



**Federal Energy  
Regulatory  
Commission**

**Office of  
Energy Projects**

**November 2015**

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**Transcontinental Gas Pipe Line Company, LLC**

**Docket No. CP15-89-000**

# **Garden State Expansion Project**

## **Environmental Assessment**

Washington, DC 20426

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:  
OEP/DG2E/Gas 2  
Transcontinental Gas Pipe Line  
Company, LLC  
Docket No. CP15-89-000

TO THE PARTY ADDRESSED:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared this environmental assessment (EA) for the Garden State Expansion Project (Project) proposed by Transcontinental Gas Pipe Line Company, LLC (Transco) in the above-referenced docket. Transco requests authorization to construct and operate natural gas facilities in New Jersey to provide additional natural gas volumes on its existing pipeline system.

The EA assesses the potential environmental effects of the construction and operation of the Project in accordance with the requirements of the National Environmental Policy Act. The FERC staff concludes that approval of the proposed Project, with appropriate mitigating measures, would not constitute a major federal action significantly affecting the quality of the human environment.

The Project involves installation of a new compressor station and a new meter station co-located on Transco's Trenton-Woodbury Lateral in Burlington County, New Jersey; modification and addition of compression at an existing compressor station (Station 205) in Mercer County, New Jersey; and construction or modification of related appurtenant underground and aboveground facilities. The Project would provide 180,000 dekatherms per day of incremental firm transportation capacity from Transco's Station 210 Zone 6 Pool in Mercer County, New Jersey to a new delivery point with New Jersey Natural Gas Company on Transco's Trenton-Woodbury Lateral.

The FERC staff mailed copies of the EA to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners within 0.5 mile of the above ground facilities; interested individuals and groups; newspapers and libraries in the project area; and parties to this proceeding. Everyone on our environmental mailing list will receive a CD version of the EA. In addition, the EA is available for public viewing on the FERC's website ([www.ferc.gov](http://www.ferc.gov)) using the eLibrary link. A limited number of copies of the EA are available for distribution and public inspection at:

Federal Energy Regulatory Commission  
Public Reference Room  
888 First Street NE, Room 2A  
Washington, DC 20426  
(202) 502-8371

Any person wishing to comment on the EA may do so. Your comments should focus on the potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. The more specific your comments, the more useful they will be. To ensure that the Commission has the opportunity to consider your comments prior to making its decision on this Project, it is important that we receive your comments in Washington, DC on or before **December 4, 2015**.

For your convenience, there are three methods you can use to file your comments with the Commission. In all instances please reference the Project docket number (CP15-89-000) with your submission. The Commission encourages electronic filing of comments and has expert staff available to assist you at 202-502-8258 or [efiling@ferc.gov](mailto:efiling@ferc.gov).

- (1) You can file your comments electronically using the [eComment](#) feature located on the Commission's website ([www.ferc.gov](http://www.ferc.gov)) under the link to [Documents and Filings](#). This is an easy method for submitting brief, text-only comments on a project;
- (2) You can also file your comments electronically using the [eFiling](#) feature on the Commission's website ([www.ferc.gov](http://www.ferc.gov)) under the link to [Documents and Filings](#). With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "[eRegister](#)." You must select the type of filing you are making. If you are filing a comment on a particular project, please select "Comment on a Filing"; or
- (3) You can file a paper copy of your comments by mailing them to the following address:

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington, DC 20426

Any person seeking to become a party to the proceeding must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedures (18

CFR 385.214).<sup>1</sup> Only intervenors have the right to seek rehearing of the Commission's decision. The Commission grants affected landowners and others with environmental concerns intervenor status upon showing good cause by stating that they have a clear and direct interest in this proceeding which no other party can adequately represent. **Simply filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered.**

Additional information about the Project is available from the Commission's Office of External Affairs, at **(866) 208-FERC**, or on the FERC website ([www.ferc.gov](http://www.ferc.gov)) using the eLibrary link. Click on the eLibrary link, click on "General Search," and enter the docket numbers excluding the last three digits in the Docket Number field (i.e., CP15-89). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at [FercOnlineSupport@ferc.gov](mailto:FercOnlineSupport@ferc.gov) or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659. The eLibrary link also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. Go to [www.ferc.gov/docs-filing/esubscription.asp](http://www.ferc.gov/docs-filing/esubscription.asp).

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<sup>1</sup> See the previous discussion on the methods for filing comments.

