



State of New Jersey
 Highlands Water Protection and Planning Council
 100 North Road (Route 513)
 Chester, New Jersey 07930-2322
 (908) 879-6737
 (908) 879-4205 (fax)
 www.highlands.state.nj.us



HIGHLANDS RMP CONSISTENCY DETERMINATION REVIEW (REVISED**)**

PROJECT INFORMATION		
Project Name: <u>Amended</u> Tennessee Gas Pipeline Company 300 Line Project		Date: <u>December 21, 2011</u>
Name of Applicant: Tennessee Gas Pipeline Company		
Areawide WQMP: No	WMP: No	
Municipality: Vernon and West Milford Townships and Ringwood Borough	County: Sussex and Passaic	
Exempt project? Subject of this review	Project specific amendment? No	WMP review? No
NJDEP Activity #: CSD090014	HCAA#: N/A - HAD Exemption #11 application is subject of review.	
Lot and Block, if applicable: Numerous		
Sewer Service Area/WWTP Facility: N/A		
Sewer Service Area/WWTP Facility: New <input type="checkbox"/> Existing <input type="checkbox"/> <i>If existing provide the following:</i>		
Proposed Change in Service Area or Wastewater Flow?: No		
NJPDES #:	Permit Discharge (MGD):	
Type of Discharge: GW <input type="checkbox"/> SW <input type="checkbox"/>	Total Proposed Service Area (acres):	
Total Existing Service Area (acres): N/A		
Description of Project:		
<u>Project History</u>		
<u>This revised Consistency Determination addresses the application submitted by the Tennessee Gas Pipeline Company on July 8, 2011 for an amendment to an existing Highlands Applicability Determination (HAD) for the 300 Line Project issued by NJDEP for the Preservation Area, and to the exemption determination issued by the Highlands Council for the Planning Area. The submitted Amendment has two related but independent components – Attachment A and Attachment B. Attachment A addresses modifications made to the 300 Line Project within the Highlands Region since the Highlands Council and NJDEP issued a coordinated determination that the project was exempt from the Highlands Act under Exemption #11 as an upgrade of public utility lines, rights of way, or systems, by a public utility and the project was consistent with the goals and purposes of the Highlands Act. Attachment B (which is the subject of a separate Consistency Determination report) contains the application for the proposed Northeast Upgrade Project (briefly described below.)</u>		
<u>The original submittal was subject to public comment, with an ultimate close of public comments on October 9, 2009. The Highlands Council approved Resolution #2009-56 on January 11, 2010, incorporating the Staff Consistency Determination Report, finding that the 300 Line Project as then proposed met the Highlands Act requirements of Exemption #11 for the Planning Area, and that the 300 Line Project as then proposed was “consistent with the goals and purposes of the Highlands Act” as required for Exemption #11 in the Preservation Area, in support of NJDEP decision-making regarding the project. In both cases, conditions were imposed upon and agreed to by the applicant. These conditions were specifically related to ensure consistency with the goals and purposes of the Highlands Act as required by Exemption #11 in the Highlands Act and the conditions were separate and apart from any other conditions imposed by any other agency under their separate statutory authority.</u>		
<u>Attachment B contains the application for the proposed Northeast Upgrade Project, which involves the construction of approximately 7.6 miles of new 30-inch diameter underground natural gas pipeline. (Note: a 1.29-mile long segment of the Northeast Upgrade project was previously addressed by the Highlands Exemption determinations issued for the 300 Line project, but is now proposed to be separated from the 300 Line project and incorporated within Attachment</u>		

B, the Northeast Upgrade Project.) This Revised Consistency Determination only addresses Attachment A. The project modifications are summarized in an addendum to this Consistency Determination (see the page following this "Description of Project" section), and where appropriate, these modifications are reflected within this amended Consistency Determination in track changes view (such that reviewers can readily discern changes made to the Consistency Determination from the Consistency Determination that was previously prepared and approved by the Highlands Council for this project). A separate Consistency Determination has been prepared for Appendix B (the proposed Northeast Upgrade Project). Please note that the Highlands Council is requesting public notice on each project concurrently but reserves the right to issue findings and decisions on each project as separate proposals.

Overview of Modified Project

The existing Tennessee Gas Pipeline Company's "300 Line" is a 24-inch underground natural gas pipeline system that traverses northern Pennsylvania and northwestern New Jersey. The existing maintained right-of-way (ROW) is 50-feet in width in the New Jersey segment. The specific portion of the proposed project in New Jersey ~~would include~~ increasing the capacity of the existing natural gas pipeline system through construction of approximately ~~4715.98~~ miles of new 30-inch underground natural gas pipeline, which Tennessee Gas is proposing constitutes an upgrade under Exemption #11 of the Highlands Water Protection and Planning Act (Highlands Act). The ~~proposed~~ pipeline loop in New Jersey is known as "the 325 Loop Segment" (the term "loop" refers to a segment of pipeline installed adjacent to an existing pipeline and connecting to it at both ends). Approximately ~~4615~~ miles of the 325 Loop Segment ~~would be~~ located in the Highlands Region (approximately ~~4410~~ miles in the Preservation Area and five miles in the Planning Area). The proposed 325 Loop Section ~~would commence~~ in Wantage Township (outside of the Highlands Region) and ~~extends~~ into the Highlands Region through Vernon (8.7 miles) and West Milford (~~6.754~~ miles) Townships; ~~(the revised terminus is located west of the Monksville Reservoir in West Milford Township) terminating in Ringwood Borough (0.6 miles).~~ The existing pipeline ROW in the Highlands Region consists of approximately 103 acres. The new proposed land disturbance would consist of approximately ~~230232.24~~ acres (approximately ~~8281~~ acres within the existing ROW and approximately ~~148151~~ acres outside of the existing ROW). Of the ~~148151~~ acres of new disturbance outside of the ROW, there would be approximately ~~3938~~ acres of permanent land disturbance. The project ~~has been submitted to received approval from~~ the Federal Energy Regulatory Commission (FERC) ~~for review and is under construction.~~

A total of six (6) private access roads were identified in the September 2009 Highlands Exemption application. Tennessee Gas performed a constructability analysis and based on constraints associated with wetlands, rare species habitat and topography, an additional 16 private access roads were added and one original was removed. In all, a total of 21 private access roads located within the Highlands Region have been identified for use during construction of the 325 Loop Segment. The applicant states that the majority of the private access roads will require minimal modification and that all other roadways proposed for access during construction are public roadways and will not require modification or improvement for use.

As a condition of approval, the Highlands Council requires that the previously approved Comprehensive Mitigation Plan (CMP) shall be modified to assess the potential impacts of foreseeable but low-probability events, such as major weather or other catastrophic events, including but not limited to impacts such as slope failure, failure of sediment and erosion control measures, and silt and mud deposition into lakes and other waterbodies. In addition, the CMP shall include a contingency plan to address such foreseeable and low-probability events and their impacts, including pre-planning, event management and restoration and will include reporting protocols to NJDEP and Highlands Council.

The applicant will provide a copy of this CMP to the FERC. The FERC is currently reviewing the revised application for a certificate of public convenience and necessity for the proposed project and the FERC is reviewing that certificate application pursuant to the applicable provisions of the Natural Gas Act and the FERC's regulations. Construction of the project and the implementation of the CMP are contingent upon issuance by the FERC of the requested certificate of public convenience and necessity for the project. Following FERC issuance of a certificate order authorizing the project, the applicant will file with the FERC an Implementation Plan for the Project, which will include all applicable construction, restoration and monitoring requirements, techniques, and standards, including the requirements of the referenced CMP. Once the Implementation Plan for the project is approved by the FERC, the applicant will be required to comply with all provisions of that Implementation Plan, as well as with all requirements and conditions of

the certificate order. Compliance with the Implementation Plan will be monitored by environmental inspectors from the FERC, as well as the applicant's Environmental Inspectors (EIs).

This project review is in support of decision making by both the Highlands Council (in the Planning Area) and NJDEP (in the Preservation Area in consultation with the Highlands Council) regarding whether this application meets the standard of eligibility for Exemption #11 of the Highlands Act ("the ... upgrade of public utility lines, rights of way, or systems, by a public utility...), which mandates that a Highlands Act exemption is only to be granted "provided that the activity is consistent with the goals and purposes of" the Highlands Act. The Highlands Council uses the resource policies, objectives and requirements of the Regional Master Plan as a general measure of whether a project meets this threshold, applying a weight of evidence approach. Broad and extensive consistency with the substantive requirements as a whole must be found, but complete consistency with each individual requirement of the RMP is not required. This standard of review is based on the Act's reference to the goals and purposes of the Act rather than consistency with the RMP itself.

Overview of September 2009 Application and Resulting Actions

The applicant had originally submitted a Highlands Applicability Determination (HAD) for Exemption #11 on March 6, 2009 to the NJDEP and copied the Highlands Council. The Highlands Council released a staff draft Consistency Determination for public review and comment on May 11, 2009 with an ultimate close of public comments on June 29, 2009. Since that original submittal, and based upon the findings of the Highlands Council staff draft Consistency Determination, further input from the Highlands Council staff, NJDEP, the public and other agencies, the applicant ~~has~~ revised the proposed project (submitted on September 10, 2009) to reduce the environmental impacts. The revised submittal was subject to public comment, with an ultimate close of public comments on October 9, 2009.

In 2009, ~~the~~ Highlands Council ~~is~~ addressing this revised proposal as an amended submittal and ~~is~~ soliciting further public input in accordance with the established protocols for Consistency Determination review, due to the significant changes subsequent to the close of public comments on the original application. Specifically, the revised application:

- Includes~~d~~ those portions of the proposed project located within the Planning Area (the original submittal had excluded the Planning Area);
- Includes~~d~~ the development of a Comprehensive Mitigation Plan that ~~will~~ would be designed to avoid, minimize and mitigate adverse impacts to Highlands Region resources;
- Committed~~s~~ to implementation of the Comprehensive Mitigation Plan to achieve no net loss of Highlands resources where avoidance and minimization are not sufficient to avoid impacts;
- Includes~~d~~ the provision that the applicant ~~will~~ would coordinate with the Highlands Council throughout the construction phase of the project. Further, the applicant committed to providing the Council with an annual monitoring report for three years following construction or until such time as all restoration efforts are deemed successful by the Highlands Council.
- Includes~~d~~ application of Exemption #11 of the Highlands Act to include routine post-construction repair and maintenance on the Tennessee Gas Pipeline Company 300 Line. These repair and maintenance activities include, but are not limited to, pipeline inspections, correction and repairs of anomalies, hydrostatic tests, excavation for external inspections, replacement of pipeline coating, replacement of pipeline segments, installation and maintenance of cathodic (i.e., metal corrosion) protection, maintenance of mainline valves, maintenance of pig launchers and receivers, and mowing and clearing of the ROW. Such activities are required to adhere to the FERC's maintenance requirements in Section 380.15 of the FERC regulations. Following is a brief description of the proposed project elements:
 - **Pipeline Facilities** – The proposed 325 Loop Segment would be located at a maximum 25-foot offset from the existing 300 Line pipeline within the existing ROW where feasible. Additional new permanent ROW would be required (see below – Existing and Proposed Permanent ROW) along with temporary workspace to facilitate construction of the pipeline.
 - **Existing and Proposed Permanent ROW** – The existing 300 Line pipeline is situated within a 50-foot

permanent ROW. The applicant proposes~~d~~ to maintain a maximum 25-foot separation between the existing pipeline and the proposed 325 Loop segment where feasible. This would result in a 75-foot wide permanent easement. ~~Discussions with landowners are in progress, including governmental agencies regarding preserved open space along the pipeline ROW.~~

- **Temporary Construction Workspace** – The applicant ~~is~~ proposed~~ing~~ to add an additional 50 feet of temporary ROW for temporary construction workspace, which would result in a “typical 100-foot wide construction ROW.” The applicant indicates that construction ROW width would be reduced in wetland areas, steep slopes, stream crossings and in some residential areas to reduce impacts and may be extended to 125 feet in agricultural areas to facilitate topsoil segregation. In addition to the typical 100-foot wide construction ROW, the applicant states that additional temporary workspace areas would be required to facilitate construction in areas that feature wetlands, steep slopes and bedrock outcroppings as well as road, railroad and utility crossings. The applicant indicates that these additional temporary workspaces would be required to support specialized construction techniques such as drilling or boring. According to the applicant, these workspaces would typically range from 25 to 100 feet depending on existing conditions. The applicant indicates that disturbed areas would be restored to pre-construction conditions upon completion of construction activities, in compliance with FERC requirements.
- **Access Roads** – Access roads would be required during construction for movement of personnel, equipment and material to the pipeline ROW. ~~The applicant states that it will be capable of constructing the project using existing public roads and six existing private roads (two in Preservation Area and four in Planning Area) and that minor improvements such as re-grading and vegetation trimming will be required.~~
- **Pipe and Equipment Storage Yard** – The applicant states~~d~~ that it would utilize one area, approximately 35 acres in size, for pipe storage and staging areas during construction. It is stated that two possible locations have been identified (Area A and Area B). Area A is located off Burnt Meadow Road in the Hewitt village area of West Milford and is within the confines of a previously disturbed quarry. Area B is located off Greenwood Lake Turnpike in West Milford and is also located within a previously disturbed area. Upon completion of construction activities, the applicant states that the selected site would be restored to pre-construction conditions.
- **Pig Receiver** – The applicant proposed~~s~~ to construct a “pig receiver” (i.e., a pipeline component used for removing an inline inspection tool or other device from a pressurized pipeline) in a previously disturbed area in Ringwood. The area would require a temporary workspace area of approximately 0.60 acres. Following construction, the pig receiver would lie within the permanent ROW easement.
- **Main Line Valves** – The applicant proposed~~s~~ to install tie-in valves at the beginning and the end of the pipeline loop, and install three main line valves along the pipeline as referenced in the Project Narrative in the HAD application..

In addition to the construction elements discussed above, the amended proposed project integrates a **Comprehensive Mitigation Plan (CMP)**. ~~(Note: CMP revised in October 2011):~~ The purpose of the CMP is to set forth a plan of construction and restoration by which project implementation would avoid, minimize and mitigate any impacts to Highlands Resources so that there will be no net loss of such resources, consistent with the Highlands Regional Master Plan (RMP). It ~~will~~ provides an approach and process for identifying the specific resource issues, the means to avoid and minimize the specific impact, and ultimately, the ability to define ways that would help mitigate unavoidable environmental impacts. The combined effect of these plans is intended to effectively deal with the proposed project as a whole unit. The applicant also indicates that Environmental Inspectors (EIs) would be on-site during construction activities to ensure compliance with the CMP, as well as requirements of all applicable federal, State and local environmental permits and approvals

The applicant ~~will~~ was required to provide a copy of this CMP to the FERC. The FERC ~~is currently~~ review~~ing~~ the application for a certificate of public convenience and necessity for the proposed project ~~and the FERC is reviewing that certificate application~~ pursuant to the applicable provisions of the Natural Gas Act and the FERC’s regulations. Construction of the project and the implementation of the CMP ~~are~~ were contingent upon issuance by the FERC of

the requested certificate of public convenience and necessity for the project. Following FERC issuance of a certificate order authorizing the project, the applicant ~~will file~~ with the FERC an Implementation Plan for the Project, which ~~will include~~ all applicable construction, restoration and monitoring requirements, techniques, and standards, including the requirements of the referenced CMP. Once the Implementation Plan for the project ~~is was~~ approved by the FERC, the applicant ~~will be was~~ required to comply with all provisions of that Implementation Plan, as well as with all requirements and conditions of the certificate order. Compliance with the Implementation Plan ~~will be is~~ monitored by environmental inspectors from the FERC, as well as the applicant's EIs.

