Penn Line North and the Central Penn Line South project starts at 0.35 miles south on Hynick Road from the intersection of Hynick Road and SR 118 (Red Rock, PA Quadrangle N: 40°, 17', 2.17"; W: 76°, 18', 48.68") and ends at 0.22 mile north on Happy Valley Road from the intersection with Monroe Drive (Shamokin, PA Quadrangle N: 40°, 50', 23.7"; W: 76°, 30', 27.13") Sugarloaf, Cleveland, Franklin, Montour, Hemlock, Mount Pleasant, Orange, Greenwood, and Jackson Townships, Columbia County, PA.

(Permittee signature)

(Date)

(Signature of individual responsible
for supervision of work)

(Date)

Return To:

Department of Environmental Protection
Northcentral Regional Office
Waterways and Wetlands Program
208 West Third Street Suite 101
Williamsport, PA 17701-6448

**WATER OBSTRUCTION AND ENCROACHMENT PERMIT
COMPLETION REPORT**

Project Location:

County Columbia

Municipality Sugarloaf, Cleveland, Franklin, Montour, Hemlock, Mount Pleasant, Orange,
Greenwood, and Jackson Townships

I (We) hereby certify that the _____ work authorized by the above referenced permit

was completed on _____ in accordance with the plans approved and that all
(Date)

unauthorized obstructions have been removed.

Name: _____
(Typed or printed)

Signature: _____

Title: _____

Firm: _____

Date: _____

Return To:

Department of Environmental Protection
Northcentral Regional Office
Waterways and Wetlands Program
208 West Third Street Suite 101
Williamsport, PA 17701-6448