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## ABBREVIATIONS AND TECHNICAL ACRONYMS

|                   |  |
|-------------------|--|
| APE               | area of potential affect   |
| AQCR              | Air Quality Control Region   |
| BMPs              | Best management practices  |
| CAA               | Clean Air Act of 1970  |
| Certificate       | Certificate of Public Convenience and Necessity  |
| CFR               | Code of Federal Regulations  |
| CH <sub>4</sub>   | methane  |
| CO                | carbon monoxide  |
| CO <sub>2</sub>   | carbon dioxide   |
| CO <sub>2e</sub>  | carbon dioxide equivalents   |
| Commission        | Federal Energy Regulatory Commission   |
| CSP               | Construction Spill Plan  |
| dB                | decibel  |
| dba               | A-weighted decibel   |
| DOT               | U.S. Department of Transportation  |
| Dt/d              | Dekatherms per day   |
| EA                | environmental assessment   |
| EI                | environmental inspector  |
| EPA               | U.S. Environmental Protection Agency   |
| FERC              | Federal Energy Regulatory Commission   |
| GHG               | greenhouse gas   |
| GWP               | global warming potential   |
| HAP               | hazardous air pollutants   |
| hp                | horsepower   |
| L <sub>dn</sub>   | day-night sound level  |
| L <sub>eq24</sub> | 24-hour equivalent sound level   |
| M&R               | meter and regulating   |
| MP                | milepost   |
| N <sub>2</sub> O  | nitrous oxide  |
| NAAQS             | National Ambient Air Quality Standards   |
| NESHAP            | National Emissions Standards for Hazardous Air Pollutants  |
| NGA               | Natural Gas Act  |
| NJDEP             | New Jersey Department of Environmental Protection  |
| NJGS              | New Jersey Geological Survey   |
| NJHPO             | New Jersey Historic Preservation Office  |
| NJNG              | New Jersey Natural Gas   |
| NO <sub>2</sub>   | nitrogen dioxide   |
| NO <sub>x</sub>   | nitrogen oxides  |
| NOI               | Notice of Intent to Prepare an Environmental Assessment for the Proposed Garden State Expansion Project and Request for Comments on Environmental Issues |
| NRHP              | National Register of Historic Places   |

|                   |   |
|-------------------|---|
| NSA               | Noise Sensitive Area  |
| NSPS              | New source performance standards  |
| O <sub>3</sub>    | ozone   |
| OEP               | Office of Energy Projects   |
| OTR               | Ozone Transport Region  |
| Pb                | lead  |
| pCi/L             | picocuries per liter  |
| PEM               | palustrine emergent   |
| PFO               | palustrine forested   |
| PSS               | palustrine scrub shrub  |
| Plan              | FERC Upland Erosion Control, Revegetation, and Maintenance Plan                   |
| PM                | Particulate matter  |
| PM <sub>2.5</sub> | particulate matter with an aerodynamic diameter less than or equal to 2.5 microns |
| PM <sub>10</sub>  | particulate matter with an aerodynamic diameter less than or equal to 10 microns  |
| Procedures        | FERC Wetland and Waterbody Construction and Mitigation Procedures                 |
| Project           | Garden State Expansion Project  |
| Secretary         | Secretary of the Commission   |
| SESCPs            | Soil Erosion and Sediment Control Plans   |
| SHPO              | State Historic Preservation Office  |
| SO <sub>2</sub>   | sulfur dioxide  |
| SPCC Plan         | Spill Prevention Containment and Countermeasure Plans                             |
| Station 203       | Compressor Station 203  |
| Station 205       | Compressor Station 205  |
| tpy               | tons per year   |
| Transco           | Transcontinental Gas Pipe Line Company, LLC                                       |
| UDCP              | Unanticipated Discovery of Contamination Plan                                     |
| UDP               | unanticipated discovery plans   |
| USDA              | United States Department of Agriculture   |
| USFWS             | U.S. Fish and Wildlife Service  |
| USGCRP            | U.S. Global Change Research Program   |
| USGS              | United State Geological Survey  |
| VOC               | volatile organic compound   |
| WMP               | Waste Management Procedures   |

## **A. PROPOSED ACTION**

### **1.0 INTRODUCTION**

The staff of the Federal Energy Regulatory Commission (Commission or FERC) has prepared this environmental assessment (EA) to assess the environmental effects of the natural gas pipeline facilities proposed by Transcontinental Gas Pipe Line Company, LLC (Transco). We<sup>1</sup> prepared this EA in compliance with the requirements of the National Environmental Policy Act of 1969 (Title 40 of the Code of Federal Regulations, Parts 1500-1508 [40 CFR 1500-1508]), and with the Commission's implementing regulations under 18 CFR 380.