To ensure completion of the individual plans of the CMP, the applicant ~~will has~~ posted a performance bond, ~~with in~~ the dollar amount ~~to be~~ determined by the Highlands Council based on information from the consultant. Commitment to development and implementation of the CMP ~~would be is~~ a condition of the Highlands Act Exemption #11. On June 10, 2010 the applicant and the Highlands Council executed a Performance Agreement. The Performance Agreement identifies the land and financial mitigation to which the applicant committed to for impacts resulting from the 300 Line project to achieve consistency with the goals, policies and objectives of the Highlands Regional Master Plan.

The applicant filed a "Final Environmental Report" with FERC in July 2009. This report is a compendium of 13 resource reports that describe existing conditions/resources of the existing and proposed ROW. Appendix O of the report provides the alignment sheets for all the project lines including the proposed 325 Loop Section that is the subject of this review. Appendix D of the Environmental Report conceptually describes the "Environmental Construction Plan" (ECP) that the applicant developed specifically for this project. The ECP describes the basic environmental construction techniques that Tennessee Gas (and its contractors) will implement during and following construction and maintenance to protect the environment and to minimize potential effects of the pipeline construction and maintenance. According to the applicant, it has based the specifications in the ECP on procedures successfully used in constructing, operating and maintaining transmission systems throughout the United States, and on guidelines and recommendations from the U.S. Army Corps of Engineers, the U.S. Department of Agriculture, the Natural Resources Conservation Service ("NRCS"), and the FERC. The Final Environmental Report filed with FERC is available on-line at: http://www.elpaso.com/tgp300lineproject/certificate_application.shtm (additional information regarding the project may be found at <http://www.elpaso.com/tgp300lineproject/>). The Final Environmental Report may also be downloaded from the FERC website at: www.ferc.gov (Docket No.CP09-444). The Highlands Council has also posted on its website for public review other GIS and text materials as provided by Tennessee Gas.

Addendum

300-Line Project Modifications

Following is a summary of the modifications made to the 300-Line Project within the Highlands Region (the Highlands Council previously granted Exemption #11 on February 16, 2010):

- **Workspace Modification and Reduction in the Overall Length of the Loop 325 Segment –** Applicant has modified portions of the workspace along Loop 325, the majority of which resulted in reduced need for temporary workspace. The length of Loop 325 for the 300 Line Project was reduced by 1.29 miles and removes the horizontal directional drill (HDD) under the Monksville Reservoir (though it should be noted that the other part of this Amendment, Appendix B, addresses the proposed 7.6-mile Northeast Upgrade, which does entail HDD under the Monksville Reservoir.)
- **Addition of 16 Temporary Access Roads for Use During Construction –** A total of six private access roads were identified in the previous HAD application. The applicant indicated that a constructability analysis was performed and based on constraints associated with wetlands, rare species habitat and topography, an additional 16 private access roads were added and one original was removed. In all, a total of 21 private access roads located within the Highlands Region have been identified for use during construction of the 325 Loop Segment. The applicant states that the majority of the private access roads will require minimal modification and that all other roadways proposed for access during construction are public roadways and will not require modification or improvement for use. Net additional temporary disturbance associated with the 21 access roads is approximately 3 acres.
- **Pipeline Route Modification to Avoid Two Timber Rattlesnake Dens –** According to the applicant, two timber rattlesnake (*Crotalus horridus*) dens were identified on Loop 325 during field surveys conducted in Spring 2010 within Wawayanda State Park. The timber rattlesnake is listed as a state endangered species. The dens were located immediately north of the initial proposed pipeline alignment and within the originally approved construction workspace. Based on consultation with the NJDEP Natural Heritage Program staff, the applicant notes that it will realign a 0.32-mile section of Loop 325 from the north of the existing 24-inch line to the south. The associated construction workspace was relocated also to the south of the new alignment, which will allow for the protection of the dens during construction. The applicant states that it will adhere to the NJDEP Freshwater Wetlands and Flood Hazard Individual Permit special conditions pertaining to timber rattlesnakes.

PRESERVATION AND PLANNING AREAS AND LAND USE CAPABILITY ZONES			
Project Area located in which Highlands Act Area? (Check all that apply):			
Preservation Area <input checked="" type="checkbox"/>	If yes, percentage? 70 %	Planning Area <input checked="" type="checkbox"/>	If yes, percentage? 30%
Project Area within which Land Use Capability Zone or Sub-Zone? (check all that apply):			
Protection Zone <input checked="" type="checkbox"/>	Conservation Zone <input type="checkbox"/>	Existing Community Zone <input checked="" type="checkbox"/>	
Conservation – Environmentally Constrained Sub-Zone <input type="checkbox"/>	Existing Community – Environmentally Constrained Sub-Zone <input checked="" type="checkbox"/>	Lake Community Sub-Zone <input type="checkbox"/>	Wildlife Management Sub-Zone <input checked="" type="checkbox"/>
The review below is organized by Regional Master Plan Goals, Policies and Objectives for each resource and smart growth category; <u>C</u> stands for Consistent, <u>I</u> for Inconsistent, and <u>N/A</u> means the goal, policy, or objective is not applicable. Project specific reviews are based on the application of these Policies and Objectives to the project site, and do not require the adoption of municipal ordinances. Documents reviewed for this analysis include all appropriate documents submitted to the NJDEP, Highlands Council GIS data and technical reports, and documents related to the State Planning Commission Plan Endorsement process where applicable.			
PART 1 NATURAL RESOURCES			
SUBPART A FOREST RESOURCES			
Project Area within Forest Resource Area? Yes			
If yes to above, is there Encroachment into a Forest within Forest Resource Area? Yes			
Forest Integrity Value (check one): High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/>			
Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 1A2: To limit human development in the Forest Resource Area in the Preservation Area in order to protect and enhance forest resources, forest ecosystem integrity, Critical Habitat, and the quantity and quality of water resources.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1A2c: To prohibit through local development review and Highlands Project Review the deforestation of lands within the Forest Resource Area of the Preservation Area for human development except where authorized as an exemption by the Highlands Act, or is an agricultural or horticultural development as defined at N.J.S.A. 13:20-31 and meets the requirement of that provision of the Highlands Act, or if qualifying as a major Highlands Development, the project must, at a minimum, be in conformance with the NJDEP Preservation Area Rules at N.J.A.C. 7:38-3.9.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1A2d: To prohibit through Plan Conformance, local development review and Highlands Project Review the expansion or creation of public water supply systems or public wastewater collection and treatment systems or community-based on-site wastewater facilities into forested areas of the Forest Resource Area within the Planning Area except as provided for in Policy 2J4 with Objectives 2J4a through 2J4d, and Policy 2K3 with Objectives 2K3a through 2K3e, and within the Preservation Area except as provided for in Policy 2I1 and Objectives 2I1a and 2I1b.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1A2e: To require through local development review and Highlands Project Review that projects qualifying as major Highlands Developments, affecting or potentially affecting forests outside the Forest Resource Area in the Preservation Area, comply with the NJDEP Preservation Area Rules at N.J.A.C. 7:38-3.9. All projects in the Preservation Area that are not major Highlands Developments shall comply with Policies 1A1 and 1A2.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1A5: To prohibit through local development review and Highlands Project Review forest clear-cutting within the Forest Resource Area except in accordance with a Forest Management Plan approved by the State Forester.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1B2: To limit through local development review and Highlands Project Review human development of forests to low impact residential development in the Protection Zone and the Conservation Zone in the Planning Area.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 1B3: To limit through local development review and Highlands Project Review deforestation in the Forest Resource Area and forested lands within High Integrity Forest Subwatersheds within the Existing Community Zone to maximum extent practicable.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1B3a: Implementation through Plan Conformance of regulations, which limit the clearing of trees in conjunction with human development to circumstances where the clearing will not diminish the integrity of forest resources.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1B5: To ensure that forest resources are protected on a site specific basis during local development review and Highlands Project Review.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1B5a: Applications for local development review and Highlands Project Review require identification of any forest area on and adjacent to a site in accordance with the Highlands Council's Method for Identifying Upland Forest Areas in the Highlands Region.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1B7: To prohibit clear-cutting of forest lands except pursuant to an approved Forest Management Plan approved by the State Forester.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1C1: To require that conforming municipalities and counties address the protection of forested portions of Forest Resource Areas and High Integrity Forest Subwatersheds in their master plans and development regulations.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 1C3: To require that conforming municipalities adopt a tree clearing ordinance consistent with an approved community forestry plan under the New Jersey Forest Service Community Forestry Program as part of the municipal master plan and local development regulations.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: The applicant is currently authorized and required to conduct vegetative clearing within the existing ROW, which includes the removal of trees and tall growing saplings and shrubs, to ensure that the ROW is maintained for access, visibility, and safety, pursuant to FERC rules governing natural gas transmission lines. Thus, the applicant notes that the majority of vegetative communities located within the existing ROW are not forested, which is consistent with the Highlands Council GIS forest data layer.

The expansion of the permanent ROW by 25 feet to 50 feet, the additional 50 feet of temporary expansion for a “typical” 100-foot wide construction ROW, improvements to existing access roads, and construction of other temporary workspaces would require removal of forests in a Forest Resource Area in both the Preservation and Planning Areas. The applicant indicates that it is required to obtain permits from NJDEP for impacts to forested wetlands and must comply with FERC Wetland and Waterbody Construction and Mitigation Procedures (FERC Mitigation Procedures) for pipeline construction and operation through forested wetland areas. Appendix C of the CMP contains a copy of the FERC Mitigation Procedures.

A key component of the CMP is a proposed Forest Management Plan. According to the applicant, the goal of the Forest Management Plan is minimizing the initial impacts to and restoring forests directly impacted by the proposed project, as well as improving forest habitats on parcels acquired to compensate for unavoidable forest impacts. The applicant indicates that as part of this plan, all Highlands forests will be identified in accordance with the Council’s *Method for Identifying Upland Forests in the Highlands Region*. Further, the applicant notes that the Forest Management Plan would be designed to enhance the functional values of the forest habitat under the control of Tennessee Gas outside of the ROW. The plan would identify the specific forest habitat to be affected and would be designed to demonstrate that there is no net loss of forest habitat and function.

The applicant states that the plan will address construction-related mitigation for the improvement of access roads and creation of new permanent easement to include the following key elements:

- Identification of a route that results in the least disturbance to existing forest resources, including locating the proposed Loop 325 within and adjacent to the existing 300 Line easement;
- Identification and avoidance, as practical, of large specimen trees or den trees;
- Where appropriate, replanting restored temporary access and staging areas using native deer resistant species of shrubs, sub-canopy trees and canopy trees; and
- Identification of locations where the planting of shrubs and sub-canopy trees and canopy trees will help restore vertical structure to forested areas harmed by deer browsing. Plant species will be selected from the native species on either side of the ROW/access roads to be restored, and all planted species will be protected with deer fencing.

With respect specifically to upland forest restoration and mitigation, the applicant notes that the approach involves a combination of impact minimization during construction and vegetation re-establishment involving natural, successional processes as a key component. It is stated that that this approach will best minimize the long-term impacts to forested uplands and will facilitate the development of an upland forest with a vegetation community composed of species best suited for the site and successional stage. The applicant states that its reforestation plan is based upon principles outlined within the *No Net Loss Reforestation Act* (P.L. 1993, c 106, N.J.S.A.13:1L-14.2) and shall be limited to those forested upland areas within designated temporary workspace. Following is a summary of the key elements of the applicant’s reforestation plan:

- Re-establishment of forest will be performed using a combination of plantings and natural, successional processes.
- Restoration planting densities of 600 plants-per-acre within upland forests, 400 of which shall consist of tree species. Tree species will consist of four to six foot whip-sized individuals in a variety of native upland species obtained from a reputable plant nursery. No cultivars or other ornamental sub-species will be allowed as substitutes. Alternatively, reforestation planting may consist of 800 to 1,000 seedlings per acre.
- Planting will be conducted by a qualified and reputable landscape contractor contracted by the applicant to provide oversight of the restoration activities. The landscape contractor will be provided a copy of the CMP and will be apprised of applicant’s obligations under the plan.

- Spacing of individual plants (typically six to ten feet on center) will be conducted so as to maintain consistent areal canopy coverage and adequate sun exposure as the plantings grow and mature.
- Plantings will be accomplished through the use of plant stocks chosen for their compatibility with the local environment. Commercially available plants and seeds will be utilized to accomplish this goal. The planting plan has been designed to provide a variety of plant species to promote species richness, enhance wildlife habitat, and help to “jump start” restoration of the forest community within the temporary workspace impacted during construction activities.
- Specifications for species, planting stock size and quality, stem quantity and spacing, and planting method will be developed for review by the Highlands Council and NJDEP, and other agencies as appropriate.
- The applicant will conduct post-construction monitoring of all forested areas affected by construction for a minimum of three years to assess the condition of vegetation and the success of restoration.
- Restoration shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed land. Yearly monitoring reports shall be submitted to the Highlands Council at the end of each growing season. These success criteria will identify quantities of native woody species that would be considered necessary to ensure successful forested restoration. If actual field stem counts fall short of the pre-determined threshold values, the applicant will develop and implement supplemental plans in conjunction with the appropriate State and federal agencies.

While the Highlands Council staff recognizes the value of these reforestation measures, it acknowledges that the results will not replace the functions and values of a mature forest in the short-term. It is anticipated that these measures will ensure successful long-term forest restoration, as coordinated with the Council staff, NJDEP and other agencies, and monitored over time until a viable and sustainable community is established.

In addition to reforestation, the applicant notes its commitment to the acquisition of land, which shall also mitigate for the temporal loss of forest. ~~The site currently under consideration contains over 55 acres.~~ The applicant has purchased a 68.23 acre parcel of mature upland forest located within the Forest Resource Area and is designated by the Highlands RMP as having a high forest integrity value. In addition, as discussed in the Special Environmental Zone section of the CMP, the applicant also plans on acquiring an additional mature forested parcel (~~18.1 acres approximately 20-25 acres~~) for a total ~~75-80~~ of approximately 86 acres of forest acquisition and permanent protection.

The applicant has stated its goal of avoidance, minimization and mitigation of unavoidable loss of forest (acquisition of ~~75-80~~ approximately 86 acres of mature forest to offset 38 acres of permanent forest impact and implementation of a forest restoration and mitigation plan to compensate for temporary forest impacts). With the consideration that development of the Forest Management Plan will be coordinated with the Highlands Council and other resource agencies, and that the applicant will post a performance bond to ensure no net loss of forest habitat and function, the proposed project, as amended, is found to be made sufficiently consistent with the RMP goals, policies and objectives and NJDEP Preservation Area rules related to forest protection, to be considered consistent with the goals and purposes of the Highlands Act regarding this resource.