On February 18, 2015, Transco filed an application with the Commission in Docket No. CP15-89-000 for the Garden State Expansion Project (Project) under section 7(c) of the Natural Gas Act (NGA) and part 157 of the Commission's regulations. Transco seeks to construct and operate certain natural gas facilities in New Jersey to provide 180,000 dekatherms per day (Dt/d) of natural gas incremental firm transportation capacity in two phases.

The EA is an important and integral part of the Commission's decision on whether to issue Transco a Certificate of Public Convenience and Necessity (Certificate) to construct and operate the proposed facilities. Our principal purposes in preparing this EA are to:

- identify and assess potential impacts on the natural and human environment that could result from implementation of the proposed action;
- identify and recommend reasonable alternatives and specific mitigation measures, as necessary, to avoid or minimize project-related environmental impact; and
- facilitate public involvement in the environmental review process.

### **2.0 PURPOSE AND NEED**

Transco's stated purpose is to provide firm transportation for New Jersey Natural Gas (NJNG), a local gas distribution company along the New Jersey Coast whose natural gas service was affected by Hurricane Sandy. Transco would transport gas from Transco's Zone 6 Station 210 market pool in Princeton, New Jersey to a new delivery point for NJNG on its Trenton-Woodbury Lateral located at the Chesterfield Meter and Regulating Station (M&R) in Burlington County, New Jersey. The Project would provide up to 20,000 Dt/d for Phase 1 and up to 180,000 Dt/d of natural gas from the receipt point to the delivery point for NJNG.

NJNG, as part of its Southern Reliability Link Project, plans to construct an approximately 28-mile-long new lateral from its existing distribution system to the new delivery point on Transco's Trenton-Woodbury Lateral. Transco states that its transportation service under the Project would allow NJNG to access additional supplies of natural gas and benefit the consuming public by providing enhanced reliability and resiliency to NJNG's service territory in Monmouth and Ocean Counties, New Jersey.

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<sup>1</sup> "We," "us," and "our" refers to environmental staff of the Office of Energy Projects.

Under Section 7 of the NGA, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on technical competence, financing, rates, market demand, gas supply, environmental impact, long-term feasibility, and other issues concerning a proposed project.

### **3.0 PROPOSED FACILITIES**

The Project would involve the installation of new facilities and modification of existing facilities. A general location map (figure 1) and aerials (figures 2 and 3) for the Project are located in the appendix. Transco's proposed Project would consist of the following:

#### Phase 1 (targeted in-service date of November 1, 2016)

- Chesterfield M&R, Burlington County, New Jersey – new meter and regulating station near milepost (MP) 15.2 on Transco's Trenton-Woodbury Lateral;
- Compressor Station 205 (Station 205), Mercer County, New Jersey – Uprate Unit 3 existing motor to 25,000 horsepower (hp) and related minor ancillary modifications; and
- Valves and tie-in piping extending from Trenton-Woodbury Lateral to Chesterfield M&R and the future location of Compressor Station 203 (Station 203).

#### Phase 2 (targeted in-service date of August 1, 2017)

- Station 205, Mercer County, New Jersey – Units 1 and 2: Replace existing 16,000 hp compressor units and uprate electric motors each to 16,000 hp, including minor ancillary modifications;
- Station 203, Burlington County, New Jersey – new compressor station consisting of a single 30,500 hp electric motor driven unit near MP 15.2 on the Trenton-Woodbury Lateral;
- Electrical Substation, Burlington County, New Jersey – new electrical substation to power Station 203;
- Automate 15-inch block valve J736 located on the Trenton-Woodbury Lateral, Burlington County, New Jersey; and
- Communication tower – approximately 150 feet high, within boundaries of Compressor Station 203/Chesterfield M&R/Electrical Substation.

Transco anticipates that construction of the Phase 1 facilities would begin during the first quarter of 2016 to achieve the targeted in-service date of November 1, 2016. Construction of the Phase 2 portion of the Project is anticipated to occur continuously after completion of Phase 1 tasks, which is expected to be at the beginning of the 2<sup>nd</sup> quarter of 2016, with a target in-service date of August 1, 2017.