SUBPART B HIGHLANDS OPEN WATERS AND RIPARIAN AREAS			
Project Area includes Highlands Open Waters Buffer? Yes			
Highlands Open Waters Affected: Streams <input checked="" type="checkbox"/> Lakes & Ponds <input checked="" type="checkbox"/> Wetlands <input checked="" type="checkbox"/>			
Highlands Open Waters in Preservation Area: Yes			
Watershed Value (Check one): High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/>			
Area includes Riparian Area? Yes <i>If No, disregard remainder of Riparian Area checklist.</i>			
Specific Riparian Area Features (Check all that apply.): Flood Prone Areas <input checked="" type="checkbox"/> Lakes & Ponds <input type="checkbox"/> Riparian Soils <input checked="" type="checkbox"/> Wetlands <input checked="" type="checkbox"/> Wildlife Corridor <input checked="" type="checkbox"/> Streams <input checked="" type="checkbox"/>			
Riparian Integrity Value (Check one per HUC14): High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/> HUC14: High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/> HUC14: High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/> HUC14:			
Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 1D4: Highlands Open Waters shall include a protection buffer of 300 feet from the edge of the discernable bank of the Highlands Open Waters feature, or from the centerline where no discernable bank exists. With respect to wetlands and other Highlands Open Waters features (e.g., seeps, springs, etc.), the feature shall include a protection buffer of 300 feet from the delineated Letter of Interpretation (LOI) line issued by the NJDEP for wetlands, or from a field-delineated boundary for other features. In areas where existing development or land uses within the protection buffers have reduced or impaired the functional values of the buffers, the Council will seek opportunities to restore the buffer and its functions. Any proposed disturbance shall, through local development review and Highlands Project Review, comply with Highlands Open Waters buffer standards. The protection buffer width for Category 2 streams in the Planning Area may be modified through a Stream Corridor Protection/Restoration Plan, as specified in Objective 1D4i. In approved Redevelopment Areas, the Council may, at its discretion, modify the required buffer, upon a showing of no alternatives, no impact to the functional value of the buffer, and provision of alternative approaches to enhancing or protecting Highlands Open Waters and resources of the buffer area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Objective 1D4a: Require that all applications for approval through local development review and Highlands Project Review include the identification and mapping of Highlands Open Waters.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1D4b: Preservation Area buffers for Highlands Open Waters shall comply with the Highlands Preservation Area rules at N.J.A.C. 7:38, which provide that all major Highlands developments are prohibited within Highlands Open Waters and its adjacent 300 foot buffer in the Preservation Area except for linear development, which may be permitted provided that there is no feasible alternative for the linear development outside Highlands Open Waters or its buffer. Structures or other land improvements existing within Highlands Open Waters buffer in the Preservation Area on August 10, 2004 may remain, provided that the area of disturbance is not increased other than through a HPAA. For purposes of this Objective when considering land for conversion to non-agricultural land uses, historic or current agricultural land uses shall not be considered "land improvements," "development," "land disturbances," or "land uses."	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1D4c: Require that proposed development within all Highlands Open Waters buffers (Preservation and Planning Areas) conforms through local development review and Highlands Project Review with the buffer requirements of N.J.A.C. 7:8 (Stormwater Management Rules), N.J.A.C. 7:13 (Flood Hazard Area Rules), and N.J.A.C. 7:7 (Freshwater Wetland Rules), and with any applicable requirements of a Regional Stormwater Plan adopted pursuant to N.J.A.C. 7:8 (Stormwater Management Rules).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1D4d: Structures or other land improvements existing within a Highlands Open Waters buffer of the Planning Area on August 10, 2004 may remain, provided that the area of disturbance shall not be increased unless approved through local development review or Highlands Project Review in compliance with RMP policies and objectives. For purposes of this Objective when considering land for conversion to non-agricultural land uses, historic or current agricultural land uses shall not be considered "land improvements," "development," "land disturbances," or "land uses."	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1D4e: In the Protection and Conservation Zones of the Planning Area, proposed disturbances of Highlands Open Waters buffers shall only occur in previously disturbed areas, unless a waiver is granted by the Highlands Council under Policy 7G2. For purposes of this Objective when considering land for conversion to non-agricultural land uses, historic or current agricultural land uses shall not be considered "land improvements," "development," "land disturbances," or "land uses." Such proposed disturbances must demonstrate full utilization of the following performance standards in the listed order, to demonstrate the necessity of an encroachment into Highlands Open Waters buffers: 1) avoid the disturbance of Highlands Open Waters buffers; 2) minimize impacts to Highlands Open Waters buffers; and 3) mitigate all adverse impacts to Highlands Open Waters buffers so that there is no net loss of the functional value of the buffer, in compliance with Objective 1D4h. Minimization and mitigation opportunities shall be considered only upon a clear and convincing demonstration by the applicant that the protection buffer cannot be avoided and in no case shall the remaining buffer be reduced to less than 150 feet from the edge of Highlands Open Waters, unless a waiver is granted by the Highlands Council under Policy 7G2 and the proposed disturbance complies with Objective 1D4c.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Objective 1D4f: In the Existing Community Zone of the Planning Area, proposed disturbances of Highlands Open Waters buffers shall only occur in previously disturbed areas, unless a waiver is granted by the Highlands Council under Policy 7G2 and the proposed disturbance complies with Objective 1D4c. For purposes of this Objective when considering land for conversion to non-agricultural land uses, historic or current agricultural land uses shall not be considered "land improvements," "development," "land disturbances," or "land uses." Such disturbances shall employ performance standards such that all proposed disturbances of Highlands Open Waters buffers shall employ Low Impact Development Best Management Practices to mitigate all adverse modification to Highlands Open Waters buffers so that there is no net loss of the functional value of the buffer, in compliance with	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Objective 1D4h.			
<p>Objective 1D4i: Develop through Plan Conformance and implement stream corridor or subwatershed-based Stream Corridor Protection/Restoration Plans which shall include Steps 1, 2, and 3, and may include Steps 4 and 5:</p> <p>1. Identify areas where existing development, land disturbances, or land uses are within Highlands Open Waters buffers have removed or substantially impaired natural vegetation communities, and have significantly reduced or impaired the functional values of Highlands Open Waters buffers. For purposes of this Objective when considering land for conversion to non-agricultural land uses, historic or current agricultural land uses shall not be considered “land improvements,” “development,” “land disturbances,” or “land uses”;</p> <p>2. Identify and require opportunities for restoration of areas identified in Step 1 as part of mitigation requirements under a Highlands Act waiver or Objectives 1D4e and 1D4f, and public or nongovernmental restoration/stabilization projects;</p> <p>3. Identify the extent of stream corridor features that are critical to supporting the functions of a healthy Highlands Open Waters buffer and that extend beyond the buffers required by Objectives 1D4b and 1D4c. The 300 foot buffer in these areas may be expanded to be most protective of these features which may include, but are not limited to, Critical Habitat, pollutant source areas identified through scientific techniques, and steep slopes;</p> <p>4. Where Highlands Open Waters buffers include areas identified in Step 1, regarding Category 2 surface waters in the Planning Area only, the Stream Corridor Protection/Restoration Plan may identify where, based on scientific analysis of site-specific conditions (e.g., topography, vegetation cover type, habitat, soil type, upstream land uses and pollution inputs, width of floodplain, rate and volume of run-off), a buffer of less than the full 300 feet (but including the undisturbed buffer area at a minimum) is sufficient to maintain or improve the protection of Highlands Open Waters and Riparian Areas. The plan must identify alternative buffers that provide functional buffer values at least equivalent to existing conditions and are no less than 150 feet or no less than the extent allowed in State or municipal regulation (including Objectives 1D4b and 1D4c), whichever is greater. Further, the plan shall include a functional value assessment to ensure that there is no net loss in the overall functional value of the subwatershed’s stream buffers. Buffers established through this process shall be determined based on site conditions rather than fixed distances, reflecting findings of the scientific analysis, and shall be used in the site design and development review process regarding determinations of restoration, continued use, or increased use of the disturbed buffer area. Buffer averaging for the purpose of accommodating development proposals is deemed not to meet the requirements of this provision; and</p> <p>5. Where a proposed Highlands Redevelopment Area would not meet, in full, Objectives 1D4b through 1D4h but affects an undisturbed buffer area determined to not be necessary for the protection of the functional values for Highlands Open Waters buffer (as determined through scientific analysis of site-specific conditions), modification of the undisturbed buffer may be allowed to no less than the extent allowed in State or municipal regulation. However the Council shall first determine that there is no alternative to the proposed reduction of the buffer, and require a showing of no impact to the functional values of the buffer and provision of alternative approaches to enhancing or protecting the Highlands Open Waters and resources of the buffer area. Restoration or enhancement of buffer functional values shall be provided on-site or within the same stream reach to achieve a net improvement of existing buffer functional values.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Objective 1D4j: The Highlands Council may require on a case-by-case basis, through Highlands Project Review, an expansion of the 300 foot buffer to protect the habitat of a water or wetlands-dependant rare, threatened or endangered species, to the minimum expansion necessary to achieve protection of that species.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Policy 1D5: Protect the integrity of the Riparian Areas through the application of RMP standards during local development review and Highlands Project Review.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Objective 1D5a: Require that all applications for approval through local development review and Highlands Project Review include the identification and mapping of Highlands Riparian Areas, including those identified by the Highlands Council and by site-specific analysis.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Objective 1D5b: Limit disturbance of existing natural vegetation or increases in impervious area within High and Moderate Integrity Riparian Areas in any Land Use Capability Zone to the minimum alteration feasible in areas beyond Highlands Open Waters buffer requirements; protect the water quality of adjacent Highlands Open Waters; and maintain or restore habitat value of the Riparian Area.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Objective 1D5c: Prohibit modifications to Riparian Areas in the Protection Zone except where a waiver is approved by the NJDEP or the Highlands Council under Policy 7G1 or 7G2.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Objective 1D5d: Restrict modifications to Riparian Areas in the Existing Community Zone, other than those addressed by Objective 1D5b, that would alter or be detrimental to the water quality and habitat value of a Riparian Area.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Objective 1D5e: Implement Low Impact Development Best Management Practices for any development activity proposed within a Riparian Area, which minimize both alterations of natural vegetation and increases in impervious area, in compliance with Policies 6N3 and 6N4 and provide for mitigation through restoration of impaired Riparian Areas in the same HUC14 subwatershed.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Objective 1D5f: Require that development within Riparian Areas conforms through local development review and Highlands Project Review to any applicable requirements of a Regional Stormwater Plan adopted pursuant to N.J.A.C. 7:8 (Stormwater Management Rules).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Objective 1D5g: Require identification and implementation of opportunities where the restoration and enhancement of previously impaired Riparian Areas are feasible and appropriate as mitigation to any allowable modification to Riparian Area requirements.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Comments: Highlands Open Waters and Riparian Areas are located extensively throughout the existing and proposed ROW. It is noted that this project may meet the definition of “linear development” (as determined by NJDEP) and that the Preservation Area rules at N.J.A.C. 7:38-3.6 permit linear development within a Highlands Open Waters buffer provided that there is no feasible alternative for the linear development outside the Highlands Open Water or Highlands Open Water buffer. N.J.A.C. 7:38-6 also requires an applicant to provide mitigation in accordance with N.J.A.C. 7:7A for each NJDEP-approved linear development proposed within a Highlands Open Water that is also a</p>			

freshwater wetland or State open water, as defined in the Freshwater Wetlands Protection Act rules. N.J.A.C. 7:7 states that mitigation shall, at a minimum, fully compensate for the loss of ecological value caused by a disturbance, by replacing any freshwater wetlands and State open waters values and functions lost or disturbed with equal values and functions.

The applicant indicated that it would coordinate with NJDEP regarding open water crossings regulated by NJDEP under the Flood Hazard Area Control Act and implementing regulations. The applicant also indicated that it would coordinate with NJDEP regarding wetlands and wetlands transition areas regulated by NJDEP under the Freshwater Wetlands statute and regulations and with respect to critical habitat within wetlands, NJDEP-regulated transition areas under the Freshwater Wetlands Protection Act and implementing regulations, Green Acres under the Green Acres Act and regulations and water crossings under the Flood Hazard Area Control Act, Freshwater Wetlands Protection Act, and implementing regulations. However, in recognition that the Highlands RMP requirements for all Highlands Open Waters, the applicant also notes that the CMP calls for the protection of all 300-foot Highlands Open Water buffer areas including those areas that are located outside of NJDEP wetland or flood hazard area jurisdiction.

The applicant states that it would implement a variety of measures to protect surface waters and wetlands. It would implement water body and wetland construction procedures described within the FERC-approved Plan and Procedures (Appendix C of the CMP) and would utilize Best Management Practices (BMPs) to minimize potential impacts.

With respect specifically to streams, the applicant states that it would install specified erosion controls at all drainage channels prior to the commencement of crossing activities. If found necessary, the applicant states that the pipe used for stream crossings and in floodplains would be weighted to prevent floatation. The pipe would be welded together in staging areas and then carried or floated along the ROW into place. After the pipe is lowered into the trench, previously excavated material would be returned to the trench line for backfill. The applicant indicates that stream flow would be maintained at all stream crossings, and no alteration of the stream capacity would result from pipeline construction. Stream crossings would be perpendicular to the flow to the extent practical. The applicant states that temporary erosion control measures would be implemented as necessary to prevent downstream impacts. After the completion of construction, streambeds would be restored to their pre-construction elevation, bed material composition and grades. The applicant states that spoil, debris, piling, cofferdams, construction materials, and any other obstructions resulting from or used during construction of the pipeline would be removed to prevent interference with normal stream flow.

With respect specifically to wetlands, the applicant states that the width of the temporary construction ROW would be reduced to 75 feet in wetland areas to reduce potential temporary construction impacts. The applicant states that it would expedite construction in and around wetlands to minimize potential adverse impacts by restoring wetlands to original configuration and contour, segregating topsoil during excavation, permanently stabilizing upland areas near wetlands as soon as possible after backfilling, conducting scheduled ROW inspections during and after construction, and repairing any erosion control or restoration features until permanent re-vegetation is successful. The applicant states that it would comply with applicable permit conditions issued by federal, State and local permitting agencies.

The applicant has identified numerous measures to protect surface waters and wetlands in its Narrative Report attached to the HAD application, Final Resource Reports, and the CMP. Further, the applicant has stated that it will monitor buffer revegetation efforts annually for the first three years after construction or until wetland revegetation is successful. The applicant states that it will file an annual report with the Highlands Council identifying the status of the open water buffer revegetation efforts. The report will include the percent cover achieved and problem areas. An annual report will be filed until buffer revegetation is successful. The applicant notes that revegetation will be considered successful if the cover of herbaceous and/or woody species is at least 75 percent of the type, density and distribution of the vegetation in adjacent buffer areas that were not disturbed by construction. If the area is not showing signs of re-establishing native vegetation during the third growing season following construction, the applicant will develop and implement (in consultation with a professional landscape ecologist and other State and federal regulatory agencies, as needed) a plan to revegetate the buffer with native species. Revegetation efforts will continue until revegetation is successful. A copy of the monitoring report will be provided to the Council at the end of each growing season until revegetation is successful.

The applicant has stated its goal of avoidance, minimization and mitigation of unavoidable impacts of Highlands Open Waters and Riparian Areas. With the consideration that development and implementation of the stream, riparian and wetland restoration mitigation plans will be coordinated with the NJDEP and the Highlands Council, and that the applicant will post a performance bond to ensure no net loss of Highlands Open Waters and Riparian Areas functional value, the proposed project, as amended, is found to be made sufficiently consistent with the relevant RMP goals, policies, and objectives and NJDEP Preservation Area rules to be considered consistent with the goals and purposes of the Highlands Act regarding this resource. With respect to Objective 1D5a, the applicant has noted that due to the linear nature and size of the project, it is not feasible to provide site-specific drawings at this project stage of all of the Riparian Areas and buffer zones to be affected by the project. The Council staff concurs, in consideration of the project stage. The applicant has committed to provide site-specific mapping as it is generated during the progression of the project (and as will be required by NJDEP in its permitting process). That commitment will be required to be added to the Open Waters and Riparian Areas Plan to be consistent with the RMP.

SUBPART C STEEP SLOPES

Project Area includes: Steep Slopes >20% in Any Areas (severely constrained)? Yes

Steep Slopes >15% in Forested Areas (severely constrained)? Yes

Steep Slopes >10% in Riparian Area in Undeveloped Lands (moderately constrained)? Yes

Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 1E6: To require through local development review and Highlands Project Review that applications for development include topographic information identifying the location of any Steep Slope Protection Areas located on the parcel proposed for development.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1E7: To require through local development review and Highlands Project Review that applications for development involving parcels of land with slopes of 10% or greater include identification of forested lands, areas which are highly susceptible to erosion, depth to bedrock and Soil Capability Classes.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1E8: To prohibit through local development review and Highlands Project Review land disturbance within areas which are Severely Constrained Slopes and Moderately Constrained Slopes, except for linear development in both the Preservation and Planning Areas that meets the requirements of N.J.A.C. 7:38-3.8(c)1-4.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1E9: To require through local development review and Highlands Project Review the use of Low Impact Best Development Practices for any land disturbance or human development within areas, which are Constrained or Limited Constrained Slopes, or that involves an approved disturbance of a Severely Constrained or Moderately Constrained Slope.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1E10: To require that conforming municipalities and counties implement the steep slope protection provisions of Policies 1E2 through 1E9 through master plans and development regulations.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: The proposed project would require disturbance of areas that are Severely Constrained Slopes and Moderately Constrained Slopes in both the Preservation and Planning Areas. It is noted that this project may meet the definition of “linear development” (as determined by NJDEP and the Highlands Council) and that the Preservation Area rules at N.J.A.C. 7:38-3.6 and RMP Policy 1E8 permit linear development within a steep slope provided that there is no feasible alternative for the linear development outside the steep slope.

A key component of the CMP is a Steep Slope Construction Plan, which includes a soil erosion and sediment control plan developed for the project in accordance with N.J.A.C. 2.90-1. The applicant states that this plan will be submitted to the Sussex and Passaic County Soil Conservation Districts for review and approval. The plan covers all areas of construction, including the ROW, access roads, staging areas, and additional temporary workspace. It also identifies locations for the placement of silt fence, construction staging, gravel tracking pads, and other requirements of the applicable County Soil Conservation District.

The applicant states that the Loop 325 project has been designed to avoid steep slopes where possible and has minimized workspace areas within steep slope areas to the extent practicable to allow for safe working conditions during construction. It is stated that in areas where steep slopes are unavoidable, specialized construction techniques would include the following:

- Identification by milepost of areas with steep slopes (greater than 24 degrees) prior to commencement of construction.
- During grade restoration, the spoil will be placed back in the cut and compacted. Any springs or seeps found in the cut will be carried down-slope through PVC pipe or gravel French drains installed as part of the cut

restoration.

- In the areas of construction where the slope exceeds 24 degrees or more, a special means of manipulating the construction equipment will be utilized. The preferred method will be “winching” the equipment. This process consists of placing and anchoring a tractor at the top of the slope and using a winch to manipulate the equipment up and down the slope.
- Use of advanced techniques in silt fencing and strong materials to avoid undercutting, toppling or splitting of the fence.
- When impacts to steep slopes are unavoidable, emphasize disruption of the least sloped areas over the more steeply sloped areas.
- Minimize length of traverse across steep slopes while controlling erosion/disruption potential (i.e., having a short traverse down a severe slope may be more disruptive than a longer traverse that avoids the steep slope).
- Strictly limit vegetation removal on either side of access roads in steep slope areas.
- Diffusion of stormwater flow in sloped areas should be emphasized using measures appropriate to rural areas, such as slope intercepts and off-flow points and swales.
- In areas of rugged topography, ROW restoration will begin within 10 days of final pipeline installation to minimize potential erosion and sedimentation control problems.

The applicant states that post-construction mitigation would include installation of permanent trench or slope breakers, revegetation, and monitoring to ensure stabilization of the site. Slope breakers would be installed to slow down the flow of water and increase stormwater infiltration. Swales lined with grass and shrubs may also be designed so as to trap sediment as it comes down the slope.

With the consideration that development of the Steep Slope Construction Plan will be coordinated with the Highlands Council and Sussex and Passaic County Soil Conservation Districts, - that the project is being designed to avoid, minimize and mitigate impacts to steep slopes, and that the applicant will post a performance bond to ensure that the slope profile will be reestablished and replanted to pre-construction conditions, the proposed project, as amended, is found to be made consistent with the RMP goals, policies and objectives and NJDEP Preservation Area rules related to steep slopes sufficient to be considered consistent with the goals and purposes of the Highlands Act regarding this resource.

SUBPART D CRITICAL HABITAT

Project Area includes:		Critical Wildlife Habitat? Yes			Significant Natural Area(s)? Yes		Vernal Pool(s) +1,000 ft? Yes		
Species of Concern (Landscape Rank)	Great Blue Heron Forage (2)	Sedge Wren (4)	Wood Turtle (3)	Bobcat (4)	Barred Owl (3)	Red-shouldered Hawk (4)	Cooper's Hawk (3)		
Bog Turtle (5)	Northern Goshawk (4)	Brook Snaketail (2)	Timber Rattlesnake (4)	New England Bluet (2)					
Regional Master Plan Goals, Policies, and Objectives:							C	I	N/A
Policy 1F2: To prohibit through Plan Conformance, local development review and Highlands Project Review the direct impact of new human development or expansion or increased intensity of existing development within Critical Habitat.							<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Policy 1F5: To establish a Habitat Conservation and Management Program, including minimum performance standards and criteria for the protection, enhancement, and restoration of lands within Critical Habitat.							<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1F6: To require that applications for any local development review and Highlands Project Review for Critical Habitat be subject to minimum standards and criteria outlined in the Habitat Conservation and Management Plan.							<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1F6a: Prohibit direct impacts from new development or expansion or increased intensity of existing development that will jeopardize the continued existence of, or result in the likelihood of the destruction or adverse modification of Critical Habitat, except as permitted through the issuance of a waiver under Policy 7G1 or 7G2.							<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1F6b: Prohibit indirect impacts from activity that is off-site, adjacent to, or within Critical Habitat that will jeopardize the continued existence of, or result in the likelihood of the destruction or adverse modification of Critical Habitat, except as permitted							<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

through the issuance of a waiver under Policy 7G1 or 7G2.			
Objective 1F6c: Waiver applications under Policy 7G2 for local development in a municipality with a Council-approved Critical Habitat Conservation and Management Plan shall be subject to the minimum standards and criteria for waiver provisions as set forth in the plan, to the maximum extent practicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1F6d: Waiver applications under Policy 7G2 for development in a municipality without a Council-approved Critical Habitat Conservation and Management Plan shall be subject to the Low Impact Development Best Management Practices required in Objective 1F5b.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1F6e: A vernal pools protection buffer may be reduced only if an applicant can demonstrate, to the satisfaction of the Highlands Council in coordination with the NJDEP's Endangered and Nongame Species Program, that the reduction is the minimum feasible and that: <ul style="list-style-type: none"> In an undisturbed wetland, documented and field-determined vernal pool-breeding wildlife require a smaller protective buffer, as documented in scientific literature; or Existing land uses present a significant, insurmountable and permanent barrier to the migration or viability of vernal pool-breeding wildlife that is infeasible to mitigate. Requirements for demonstrating the above criteria shall be included in the Critical Habitat Conservation and Management Plan.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1F6f: A Critical Wildlife Habitat area or Significant Natural Area delineation may be modified if an applicant can demonstrate, to the satisfaction of the Highlands Council in coordination with the NJDEP's Endangered and Nongame Species Program or Natural Heritage Program, that: <ul style="list-style-type: none"> The nature of the site is such that it does not provide habitat for species of concern; The species of concern are not present on the site during any critical part of their life cycle, do not depend upon the site for food, shelter or breeding, and the habitat; on the site is either unsuitable or not critical to species' recovery in the Region; or Existing land uses present a human, natural or development barrier to the use of the site by species of concern. Requirements for demonstrating the above criteria shall be included in the Critical Habitat Conservation and Management Plan.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 1F7: To require through local development review and Highlands Project Review that projects qualifying as major Highlands Developments, affecting or potentially affecting Critical Habitat in the Preservation Area, comply with the NJDEP Preservation Area Rules at N.J.A.C. 7:38-3.11 and with the minimum standards and criteria outlined in the Critical Habitat Conservation and Management Plan. All projects in the Preservation Area that are not major Highlands Developments shall comply with Policies 1F1 through 1F6.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments: The vast majority of the existing and proposed ROW is mapped as Critical Habitat. The ROW traverses a Significant Natural Area (Wawayanda Macrosite in Vernon) and a vernal pool (in the Planning Area).

Preparation and implementation of a Critical Habitat Mitigation Plan is a key element of the CMP. As part of the on-going and continued development of that plan, field surveys of the project area were conducted by qualified biologists and botanists during the fall of 2008, and ~~continue to progress through~~ the spring and summer of 2009. According to the applicant, survey results and biological assessments will be submitted when all field surveys have been completed. On-going coordination with the Natural Heritage Program (NHP) and the Endangered and Non-Game Program biologists within NJDEP, the Highlands Council, and the US Fish and Wildlife Service (USFWS) will continue through the permitting and construction of the project to avoid, minimize and mitigate for impacts on sensitive species including rare, threatened or endangered species.

The applicant has initiated consultations with the USFWS, NJDEP Division of Fish and Wildlife – Bureau of Land Management, NJDEP Division of Parks and Forestry, and NJDEP Division of Fish and Wildlife to identify significant wildlife habitats and wildlife managed lands. The NJDEP has been consulted and identified federal and state-listed plant and animal species potentially present in the project area, as well as vegetative communities of special concern in the vicinity of the project area. The NJDEP has identified three Natural Heritage Priority sites within the vicinity of Loop 325; however Loop 325 only crosses one of the three priority sites (the Wawayanda Macrosite in Vernon, the Highlands Council identified Significant Natural Area). The applicant states that the species-specific approach that it is taken during the surveying of the project area will identify any occurrences of federal and state-listed species present. Based upon the results of these field surveys, the applicant will work cooperatively with the Highlands Council, USFWS and the NJDEP to develop impact avoidance and mitigation measures for federal species and those state species with habitats located in wetlands, transition areas and flood hazard areas. It is the opinion of the applicant that the post-construction restored ROW and workspace will be substantially equivalent to the existing field conditions given the existing pipeline and maintained easement present.

The applicant provided general rare species mitigation measures as well as some species-specific measures in the CMP. With respect to the general measures, the applicant provided the following:

- The Environmental Inspector (EI) job responsibilities will include understanding and implementing the components of the federal and state-listed threatened and endangered species mitigation measures. While the CMP does not specifically mention rare species, the applicant will be required to revise the CMP to explicitly

include rare species.

- Before being allowed to conduct work on the project site, all field personnel including all construction contractors and subcontractors will be required to complete an environmental training session during which they will be advised on the potential presence of applicable species, specified habitats where they are likely to be found, visual or other identifying features, and specific activity protocols to be followed in the event that a species is encountered.
- Signage will be posted at applicable locations in the field along the ROW alerting personnel to the potential presence of rare species, including representative color photographs of the species, and notification protocols and contact information for EI personnel or dedicated rare species monitors.
- The applicant will provide mitigation for each species' habitat that is permanently disturbed through construction activities. Mitigation will be four-part and account for no net loss of habitat value in terms of quality, quantity, type and function, and is not injurious to occurrences of rare plant species or rare ecological communities. With respect to temporary impacts, it is the opinion of the applicant that the post-construction restored ROW and workspace will be substantially equivalent to the existing field conditions given the existing pipeline and maintained easement present. It is the opinion of Highlands Council staff that restoration of forest to pre-disturbed conditions will not be accomplished in a short period. However, the applicant has committed to acquire and preserve 5568 acres of mature upland forest to offset impacts to this habitat.
- A field survey of the project area, which includes an inventory of rare plant species (in cooperation with NJDEP's NHP) shall be conducted. The inventory shall include a description of the survey method, all vegetation communities, and occurrences of rare, threatened and endangered species within the project areas to the extent physically or visually accessible. The inventory shall include a map depicting surveyed species and associated habitat. The applicant notes that if found to be present during field surveys, mitigation would include avoidance and fencing of known populations of these plant species, removal and replanting of the population outside of the construction workspace area or removal, translocation to an approved plant nursery during construction, and replanting during restoration (all of these activities shall be coordinated with NJDEP's NHP).
- While the CMP does not specifically address the effects of temporary factors related to construction such as noise, increased air emissions, etc., the applicant will be required to revise the CMP to explicitly address such impacts and measures to address potential impacts to rare, threatened and endangered species.

With respect to the vernal pool habitat that the ROW traverses, the applicant is of the opinion that there will be no direct impacts on the vernal pool or associated wetland. The applicant states that potential project-related impacts will be limited to the upland dispersal habitat potentially used by obligate and facultative vernal pool species such as wood frogs (*Rana sylvatica*) and mole salamanders (*Ambystoma sp.*). These areas are within the 1,000-foot vernal pond buffer, and are considered by the applicant to be an unavoidable impact to the buffer (i.e., the applicant states that the proposed project activities are located close to the limits of the dispersal habitat (800 to 1,000 feet from the vernal pool. EI inspectors as well as inspectors from FERC, the NJDEP, and the Highlands Council shall confirm this in the field and shall ensure that the mitigation measures below are implemented). To avoid impacts to these species, the applicant proposed the following measures to be implemented during construction:

- Installation of silt fence along the southern limit of temporary workspace to prevent dispersal of individuals into the construction area.
- Installation of signage along the ROW to identify the area as vernal pool habitat.
- Daily sweeps of the construction workspace by the EI to identify and remove any individual frogs or salamanders that may be located within the workspace.
- Specialized environmental training for contractor personnel to identify species of concern and protocol for contacting the EI, should an individual animal be found within the workspace during active construction.
- Placement of wood debris on the ground within the restored temporary workspace to provide for escape cover and overwintering habitat post-construction.

With the consideration that development of the Critical Habitat Management Plan will be coordinated with the Highlands Council, NJDEP and the USFWS, that the project is being designed to avoid, minimize and mitigate

impacts to Critical Habitats, and that the applicant will post a performance bond to ensure no net loss of Critical Habitat value, the proposed project, as amended, is found to be made consistent with the RMP goals, policies and objectives and NJDEP Preservation Area rules related to Critical Habitat sufficient to be considered consistent with the goals and purposes of the Highlands Act regarding this resource.

SUBPART E LAND PRESERVATION AND STEWARDSHIP

Project Area within Conservation Priority Area? Yes **If yes, percentage?** Almost the entire ROW traverses

Project Area within Special Environmental Zone? Yes **If yes, identify properties (B/L)** (see comments)

Project Area includes preserved land? Yes **If yes, identify properties (B/L):** (see comments)

Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 1H7: To identify and designate a Special Environmental Zone in the Preservation Area where development shall not occur in order to protect water resources and environmentally sensitive lands and which shall be permanently preserved through use of a variety of tools including, but not limited to, fee simple acquisition, easement acquisition, transfer of development rights programs, and development regulations.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Objective 1H7b: Adopt and enforce development regulations which prohibit the development of those portions of a parcel of land which are located within a Special Environmental Zone.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1H7c: Require through Plan Conformance, local development review, Highlands Project Review, and NJDEP review under N.J.A.C. 7:38 that development shall not occur within a Special Environmental Zone. In any Special Environmental Zone, any exemption identified through Policy 7F1 or waiver issued under the Highlands Act under Policy 7G1 or 7G2 shall be conditioned upon a determination that the State or local government unit has exhausted all means for the permanent preservation of these lands through use of preservation tools including, but not limited to, fee simple acquisition, easement acquisition, and transfer of development rights.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Policy 1I3: To require conforming municipalities and counties to require conservation or land stewardship easements, enforceable by the Highlands Council and at least one of the following: the appropriate municipality, the County Agriculture Development Board, the SADC, Green Acres, or a non-profit land trust organized pursuant to § 501 (c)(3) of the federal tax code and engaged in the protection of land for the purpose of providing long-term stewardship of important resources as a condition of development approval for lands within parcels proposed for development that are identified for preservation on a proposed site plan or subdivision plat.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: The existing and proposed ROW traverse three parcels identified as part of the Special Environmental Zone in the Preservation Area. All three parcels are contiguous and are located in West Milford (Block 6902 Lot 32 – 110 acres, Block 6402 Lot 5 – 82 acres, and Block 6402 Lot 7 – 17 acres). The existing and proposed ROW traverse numerous parcels identified as Preserved Open Space as well as numerous parcels within the Conservation Priority Area (High and Moderate Conservation Priority Area). Some level of impacts to these properties from the expanded ROW is considered unavoidable.

To achieve “no net loss” of the Special Environmental Zone areas traversed by the existing and proposed ROW, the applicant agreed to acquire approximately 23 acres of Special Environmental Zone designated property. In order to satisfy this condition, the applicant proposed and the Highlands Council agreed that the applicant would purchase an 18.1 acre of Special Environmental Zone designated parcel in the Township of West Milford. This property will be assigned by the applicant to a suitable land conservation entity or other public entity with an appropriate conservation deed of easement to ensure no development on the property, which the Highlands Council shall have the right to enforce. Additionally, to address the difference between the above-referenced 23 acre obligation and the actual size of the 18.1 acre parcel discussed above, the applicant has agreed to make a financial contribution. The Highlands Council and the applicant have agreed to an amount of \$7,500 per acre as representative of the value of comparable land in either or both of Sussex and Passaic counties. The financial contribution to address the 4.9 acre differential at a rate of \$7,500 per acre equals \$36,750. It is important to note that it is the position of the Highlands Council that if the applicant cannot find suitable lands to purchase, that the Council will attempt to do so before agreeing to accept monetary compensation.

~~A critical element of the CMP is the development of a plan that will protect environmentally sensitive lands in the vicinity of the project area. Through the use of Geographic Information Systems (GIS) technology and collaboration with federal, state and local conservation agencies and organizations, the applicant stated that it will identify lands in the vicinity of the project located within Special Environmental Zones that are particularly vulnerable to development and preserve the undeveloped parcel(s) through any number of conservation mechanisms, including but not limited to fee acquisition, purchase of development rights and recording of a conservation easement on the title or deed, or~~

~~donations to third party conservation organizations whose mission is to preserve natural/undeveloped lands.~~

~~To implement this component, in coordination with the Highlands Council, the applicant states that it has identified potential parcel(s) for preservation that contain similar functions and values to those that will be permanently affected during operation of the proposed project facilities, at least one of which is designated as a Special Environmental Zone. The applicant indicated that ideally, the preserved parcel(s) will be located within the same watershed as those lands with permanent impacts from project construction, and to preserve the functions and values of impacted lands, Tennessee Gas will prioritize acquisition of properties containing environmental resources, such as upland forest, forested wetlands, streams, 100-year floodplain, vernal pools, and rare species habitats. Acreage of mitigation parcel(s) is currently estimated between 20 and 25 acres. The applicant states that it will also prioritize parcels that are located within Council mapped Conservation Priority Areas. The applicant states that lands within the Special Environmental Zone would be specifically targeted for acquisition as these areas have already been identified by the Council for preservation according to their specific environmental functions including Conservation Priority Area rank, and the potential to a) protect water supply reservoirs and other critical water features, b) create large contiguous areas of environmentally sensitive lands, c) create habitat corridors, and d) connect existing preserved open space. As potential properties are identified for mitigation purposes, the applicant notes that it will continue to collaborate with the Council and other regulatory agencies and organizations for evaluation and approval of the mitigation parcels. Further, if the lands include impervious surfaces, the applicant has committed to removal of those surfaces and ecological restoration to mitigate both impacts under this category of RMP policies and objectives and impacts to Prime Ground Water Recharge Areas (see below).~~

~~Once adequate parcels have been approved for mitigation use, the applicant proposes to permanently preserve the properties by either donating the parcels to an appropriate conservation trust or government agency (e.g., USFWS, NJDEP) or by placing the parcels in a permanent conservation easement. To facilitate this process, the applicant has committed to utilize the Highlands Council's Land Preservation Program and model conservation easement language. The fee titles for the properties or a conservation easement will be conveyed or transferred to a government agency or other accepting conservation land trust or appropriate conservation organization for management of the land, including stewardship. The applicant has committed to coordinate with the Highlands Council regarding the management and stewardship of this land. If any identified parcels are within proximity to sites known or suspected to have contamination issues, the applicant has committed to conduct a review of relevant databases that catalog all reported incidences of oil or other hazardous materials spills or releases.~~

Though inconsistent with Policy 1H7 and Objective 1H7c, as the proposed project represents development in a Special Environmental Zone, the linear nature of the project and the existing ROW make this incursion necessary. However, the proposed mitigation enhances the project goals such that the project, as amended, is consistent with the goals and purposes of the Highlands Act regarding this resource.

SUBPART F CARBONATE ROCK (KARST) TOPOGRAPHY

Project Area within or contributing to Carbonate Rock Area? Yes

Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 1K2: To identify and delineate through local development review and Highlands Project Review land areas that drain surface water into the Carbonate Rock Area, as changes in the quantity, quality and rate of discharge of surface water runoff from upslope lands can impair ground water resources in the Carbonate Rock Area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 1K4: To ensure through Plan Conformance that municipalities in, or within subwatersheds draining directly to, the Carbonate Rock Area protect public health and safety and the quality of ground waters from inappropriate land uses and pollutant discharges.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1K4b: Applications for site plan or subdivision approval will include a multi-phased geotechnical site investigation (e.g., test borings, test pits) to locate any potential karst features and potential hazards to public health and safety, structures and ground water quality.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 1K4c: Local development reviews and Highlands Project Reviews and requirements shall ensure that all potential hazards to public health and safety, structures and ground water quality, including but not limited to concentrated surface water flows that dissolve carbonate rock, are fully addressed and mitigated in the construction plans and subsequent approval process, with the maximum emphasis on nonstructural measures, including, but not limited to, avoidance of modifications to the karst features.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Objective 1K4d: Public works projects, including but not limited to water supply, sewerage, stormwater and transportation facilities, shall be constructed and maintained such that the potential for damage from karst features and the contamination of ground water are avoided.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1K4e: Highlands Project Reviews and requirements and local development reviews (where applicable) shall prohibit new land uses and facilities that constitute unacceptable risks of discharge due to karst topography where karst features have been identified, including but not limited to: Underground storage tanks; Solid waste landfills; Hazardous waste storage and disposal; and Hazardous materials storage and handling.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Comments: The existing and proposed ROW traverse a small portion of a Carbonate Rock Area in Vernon (in the Planning Area) and a narrow strip of Carbonate Rock Area in West Milford (Preservation Area). The applicant notes that due to the specialized nature of pipeline construction and in consideration that only a relatively minor amount of the required construction workspace will be trenched, a full scale geotechnical subsurface exploration program for the project area is not necessary for the planning, design or construction phases of the project. However, it is noted the presence of karst features will be determined during the ditch excavation. During trenching activities, the applicant states that mitigation measures include, but are not limited to, grouting, regrouting and backfilling with supportive fill material. The applicant states that stormwater control measures will be implemented to limit surface water runoff within known karst features. If voids are encountered, then the ditch may be grouted or impermeable plugs may be installed to minimize adverse impacts to karst features from ground water. Additionally, the applicant states that it will not release hydrostatic testing wastewater volumes within those areas identified as Karst, as they are susceptible to sinkhole development unless a dewatering structure or energy dissipating device will be used to prevent scouring or erosion. The intent of this program is achieve the equivalent of RMP requirements for a Phase II investigation.</p> <p>With the consideration that development of the Carbonate Rock Plan will be coordinated with the Highlands Council, that the project is being designed to avoid, minimize and mitigate impacts to Carbonate Rock Areas, and that the applicant will post a performance bond to ensure that the karst features and ground water are protected, the proposed project, as amended, is found to be made consistent with the RMP goals, policies and objectives related to Carbonate Rock sufficient to be considered consistent with the goals and purposes of the Highlands Act regarding this resource.</p>			

SUBPART G LAKE MANAGEMENT

Project Area within Lake Management Area? Yes <i>If No, disregard remainder of Lake Management checklist.</i>			
If yes, which Tier: Shoreland Protection Tier Yes Water Quality Management Tier Yes Scenic Resources Tier Yes Lake Watershed Tier Yes			
Project Area within Lake Community Sub-Zone? No			
If yes, which Tier: Shoreland Protection Tier No Water Quality Management Tier No Scenic Resources Tier No Lake Watershed Tier No			
Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 1L2: To establish tiers of lake management appropriate to management strategies that help protect lake water quality and community value from the impacts of present and future development.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1L2a: Lake management programs shall use the following management tiers around all Highlands Region lakes of greater than ten acres in size: <ul style="list-style-type: none"> • A Shoreland Protection Tier consisting of an area measured 300 foot or the first property line perpendicular from the shoreline of the lake; • A Water Quality Management Tier consisting of an area measured 1,000 foot perpendicular from the shoreline of the lake, including the shoreland protection tier; • A Scenic Resources Tier consisting of an area measured 300 to 1,000 foot perpendicular from the shoreline of the lake, scaled based upon the view distance from the opposite shoreline, and determined through the size and layout of the lake, with wider portions of lakes having longer view distances; and • A Lake Watershed Tier consisting of the entire land area draining to the lake, through the evaluation of drainage areas using LiDAR topographic analyses or other topographic data where LiDAR data are not available. 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 1L3: To establish unique standards (as compared to lakes within the Protection and Conservation Zones) for the Lake Community Sub-Zone within the Existing Community Zone within 1,000 feet of lakes, particularly with respect to the Shoreline Protection Tier, to prevent degradation of water quality, harm to lake ecosystems, and promote aesthetic values within the Existing Community Zone.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 1L4: To establish and implement management strategies to help protect lake water quality and ecosystem values from the impacts of present and future development for all lakes.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1L4a: Implementation of standards through Plan Conformance regarding lake ecosystem and water quality in the Shoreland Protection Tier to address direct and proximate impacts upon the lake, including but not limited to shoreline modification and development (including limits to the hardscaping of shorelines using bulkheads, rip-rap and walls), docks, piers, boathouses, dredging, vegetation removal, and increased impervious cover. Pollutant discharges shall also be addressed, including	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

the potential for contamination from septic systems, cesspools and other wastewater management systems within the tier that are failing or are inadequately designed and constructed. As such systems fail, landowners should be required to provide upgraded treatment (whether on-site or through public or community systems) to minimize pollutant movement to the lake. Standards for the Lake Community Sub-Zone and for the Protection and Conservation Zones may be distinct to the extent necessary to recognize the existence of significant development within the Lake Community Sub-Zone.			
Objective 1L4b: Implementation of standards through Plan Conformance regarding land use compatibility and water quality in the Water Quality Management Tier, to prevent or minimize continuous pollutant sources that can contribute pollutants overland or through ground water to the lake from greater distances than the Shoreland Protection Tier.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1L4c: Implementation of standards through Plan Conformance regarding the protection of visual and scenic resources in the Scenic Resources Tier, including but not limited to requirements for vegetative screening of buildings, building height limitations, and limits on tree and understory removal for reasons other than public health and safety or as the minimum necessary to make reasonable use of the designated building envelope for the parcel proposed for development. Standards for the Lake Community Sub-Zone and for the Protection and Conservation Zones may be distinct to the extent necessary to recognize the existence of significant development within the Lake Community Sub-Zone.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 1L5: To require that conforming municipalities adopt and implement for all lakes the standards applicable to the Shoreland Protection and Water Quality Management Tiers; the standards applicable to the scenic resources tier shall be adopted and implemented for all public lakes (i.e., with shorelines that are not entirely privately-held and managed through a lake association), and for privately-held lakes to the extent feasible under law, recognizing the existence of previously approved lake community development plans.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1L5a: Shoreland Protection and Water Quality Management Tier requirements shall apply to all new development, regardless of lake ownership.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 1L5b: Scenic Resource Tier requirements shall apply to all lakes with public access and to lakes with no public access that are not entirely managed by a single homeowner or lake community association. For lakes that are privately-held and managed by a single homeowner or lake community association, the scenic resource tier requirements shall be voluntary.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 1L6: To require that conforming municipalities develop and adopt lake restoration plans, with sufficient input from lake community residents and landowners, for each of the municipality's developed lakes that has been identified as water quality impaired, to include watershed delineation, description of point and nonpoint sources of pollution in the watershed, lake monitoring schedules, existing and proposed in-lake management techniques, and recommended watershed best management practices. TMDLs adopted by the NJDEP to address known pollution problems may be used as lake restoration plans. For lakes that are privately-held and managed by a single homeowners or lake community association, the municipality may require that the association share in or assume the costs of developing such plans.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 1M4: To establish and implement performance and development standards through local development review and Highlands Project Review for shoreline uses which achieve compatibility among shoreline activities and nearby neighborhoods.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: To ensure that water quality within Lake Management Areas is protected, the applicant has indicated that it will construct the project facilities in accordance with its ECP as well as all applicable regulatory approvals. The applicant notes that standard construction techniques, such as use of erosion and sedimentation controls, dewatering structures, trench plugs and water bars, will ensure that both stormwater and ground water are managed in a manner that minimizes the potential for adverse impacts on water quality. Where the pipeline will be below a lake, the applicant states that directional drilling will be used to avoid trenching and disruption within the lake itself.

With consideration that the ECP will be developed and implemented with the Highlands Council and other regulatory agencies, and that the applicant will post a performance bond to ensure that water resources are protected, the proposed project, as amended, is found to be made consistent with the RMP goals, policies and objectives related to water quality and shoreline protection for Highlands lakes, and the goals and purposes of the Highlands Act regarding this resource.

PART 2 WATER RESOURCES AND WATER UTILITIES

SUBPART A WATER RESOURCES AVAILABILITY

<u>Source HUC14(s):</u>	<u>Net Availability (MGD):</u>	<u>HUC14 Constraint - Current Deficit Area (Y/N):</u>	<u>HUC14 Constraint - Existing Constrained Area (Y/N):</u>	<u>Conditional Availability (MGD):</u>
1.				

Comments: N/A. The proposed project would not result in the expansion or creation of a public water supply system, public wastewater collection and treatment system or a community on-site treatment facility. In addition, the proposed project would not result in the generation of wastewater nor require a permanent water source. Temporary water sources will be required for hydrostatic testing of the pipeline, and will be withdrawn in compliance with NJDEP water allocation rules and temporary use permits, which must be consistent with the RMP. The applicant will place a priority on withdrawing temporary water supplies from either a reservoir or from high-flow skimming of non-Category 1 streams to minimize or avoid impacts, and will place a priority on replacing flows to the original source. The applicant has stated that it will consult with the Highlands Council regarding the temporary water source. However,

temporary water uses do not affect water availability as defined and measured by the RMP.			
SUBPART B PROTECTION OF WATER RESOURCES QUANTITY			
Project Area includes Prime Ground Water Recharge Area? Yes			
Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 2D3: To protect, enhance, and restore the quantity and quality of Prime Ground Water Recharge Areas.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2D3c: Implement master plans and development review ordinances through Plan Conformance that protect Prime Ground Water Recharge Areas and minimize the potential for disruption of recharge in such areas by development.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2D3g: Require through Plan Conformance and local health ordinances, that existing land uses that have a significant potential to result in major discharges of pollutants to ground water or to the land surface (including but not limited to non-sanitary wastewater effluent and any major sources of potential discharges such as spills and leaks), such that they may degrade ground water quality within a Prime Ground Water Recharge Area, shall incorporate ongoing management of toxic chemical sources and prohibition of unregulated discharges, so that the potential for ground water contamination is minimized and the opportunity for discharge discovery and control is maximized.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 2D4: To apply standards through Plan Conformance, local development review and Highlands Project Review to protect, restore and enhance the functionality and the water resource value of Prime Ground Water Recharge Areas by restricting development and uses of land within a Prime Ground Water Recharge Area that reduce natural ground water recharge volumes or may directly or indirectly contribute to or result in water quality degradation.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2D4a: Development shall not occur in Prime Ground Water Recharge Areas unless necessary to avoid Critical Habitat, Highlands Open Waters Buffers and Moderately and Severely Constrained Steep Slopes.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2D4b: Any development activity approved to occur in a Prime Ground Water Recharge Area shall provide an equivalent of 125% of pre-construction recharge volumes for the affected Prime Ground Water Recharge Area of the site within the following areas, in order of priority: (1) the same development site where feasible; (2) the same HUC14 subwatershed, or (3) an interrelated HUC14 subwatershed as approved by the Highlands Council where no feasible option exists in the same HUC14 subwatershed. This requirement shall apply to all portions of the Prime Ground Water Recharge Area where the recharge is disrupted through impervious surfaces, routing of stormwater runoff and recharge from natural flow paths, and other similar changes.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2D4c: Require through Plan Conformance, local development review and Highlands Project Review that the disruption of Prime Ground Water Recharge Area shall be minimized through the implementation of Low Impact Development Best Management Practices meeting the requirements of Objective 2D3a.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2D4d: Require through Plan Conformance, local development review and Highlands Project Review that the disruption of Prime Ground Water Recharge Area, after conformance with Objectives 2D4a, 2D4b and 2D4c is achieved, shall be limited to no greater than 15% of the Prime Ground Water Recharge Area on the site and shall be preferentially be sited on that portion of the Prime Ground Water Recharge Area that has the lowest ground water recharge rates and the lowest potential for aquifer recharge.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2D4e: Prohibit through Plan Conformance, local development review and Highlands Project Review the expansion or creation of public water supply systems or public wastewater collection and treatment systems or community-based on-site wastewater facilities into a Prime Ground Water Recharge Area within the Protection or Conservation Zone within the Planning Area except as provided for in Policy 2J4 with Objectives 2J4a through 2J4d, and Policy 2K3 with Objectives 2K3a through 2K3e, and within the Preservation Area except as provided for in Policy 2I1 and Objectives 2I1a and 2I1b.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2D4f: Prohibit through Plan Conformance, local development review and Highlands Project Review new land uses, including those identified through Objective 2D3d, that have a significant potential to result in the discharge of persistent organic chemicals sources (including but not limited to existing discharges of industrial or other non-sanitary wastewater effluent) to ground water or to the land surface within a Prime Ground Water Recharge Area, such that they may degrade or contribute to the degradation of ground water quality.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2D4g: Require conformance with applicable components of regional stormwater management plans, where applicable, as a mandatory requirement for any site plan application.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2D4h: Achieve a net improvement in ground water recharge volume and maintenance of water quality as required through compliance with and implementation of any related provisions of an adopted regional stormwater plan.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2D4i: Achieve a net improvement in ground water volume and maintenance of water quality through redevelopment, enhanced infiltration, pretreatment or other means where feasible.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Comments: Much of the existing and proposed ROW is mapped as Prime Ground Water Recharge Area. The applicant states that since there is no new impervious area associated with the proposed project, and all disturbed areas will be revegetated or restored upon completion of construction, there will be no permanent decrease in the ground water recharge area. With respect to potential temporary impacts, the applicant proposes a Water Resources Quantity Protection Plan as part of the CMP. This plan will incorporates measures into the project design to ensure protection of ground water recharge volume, which include:</p> <ul style="list-style-type: none"> • Restoration of the site to maintain pre-construction hydrology. • Use of slope and trench breakers to slow down the flow of water and increase stormwater infiltration. • The topsoil and subsoil shall be tested for compaction by a third-party monitor within each segment of Prime 			

Ground Water Recharge Area crossed by the project. Tests shall be conducted at intervals sufficient to determine the need for decompaction.

- If necessary, soil shall be decompacted. The subsoil shall be decompacted prior to final restoration of the pre-construction contours and shall be consistent with adjacent soils at the limits of the ROW. Test results will be provided to the Council.

To mitigate for the additional 25% of recharge volume as required by the RMP, the applicant ~~had proposed is proposing~~ to acquire and to protect an area of land within a designated Prime Ground Water Recharge Area. ~~The applicant noted that after a lengthy search of potentially available parcels to meet the Prime Ground Water Recharge Area obligation, the applicant was unable to identify and acquire a suitable parcel(s). After consultation and agreement with the Highlands Council, both parties agreed on a calculation method to determine an appropriate financial contribution. It was determined that 12.96 acres (rounded to 13) are needed for the applicant to meet its obligation. The agreed upon price per acre is \$7,500 as representative of land pricing in either or both Sussex and Passaic Counties. Therefore, the total amount to be contributed by Tennessee for Prime Ground Water mitigation is \$97,500.~~

~~It is important to note that it is the position of the Highlands Council that if the applicant cannot find suitable lands to purchase, that the Council will attempt to do so before agreeing to accept monetary compensation. By protecting the property against development, the applicant states that it will be preventing potential impacts to ground water recharge. Additionally, the applicant notes that should the property acquired contain previous development such as a residence or impervious area, it will remove all structures, driveways, parking areas and lawns and replace them with grassland or forest to provide a significant increase in the recharge volume than the current condition of such property. The applicant will be coordinating with the Highlands Council to ensure that the selected parcel provides significant additional ground water recharge volume.~~

~~The applicant calculated the ground water recharge volumes in mapped Prime Ground Water Recharge Areas crossed by the project as well as those associated with potential mitigation properties. The applicant submitted these to the Council along with an assessment and justification for the use of preserved lands to mitigate for the additional 25% recharge volume requirement. The applicant found that the recharge volume within the Prime Ground Water Recharge Area affected by the project is approximately 20.5 million gallons per year. The recharge volume within the Prime Ground Water Recharge Area in the proposed mitigation area is approximately 7.7 million gallons per year which, when combined with the 100% recharge in the project area represents an overall recharge volume of 137.5%. Based on this result, the applicant states that, by implementing the measures detailed within the CMP and protecting the additional recharge volume within the Prime Ground Water Recharge Area of the proposed mitigation parcel, the project meets the 125% recharge volume requirement detailed within the RMP. The Council staff deemed the calculations and analysis to be complete and appropriate and thus the project was found to be made consistent with Objectives 2D4b and 2D4d.~~

With consideration that the Water Resources Quantity Protection Plan ~~will be~~ has been developed and implemented in coordination with the Highlands Council and other regulatory agencies, and that the applicant ~~will~~ has ~~posted~~ a performance bond to ensure that ground water quality is protected, the proposed project, as amended, is found to be made sufficiently consistent with the RMP goals, policies and objectives related to ground water, and the goals and purposes of the Highlands Act regarding this resource.

SUBPART C WATER QUALITY

Project Area within Wellhead Protection Area? Yes

If yes to above, check all that apply: Tier 1 Tier 2 Tier 3

Name of Nearest Waterway(s) (1000 feet of Project Area): Numerous waterways

SWQS Classification:

Description of Impairments, or TMDL:

Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 2G2: To reduce or avoid water quality impacts using requirements for water quality protection measures for new land uses through local development review and Highlands Project Review.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 2G3: To adopt and implement water quality protections through Plan Conformance, local development review and Highlands Project Review.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Objective 2G3a: Prohibit land uses that would increase pollutant loadings to waters for which TMDLs have been adopted by the NJDEP unless in compliance with the relevant TMDL.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2G3b: Ensure that new land uses draining to a stream designated as impaired but lacking a TMDL (i.e., Sublist 5) avoid increased pollutant loadings for the parameter or parameters for which a TMDL is required.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2G3c: Water Quality Management Plans, Wastewater Management Plans or amendments shall demonstrate that the proposed service area will not directly or indirectly support development that would be in violation of an adopted TMDL.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 2G5: To adopt and implement stormwater management controls through Plan Conformance, local development review and Highlands Project Review.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2G5a: Require recharge of clean stormwater rather than contaminated stormwater wherever feasible to meet stormwater management requirements, and to pretreat contaminated stormwater wherever its recharge is required.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2G5b: Require Low Impact Development and other Best Management Practices standards for stormwater management to minimize the discharge of stormwater-entrained pollutants to ground and surface waters.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2G5c: Implement agricultural best management practices for water conservation, water reuse, nutrient and pesticide application, animal waste management, environmental restoration, pollution assessment and prevention, and irrigation efficiency in farm operations for the protection of ground and surface water quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2G6c: Require conforming municipal and county master plans and development regulations to incorporate relevant TMDLs, additional water quality protection measures and wellhead protection for public water supply wells and nitrate standards as development standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 2H2: To develop and implement, through Plan Conformance, local development review and Highlands Project Review, resource protection measures to protect and enhance ground water and water supply resources within Wellhead Protection Areas consistent with the source water assessments for each water supply source.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2H2a: Prohibit land uses that have a significant potential to result in the discharge of pathogens (including, but not limited to, septic systems and engineered stormwater infiltration from surfaces with significant potential for contact with pathogenic contaminants) to ground water or to the land surface within a designated Tier 1 Wellhead Protection Area, such that they may degrade or contribute to the degradation of ground water quality. Require that the construction of sewer lines within Tier 1 of a Well Head Protection Area prevent seepage of untreated sewage into ground water.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2H2b: Prohibit land uses that have a significant potential to result in the discharge of persistent organic or toxic chemicals sources (including but not limited to existing discharges of industrial or other non-sanitary wastewater effluent) to ground water or to the land surface within a designated Tier 2 Wellhead Protection Area, such that they may degrade or contribute to the degradation of ground water quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2H2c: Require that land uses that have a significant potential to result in major discharges of persistent organic or toxic pollutants to ground water or to the land surface (including but not limited to non-sanitary wastewater effluent and any major sources of potential discharges such as spills and leaks), such that they may degrade ground water quality within a designated Tier 3 Wellhead Protection Area, shall incorporate ongoing management of toxic chemical sources and prohibition of unregulated discharges, so that the potential for ground water contamination is minimized and the opportunity for discharge discovery and control is maximized.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2H4a: Require site specific and municipal stormwater management plans to address wellhead protection requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 2H5: To require that conforming municipalities revise master plans and development regulations to address wellhead protection requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2H5b: Restrict development activities that pose threats to the water quality of public water supply wells.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2H5c: Ensure that development activities and existing land use activities implement best management practices to protect the quality of ground water within Wellhead Protection Areas.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 2H5d: Amend Areawide Water Quality Management Plans or Wastewater Management Plans for conforming municipalities and counties to ensure that any activity associated with the proposed service area will not adversely affect a Wellhead Protection Area.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Comments: Portions of the project area are located within areas mapped as Wellhead Protection Areas (Tiers 1, 2 and 3, with 2, 5 and 12 year times of travel to the well, respectively). With respect to wellhead protection, the applicant states that the project is not anticipated to adversely affect ground water quality and supply. The applicant proposes to implement construction practices designed to reduce and mitigate potential impacts on ground water during construction as detailed within the ECP. Tennessee Gas and its contractors will adhere to these practices related to ground water protection including specifications for trench breakers and dewatering as well as restrictions on refueling and storage of hazardous substances. The applicant states that Environmental Inspectors (EIs) will be on-site during construction activities to ensure compliance with the FERC-approved Plan and Procedures and Tennessee Gas's BMPs, as well as requirements of all applicable federal, State and local environmental permits and approvals.</p> <p>During the initial landowner contacts for survey permission, the applicant's land representatives requested information on the location of wells and septic systems from landowners whose residences were in close proximity to the proposed pipeline loops and work spaces. In many locations, this information was used to reduce work areas or re-align the pipeline route to avoid impacts to these structures. The applicant notes that owners of wells identified that are within</p>			

150 feet of the construction work area shall be offered pre- and post construction well testing.

The applicant states that all equipment used in construction of the pipeline will be refueled and lubricated within the limits of the ROW at a minimum distance of 100 feet from all wetlands and waterbodies. The applicant further notes that auxiliary fuel tanks will be used to reduce the frequency of refueling operations. Also, the applicant states that the proposed impact minimization measures will prevent the discharge of hydraulic fluids or fuels from leaving the ROW or leaching into the ground water.

With respect to stormwater management, the applicant notes that its ECP incorporates, as one document, an Erosion and Sediment Control Plan, Wetland and Waterbody Crossing Plan, and Spill Prevention and Control Plan. By incorporating the above plans into one concise document and adding site specific information, the applicant states that it was able to tailor the ECP to the requirements of the Storm Water Pollution Prevention Plan required under the US Environmental Protection Agency storm water permit or equivalent state program.

The applicant states that its ECP has been modified since the prior submittal to the Highlands Council to include additional requirements that have been imposed by the NJDEP, NRCS Soil and Water Conservation Districts, County Soil Conservation Districts, the US Army Corps of Engineers, and other federal, state, and local agencies. More specifically, the applicant states that the ECP was modified to include the additional requirements of the Standards for Soil Erosion and Sediment Control in New Jersey. The applicant states that this combined approach will allow contractors and Environmental Inspectors to reference all environmental conditions in one document.

The applicant states that the ECP will be included as part of the construction contract. Its objective is to minimize the potential for erosion and sedimentation during pipeline construction, and to effectively restore the ROW and other disturbed areas. The applicant states that it will meet these objectives by employing erosion and sediment control measures including:

- minimizing the quantity and duration of soil exposure;
- protecting critical areas during construction by reducing the velocity of and redirecting runoff;
- installing and maintaining erosion and sediment control measures during construction;
- establishing vegetation as soon as possible following final grading; and
- inspecting the ROW and maintaining erosion and sediment controls as necessary until final stabilization is achieved.

The applicant states that the EIs will be the primary responsible parties for ensuring that its contractors implement and maintain erosion and sediment control measures on a daily basis during the construction phase. By implementing the measures detailed in the ECP, the applicant states that it will meet the objectives of the RMP with respect to stormwater management.

With consideration that avoidance, minimization and mitigation measures relative to water quality are identified in the CMP and will be implemented in coordination with the Highlands Council and other regulatory agencies, that the applicant will comply with permit conditions as issued by NJDEP, and that the applicant will post a performance bond to ensure that water quality is adequately protected, the proposed project, as amended, is found to be made consistent with the RMP goals, policies and objectives related to water quality, and the goals and purposes of the Highlands Act regarding this resource.

SUBPART D SUSTAINABLE DEVELOPMENT AND WATER RESOURCES

WATER UTILITY

Potable Water Supply? NA	Domestic? NA
Source Water HUC(s): NA	
Public Community Water System? Yes	If PCWS, Name of Facility:
PCWS ID No:	Total Projected Water Demand of Project (MGD):
Comments: N/A. The proposed project would not result in the expansion or creation of a public water supply system, public wastewater collection and treatment system or a community on-site treatment facility. In addition, the proposed project would not result in the generation of wastewater nor require a permanent water source.	

WASTEWATER UTILITY	
NJPDES Permit Number: NA	Projected Flow of Project (GPD): NA
HDSF Facility? NA	HDSF Available Capacity (MGD): NA
Subject to Allocation Agreement? NA	Capacity Allocated from HDSF (MGD): NA
Extent of HDSF Service Area Included in WMP: Full <input type="checkbox"/> Partial <input type="checkbox"/>	
Wastewater Treatment Facility: NA	
Service Area: Wastewater Discharge Flow (MGD):	
NJPDES-DGW: Existing <input type="checkbox"/> Proposed <input type="checkbox"/>	Existing: Increase:
NJPDES-DSW: Existing <input type="checkbox"/> Proposed <input type="checkbox"/>	Existing: Increase:
Comments: N/A. The proposed project would not result in the expansion or creation of a public water supply system, public wastewater collection and treatment system or a community on-site treatment facility. In addition, the proposed project would not result in the generation of wastewater nor require a permanent water source.	

SEPTIC SYSTEM YIELD			
Proposed Nitrate Target(s) (mg/l): NA	Annual Recharge Rate Used: Drought <input type="checkbox"/> Average <input type="checkbox"/>		
	Protection Zone	Conservation Zone	Existing Community Zone
Municipal Septic System Density (acre/unit)			
HC Septic System Density (acre/unit)			
Municipal Septic System Yield (units)			
HC Septic System Yield (units)			
Comments: NA. Septic System Yields are not applicable.			

PART 3 AGRICULTURAL RESOURCES	
Area within Agricultural Resource Area? No If yes, percentage? %	Area within Agricultural Priority Area? No If yes, percentage? %
Project Area includes preserved farmland? No If yes, identify properties (B/L):	
Affects Farm Unit >250 acres? No	Includes Important Farmland Soils? Yes
Agricultural Uses? No	
Comments: While the existing ROW traverses small pockets of Important Farmland Soils, there are no Agricultural Resource Areas within the project area, and the Agricultural Resources policies and objectives are not applicable to the proposed project.	

PART 4 HISTORIC, CULTURAL, ARCHAEOLOGICAL, AND SCENIC RESOURCES			
Presence of Resources: Yes	Highlands Historic District Polygons Absence		
Highlands Historic Properties Polygons Absence	Highlands Historic Property Points Presence		
Archaeological Grids Presence	Highlands Scenic Resource Inventory Presence		
Description of Resources: The existing and proposed ROW traverses four archaeological grids (two in Vernon and two in West Milford) and one Historic Property Point in Ringwood. It also traverses several parcels that are listed in the Highlands Scenic Resource Inventory.			
Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 4A3: To ensure through local development review, where a municipality has adopted an historic preservation ordinance under Policy 4C2, that human development does not adversely affect the character or value of resources which are listed on the Highlands Historic and Cultural Resource Inventory to the maximum extent practicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 4A3a: All development and redevelopment applications shall include submission of a report identifying potential historic, cultural and/or archaeological resources on the subject property or immediately adjacent properties.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 4A4: To require that the impact of proposed human development on the historic and cultural resources of the Highlands Region be addressed during local development review and Highlands Project Review and approval.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 4A4a: All applications for site plan or subdivision approval shall include identification of any cultural, historic or archaeological resources in the Highlands Region, which are listed on the Highlands Historic and Cultural Resource Inventory and may be affected by the proposed development.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 4A4b: Where a municipality has adopted an historic preservation ordinance under Policy 4C2, all development which affects identified cultural, historic sites/districts, or archaeological resources shall comply with minimum standards for the preser-	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

vation of the affected resources.			
Policy 4B3: To ensure that human development does not adversely affect the character or value of resources which are listed on the Highlands Scenic Resources Inventory.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 4B5: To require that the impact of proposed human development on the scenic resources of the Highlands Region be addressed during local development review and Highlands Project Review and approval.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 4B5a: All development applications shall include identification of any scenic resources in the Highlands Region that are listed on the Highlands Scenic Resources Inventory and may be affected by the proposed development.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 4B5b: All development which affects identified scenic resources shall comply with minimum standards for the preservation of the affected resources.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 4B5c: Any proposed action that requires federal permits, involves federal grants, or involves other federal actions that may impact the resource values of the Musconetcong National Scenic and Recreational River and the Lower Delaware National Scenic and Recreational River, pursuant to section 10(a) of the National Wild and Scenic Rivers Act, shall require review by the National Park Service, National Wild and Scenic Rivers Program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Comments: According to the Highlands Council GIS mapping, the existing and proposed ROW traverse four archaeological grids (two in Vernon and two in West Milford) and one Historic Property Point in Ringwood. It also traverses several parcels that are listed in the Highlands Scenic Resource Inventory.</p> <p>The applicant notes that in addition to Section 106 requirements, cultural resources investigations were conducted for the project in accordance with the FERC's Office of Energy Project's Guidelines for Reporting on Cultural Resources Investigations, and the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation. The applicant states that it has conducted consultations with all applicable federal, state and tribal agencies relative to the potential presence of sensitive cultural or archaeological resources and that it has conducted field investigations of the Loop 325 Segment survey corridor. The applicant identified one location within the project area with potentially sensitive or significant cultural resource value. It is noted that the privileged and confidential nature of potentially significant cultural resources prevents detailed discussion in the CMP, however, the results of the investigations have been referred to the State Historic Preservation Office (SHPO) for concurrence. As mitigation, the applicant has committed to avoidance of this site and will fence the area during construction to prevent inadvertent impacts related to project activities. If project-related circumstances arise that prevent avoidance of this resource, the applicant notes that additional SHPO consultation and concurrence would be required, as well as Phase II cultural resource investigations to fully determine the extent and significance of the site.</p> <p>The applicant acknowledges that cultural resource deposits could be discovered during project construction or maintenance activities, particularly during excavation. Thus, the applicant has prepared and submitted to SHPO for approval and concurrence a document titled "Procedures Guiding the Discovery of Unanticipated Cultural Resources and Human Remains." This document details specific procedures that must be followed in the case of an unanticipated discovery to maintain compliance with all applicable federal and state laws governing cultural resources. These procedures include the immediate suspension of all activities at the discovery site, agency notification requirements including applicable contact information, and additional assessments of the discovered materials by a qualified cultural resources expert. That document has been incorporated into the applicant's construction conditions and procedures proposed for the project and will be implemented during project construction upon final review and approval by the applicable federal and state regulatory agencies. The applicant notes that all additional correspondence between Tennessee and SHPO shall be provided to the Highlands Council for review and comment.</p> <p>With respect to scenic resources, the applicant notes that permanent visual impacts associated with installation of the pipeline loop will not occur within non-forested areas; however, tree clearing for construction and maintenance of the permanent ROW in forested areas may result in temporary visual impacts. To minimize this potential, the applicant has sited the proposed loop segment adjacent to the existing 300 Line corridor to the greatest extent possible to limit the amount of tree clearing. This also concentrates utilities in existing areas and reduces the degree of disturbance within previously undisturbed areas. The applicant states that temporary impacts of limited duration will be mitigated through restoration practices to revegetate the ROW in a timely manner in accordance with the measures identified within the CMP.</p> <p>In consideration of the work done to date in coordination with SHPO, the implementation of the described mitigation measures, and the commitment to coordinate with the Highlands Council, the proposed project, as amended, is sufficient to be found consistent with the goals and purposes of the Highlands Act regarding historic, cultural,</p>			

archaeological and scenic resources.			
PART 5 TRANSPORTATION			
Project supports local transportation/transit infrastructure? NA			
Comments: NA. Transportation issues are not applicable.			
PART 6 FUTURE LAND USE			
SUBPART A LAND USE CAPABILITY ZONES			
Project Area within which Land Use Capability Zone or Sub-Zone? (check all that apply): Protection Zone <input checked="" type="checkbox"/> Conservation Zone <input type="checkbox"/> Existing Community Zone <input checked="" type="checkbox"/> Conservation – Environmentally Constrained Sub-Zone <input type="checkbox"/> Existing Community – Environmentally Constrained Sub-Zone <input checked="" type="checkbox"/> Lake Community Sub-Zone <input type="checkbox"/> Wildlife Management Sub-Zone <input checked="" type="checkbox"/>			
Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 6C1: To limit new human development in the Protection Zone to redevelopment, exempt activities, and environmentally-compatible low density new land uses, in accordance with RMP resource protection needs and water quality and quantity capacity constraints and to ensure that the impacts of development using exemptions under the Highlands Act (see Policy 7F1) are considered in regional protection measures.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 6C1a: Centers in the Protection Zone, potentially including clustered development, shall be at densities appropriate to the Zone, the community character, the State Development and Redevelopment Plan, and the use of septic systems or community wastewater systems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 6C2: To ensure through Plan Conformance, local development review and Highlands Project Review that any future development or redevelopment which does occur in a Protection Zone is subject to standards and criteria which protect the land and water resources of the Protection Zone from any potential adverse impact to the maximum extent possible.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 6D3: To limit through Plan Conformance, local development review and Highlands Project Review the use and development of lands within the Conservation Zone to agriculture use and development, including ancillary and support uses, redevelopment of existing developed areas, and environmentally-compatible low density land uses that are to the maximum extent possible achieved in compact development patterns, to be designed and developed in a manner which is compatible with the long term use of adjacent land for agricultural purposes.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 6D3b: Centers in the Conservation Zone, potentially including clustered development, shall be at densities appropriate to the Zone, the community character, the State Development and Redevelopment Plan, and the use of septic systems or community wastewater systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 6F3: To ensure that development activities within the Existing Community Zone are subject to standards and criteria which ensure that development and redevelopment incorporate smart growth principles and do not adversely affect natural resources.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 6F4: To ensure that development and redevelopment within the Existing Community Zone are served by adequate public facilities including water supply, wastewater treatment, transportation, educational and community facilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 6F5: To ensure that development and redevelopment in the Existing Community Zone are compatible with existing community character.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 6F6a: Center based development initiatives shall be planned within the Existing Community Zone at densities appropriate to the Zone, the community character, the State Development and Redevelopment Plan. Densities of five dwelling units and above are encouraged, and are required in areas designated as voluntary TDR Receiving Zones where TDR benefits are sought under the Highlands Act.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments: Much of the existing and proposed ROW traverses the Protection Zone in the Preservation Area. Policy 6C1 states “to limit new human development in the Protection Zone to redevelopment, <i>exempt activities</i> [emphasis added], and environmentally-compatible low density new land uses...” The purpose of this review is to determine if the proposed project is consistent with the goals of the Act in order to be eligible for Exemption #11. The second part of Policy 6C1 states “...to ensure that the impacts of development using exemptions under the Highlands Act (see Policy 7F1) are considered in regional protection measures.”			
The amended proposed project integrates a Comprehensive Mitigation Plan (CMP) for both the Planning Area and Preservation Area. The CMP will be prepared consistent with the Highlands Regional Master Plan (RMP) using the approach of avoid, minimize and mitigate and providing a mechanism, in the form of a plan, for identifying the specific resource issues, the means to avoid and minimize the specific impact, and ultimately the ability to define ways that would help mitigate unavoidable environmental impacts. The development and implementation of the CMP, in coordination with the various regulatory agencies, renders the proposed project consistent with the RMP goals, policies and objectives related to Land Use Capability Zones, and the with the goals and purposes of the Act.			

SUBPART C REGIONAL GUIDANCE FOR DEVELOPMENT AND REDEVELOPMENT			
Regional Master Plan Goals, Policies, and Objectives: (it is important to note the policy regarding discretionary growth - Policy 6H7 Provisions and standards relating to regional growth activities which increase the intensity of development shall be discretionary for conforming municipalities and counties):	C	I	N/A
Policy 6H1: To protect, restore, or enhance sensitive environmental resources of the Highlands Region, including but not limited to Forests, Critical Habitat, Highlands Open Waters and their buffers, Riparian Areas, Steep Slopes, Prime Ground Water Recharge Areas, Wellhead Protection Areas, and Agricultural Resource Areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 6H1b: Prevent the extension or creation of water and wastewater utility services in the Protection Zone, Conservation Zone and Environmentally Constrained Sub-Zones of the Planning Area, unless they meet the requirements of Policy 2J4 with Objectives 2J4a through 2J4d, and Policy 2K3 with Objectives 2K3a through 2K3e, and will maximize the protection of agricultural and environmentally sensitive resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 6H1d: Cluster and conservation design development plans and regulations shall consider existing community character, incorporate smart growth design principles, and require Low Impact Development including but not limited to: locating development adjacent to existing infrastructure such as water, wastewater, transportation, and public facilities to limit the degree of new impervious surface, and permitting smaller residential lots in order to incorporate community open space and existing natural resources into the design.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 6H3: To require conforming municipalities to include site development programs, such as clustering and lot averaging, to protect natural and agriculture resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 6H6: To integrate public parks and green spaces into development and redevelopment projects and ensure restoration of impaired natural resources to the extent required by law, at a minimum, and where feasible to a greater extent to maximize long term value of the project.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 6H7: Provisions and standards relating to regional growth activities which increase the intensity of development shall be discretionary for conforming municipalities and counties.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 6H8: Regional growth, where accepted through local planning and regulations, should identify opportunities to maximize land use intensity while protecting natural features and community character.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 6H8a: Development and redevelopment initiatives shall encourage the use of Highlands Development Credits as a means to enhance the existing or adjacent community while protecting local and regional natural resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 6H8b: Preparation and implementation of standards ensuring that development protects environmentally sensitive resources in all Land Use Capability Zones and Sub-Zones.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 6H9: To incorporate smart growth principles and green building design and technology in development and redevelopment initiatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments: The proposed project, as amended, is being designed such that its implementation will be protective of Forests, Critical Habitat, Highlands Open Waters and their buffers, Riparian Areas, Steep Slopes, Prime Ground Water Recharge Areas, and Wellhead Protection Areas.			
SUBPART D REDEVELOPMENT			
Locally Designated Redevelopment Area? No If yes, name of site(s):			
Highlands Designated Redevelopment Area? No If yes, name of site(s):			
Highlands Contaminated Site Inventory Tier 1 or Tier 2 Site(s)? No If yes, name of site(s):			
Comments: N/A. Redevelopment issues are not applicable.			
SUBPART E SMART GROWTH			
Is the municipality involved in the State Planning Commission Plan Endorsement (PE) process? No			
If yes, status of PE process:			
Does the project area include a State Planning Commission designated or expired center? No			
If yes, center expiration date: 00/00/0000			
Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 6N2: To require municipalities and counties to adopt stormwater management Low Impact Development standards to preserve or mimic the natural hydrologic features and characteristics of the land.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 6N2a: Implementation of on-site stormwater management features that maintain, restore and enhance the pre-existing natural drainage patterns of the site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 6N2b: Limitations on the amount of impervious cover allowed on a site as a means to protect and increase stormwater infiltration and reduce stormwater runoff.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 6N2c: Minimum requirements for site-specific hydrologic studies during local development review and Highlands Project Review which identify the velocity, volume and pattern of water flow into, through, and off of the parcel proposed for development.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 6N2d: Minimum requirements that stormwater management systems employ a "design with nature" approach.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Objective 6N2e: Minimum requirements for use of grass channels, dry swales, wet swales, infiltration basins, bio-swales and water gardens, green roofs, and other low impact approaches to attenuate and control stormwater and provide multiple environmental benefits.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 6N3: To require through Plan Conformance that municipalities and counties adopt Low Impact Development practices to minimize land disturbance during construction activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 6N4: To require through Plan Conformance that municipalities and counties adopt LID best management practices where disturbance of Highlands resources is proposed, including but not limited to Steep Slopes, forest resources, Critical Habitat, Highlands Open Waters and Riparian Areas, and Prime Ground Water Recharge Areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 6N5: To require through Plan Conformance that municipalities and counties incorporate programs for community and neighborhood design that support a variety of housing options, mixed uses, redevelopment, adaptive re-use of historic sites and structures, and infill development in their master plans and development regulations.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

General Comments: The applicant indicates that that its ECP incorporates, as one document, an Erosion and Sediment Control Plan, Wetland and Waterbody Crossing Plan, and Spill Prevention and Control Plan. By incorporating the above plans into one concise document and adding site specific information, the applicant states that it was able to tailor the ECP to the requirements of the Storm Water Pollution Prevention Plan required under the US Environmental Protection Agency storm water permit or equivalent state program. The applicant states that its objective is to minimize the potential for erosion and sedimentation during pipeline construction, and to effectively restore the ROW and other disturbed areas. The applicant states that it will meet these objectives by employing erosion and sediment control measures and best management practices.

With consideration of: 1) the development and implementation of an Erosion and Sediment Control Plan, Wetland and Waterbody Crossing Plan, and Spill Prevention and Control Plan which will be coordinated with the various resource agencies; 2) the ROW management plan will improve the ecological benefits of the ROW in keeping with a “design with nature” approach, and 3) the applicant will post a performance bond to ensure that stormwater quality will be adequately treated, the proposed project, as amended, is found to be made consistent with the RMP goals, policies and objectives related to smart growth, and the goals and purposes of the Highlands Act regarding this issue.

SUBPART F HOUSING AND COMMUNITY FACILITIES

Does the project area include an affordable housing site? No **3rd Round Status:** NA

General Comments: The proposed project is exempt from the provisions of the Council on Affordable Housing since it is public utility. The applicant shall provide a Non-Residential Development Fee Certification/Exemption form to verify the exempt status of the project.

PART 7 LANDOWNER EQUITY

Is the project exempt from the Highlands Act? Subject of this review

Does the project support the use of Highlands Development Credits? NA

Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Objective 7F1c: Preservation Area exemptions issued by the NJDEP in accordance with N.J.A.C. 7:38, shall be required, where appropriate, prior to consideration of a local development review or a Highlands Project Review. Guidance shall specify the exceptions where a review may proceed absent an exemption determination from the NJDEP.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 7F1d: Planning Area exemptions, issued by the Highlands Council, shall be required, where appropriate, prior to consideration of a local development review or a Highlands Project Review. Guidance shall specify the exceptions where a review may proceed absent such an exemption determination. Applications for exemptions submitted to the Highlands Council shall be based upon the application requirements exemptions codified in N.J.A.C. 7:38.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 7F1f: Activities authorized under exemptions #9 and #11, which require a finding that the activity is consistent with the goals and purposes of the Highlands Act, shall be based upon a finding that the proposed activities are consistent with Highlands Act, the RMP, any rules or regulations adopted by the NJDEP pursuant to the Highlands Act, or any amendments to a master plan, development regulations, or other regulations adopted by a local government unit specifically to conform them with the RMP.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 7G1: For the Preservation Area, coordinate with NJDEP during Highlands permit review for any major Highlands development including the review of waivers on a case-by-case basis: 1) if determined to be necessary in order to protect public health and safety; 2) for redevelopment in certain previously developed areas as identified by the Highlands Council, or 3) in order to avoid the taking of property without just compensation.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 7G2: For both the Preservation Area and the Planning Area, a waiver may be issued by the Highlands Council on a case-by-case basis from the requirements of the RMP or any amendments to a master plan, development regulations, or other regulations adopted by a local government unit specifically to conform them with the RMP: 1) if determined to be necessary in order to protect public health and safety; 2) for redevelopment in certain previously developed areas as identified by the Highlands Council, or 3) in order to avoid the taking of property without just compensation. Any waiver issued shall be conditioned upon a determination that the proposed development meets the requirements prescribed for a finding as listed in Section 36.a of the Highlands Act to the maximum extent possible.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Policy 7G3: For both the Preservation Area and the Planning Area during local development review, any variance or exception issued shall be conditioned upon a written determination, specifically included in an approving resolution, that the proposed development meets the requirements prescribed for a finding as listed in Section 36.a of the Highlands Act to the maximum extent possible.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Comments: Objective 7F1c is under consideration by NJDEP, with consultation by the Highlands Council, for the Preservation Area and Objective 7F1d is under consideration by the Highlands Council for the Planning Area. Both are the subject of this review.

PART 8 SUSTAINABLE ECONOMIC DEVELOPMENT

Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 8A1: To maintain and expand the existing job and economic base by promoting appropriate, sustainable, and environmentally compatible economic development throughout the Highlands Region.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 8A2: To preserve the high quality of life in the Highlands Region through economic planning of the RMP.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 8A3: To identify and pursue state and federal programs that offer financial and/or technical assistance for sustainable economic development in the Highlands Region.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 8A5: To advocate for appropriate public investment in the Highlands Region through the strategic location of public facilities and institutions that will spur sustainable and appropriate economic activity.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Objective 8A6a: Coordinate with municipalities and counties as local and regional strategies are developed to improve the tax base and to create jobs and economic opportunities consistent with the policies and objectives of the RMP.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 8C1: To promote recreation and tourism based economic initiatives, which derive economic benefit from sustainable use of the natural resources of the Highlands Region.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: The applicant states that the proposed project would generate several hundred temporary construction-related jobs. The applicant also states that the project would generate a substantial increase in tax dollars for the host municipalities, estimated to be in an aggregate range of \$1,500,000 to \$2,000,000 per year.

PART 9 AIR QUALITY

Regional Master Plan Goals, Policies, and Objectives:	C	I	N/A
Policy 9A1: To encourage capital facility development and redevelopment that leads to attainment of the National Ambient Air Quality Standards (NAAQS).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 9A2: To support continued, consistent and thorough air quality monitoring and assessment programs as a means of evaluating and managing major air toxic point sources that affect the Region.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 9A3: To encourage land use development and redevelopment practices that promote center-based growth and mixed-use development and offer alternative modes of transportation as a means to reduce automobile dependency, vehicle miles traveled, vehicle trip length, and duration, for the reduction of local and regional air pollutants and of carbon dioxide emissions linked to global warming.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 9A4: To encourage and support state and federal air quality monitoring for the Highlands Region and regulatory action to reduce levels of air pollutants including but not limited to: ozone, carbon dioxide, sulfur compounds, volatile organic compounds, methane, and fine particulate matter pollutants in the Highlands Region.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy 9A5: To encourage energy efficient design and green building practices in support of regional resource protection and smart growth planning policies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy 9A6: To support State and federal initiatives that will reduce air pollution emanating from power plants, incinerators and landfills within and affecting the Highlands Region and particularly in Warren County due to out-of-State power plant air pollution.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: The applicant states that air quality impacts associated with construction and installation of Loop 325 in the Highlands Region will include emissions from fossil-fueled construction equipment and fugitive dust. Such air quality impacts, however, will generally be temporary, localized and insignificant. Large earth-moving equipment and other mobile sources may be powered by diesel or gasoline engines and are sources of combustion-related emissions. However, the applicant notes that air pollutants from construction equipment will be limited to the immediate vicinity of the construction area and will be temporary. The applicant states that the majority of air emissions produced during construction activities will be particulate matter (PM10 and PM2.5) in the form of fugitive dust. Fugitive dust will result from land clearing, grading, excavation, concrete work, and vehicle traffic on paved and unpaved roads. The applicant states that the amount of dust generated will be a function of construction activities, soil type, moisture content, wind speed, frequency of precipitation, vehicle traffic, vehicle types, and roadway characteristics. The applicant notes that it will comply fully with state regulations that address fugitive dust impacts from construction activities.

The applicant calculated the total emissions from construction activities and determined that all site locations where construction will take place are in attainment for CO, SO2, PM10, and PM2.5; therefore, demonstration of compliance to the General Conformity thresholds for these “attainment” pollutants is not required.

The applicant notes that the natural gas provided through this project will be used primarily in the northeast region, providing lower emissions than other fuel sources that might be used for the same purposes.

CONCLUSION

In the evaluation of Exemption #11 under the Highlands Act, the activity must be “consistent with the goals and purposes of the act.” The Highlands Council assesses the latter requirement against the Highlands Act, the RMP, and NJDEP’s Preservation Area rules at N.J.A.C. 7:38 to determine whether the nature of any inconsistencies are sufficient to find that the project is not consistent with the goals and purposes of the Highlands Act and therefore should not be exempt. Non-exempt projects, to the extent that they are inconsistent with the Highlands Act, the RMP or the Preservation Area rules, must either address those inconsistencies or apply to the Highlands Council (for the Planning Area) or NJDEP (for the Preservation Area) for waivers that address the inconsistencies.

In evaluating the proposed Tennessee Gas Pipeline 300 Line Project, as amended, the Highlands Council staff analyzed, as a whole project, the required construction elements as well as the integrated Comprehensive Mitigation Plan. As described by the applicant, the Comprehensive Mitigation Plan will be prepared consistent with the Highlands Regional Master Plan to use the approach of *avoid, minimize and mitigate*. It provides an approach and process for identifying the specific resource issues, the means to avoid and minimize the specific impact, and ultimately, the ability to define ways that would help to mitigate unavoidable environmental impacts.

For the reasons set forth throughout this Draft Consistency Determination, the project, as proposed, is consistent with many of the RMP goals, policies and objectives but remains inconsistent in various areas. However, the Comprehensive Mitigation Plan addresses those inconsistencies in nearly all cases. The linear nature of the project, and the necessity of using the existing ROW for the proposed pipeline loop, results in unavoidable inconsistencies, but the Comprehensive Mitigation Plan would mitigate those inconsistencies sufficiently that the proposed project, as amended and viewed as a whole (with minimization of environmental impacts and the development of the Comprehensive Mitigation Plan), is found to be made consistent with the goals and purposes of the Act. This finding is based upon the Comprehensive Mitigation Plan as submitted, with the following conditions:

1. That the applicant incorporate its findings and commitments regarding Prime Ground Water Recharge Areas;
2. That the applicant address short-term impacts of construction activities on rare, threatened and endangered species;
- ~~3. That the applicant provide to the Highlands Council the qualifications of all Environmental Inspectors that would work on the project site prior to commencement of any on-site activity.~~
3. The applicant had proposed and the Highlands Council agreed that the applicant would purchase an 18.1 acre of Special Environmental Zone designated parcel in the Township of West Milford. As a condition of approval, the applicant will continue to coordinate with the Highlands Council such that this property will be assigned to a suitable land conservation entity or other public entity with an appropriate conservation deed of easement to ensure no development on the property, which the Highlands Council shall have the right to enforce. That the applicant coordinate with the Highlands Council to identify lands in the vicinity of the project located within Special Environmental Zones that are particularly vulnerable to development and preserve the undeveloped parcel(s) through any number of conservation mechanisms. Further, that the applicant coordinate with the Highlands Council regarding the management and stewardship of these lands.
4. That the applicant shall assess the potential impacts of foreseeable but low-probability events, such as major weather or other catastrophic events, including but not limited to impacts such as slope failure, failure of sediment and erosion control measures, and silt and mud deposition into lakes and other waterbodies. In addition, the CMP shall include a contingency plan to address such foreseeable and low-probability events and their impacts, including pre-planning, event management and restoration.
5. That the applicant will ~~post-maintain thea~~ performance bond, with the dollar amount ~~to beas previously~~ determined by the Highlands Council based on information from the Highlands Council, to ensure completion of the individual plans of the CMP. Commitment to development and implementation of the CMP, ~~would beas~~ a condition of the Highlands Act Exemption #11.

The amended project includes application of Exemption #11 of the Act to include routine post-construction repair and maintenance of the Tennessee Gas Pipeline 300 Line. As a condition of this Consistency Determination, the

applicant is required to submit a report to the Highlands Council and the NJDEP each time a proposed post construction repair or maintenance activity is planned, prior to the implementation of the activity.