#### 4.0 NON-JURISDICTIONAL FACILITIES

Under Section 7 of the NGA, the FERC is required to consider, as part of its decision to certificate jurisdictional facilities, all factors bearing on the public convenience and necessity. The jurisdictional facilities for the Project include the proposed compressor units, 203 and 205 compressor and auxiliary buildings, inlet and outlet piping, M&R, and related supporting facilities necessary to operate the compressors. Occasionally, proposed projects have associated facilities that do not come under the jurisdiction of the Commission. These non-jurisdictional facilities may be integral to the need for the proposed facilities (i.e., a power plant at the end of a jurisdictional pipeline) or they may be minor, non-integral components of the jurisdictional facilities that would be constructed and operated as a result of the proposed facilities.

The electrical substation for Compressor Station 203 construction would precede the compressor station construction. The power needed to operate Compressor Station 203 would be delivered by means of a new non-jurisdictional below-ground power line from the proposed electrical substation to be installed and operated by Public Service Enterprise Group, a local New Jersey utility. The Public Service Enterprise Group has not identified the exact easement location of the power line; however, the impacts associated with this activity would generally be limited to the compressor station site, which are discussed within section B of this EA. In addition, NJNG's Southern Reliability Link Project is also a non-jurisdictional intrastate pipeline. Section C of this EA, Cumulative Impacts, contains a discussion of the environmental impacts associated with NJNG's Southern Reliability Link Project.

The Garden State Expansion Project is being proposed by Transco in response to NJNG's request to obtain capacity. NJNG would use the capacity under the Project to provide system resiliency, service reliability, and operating flexibility. NJNG, as part of its Southern Reliability Link Project, would construct a new 28-mile-long pipeline lateral from its existing distribution system to the new delivery point on Transco's Trenton-Woodbury Lateral. The Southern Reliability Link Project would begin at the supply point of Transco's interstate pipeline in Chesterfield Township, Burlington County, and continue through North Hanover, Upper Freehold, and Plumsted until it enters the Joint Base McGuire-Dix-Lakehurst. From the military base, it connects with the NJNG system in Manchester Township (NJNG 2015). Figure 4 indicates the general location of the Southern Reliability Link Project (NJNG 2015). Transco's transportation service under the Project would allow NJNG to access additional supplies of natural gas and, according to Transco, benefit the consuming public by providing enhanced reliability and resiliency to NJNG's service territory in Monmouth and Ocean Counties, New Jersey.

According to NJNG, approximately 85 percent of the Southern Reliability Link Project would be installed within existing roadside rights-of-way. Construction is expected to begin in March 2016 and would last approximately one year. The pipeline would be monitored 24 hours a day, and 7 days a week via remote controlled valves, which would be installed along NJNG's project, allowing NJNG to monitor and shut down the flow of gas should leaks be detected. NJNG states that where the route is not in a public roadway, it is committed to restoration of the properties impacted to the landowner's satisfaction (NJNG 2015).

NJNG would obtain permits for installation and construction for the Southern Reliability Link Project as detailed in table 1 (Sturn 2015). NJNG has filed petitions with the New Jersey Board of Public Utilities, the lead state agency, in order to permit these facilities, which can be found at <http://www.njng.com/about/southern-reliability-link/srl-bpu-filings.asp>. These petitions are currently under review. NJNG states it would comply with all appropriate federal, state, county, and local authorities, statutes, and permit requirements, and that eminent domain would not be used for acquiring easements for its project (NJNG 2015).

## **5.0 PUBLIC REVIEW AND COMMENT**

On March 26, 2015, the Commission issued a *Notice of Intent to Prepare an Environmental Assessment for the Proposed Garden State Expansion Project and Request for Comments on Environmental Issues* (NOI). The NOI was mailed to federal, state, and local government representatives and agencies; elected officials; Native American tribes; potentially affected landowners within 0.5 mil of the compressor stations; environmental and public interest groups; newspapers and libraries in the Project area; and parties to this proceeding. As of October 19, 2015, we received 48 comments in response to the NOI. Commenters expressed concern primarily regarding potential impacts associated with NJNG’s proposed Southern Reliability Link Project, a non-FERC jurisdictional project. These commenters raised concerns about long-term road closures, eminent domain, hydraulic fracturing including radon exposure, and the potential for an increase in noise/vibration (see next page for additional concerns). Comments received specific to the Garden State Expansion Project were regarding impacts on air quality, noise, and safety; wildlife; cultural resources; recreational, aesthetic, and commercial interests of residents; water and wetlands; the scope of the environmental document being prepared; and the relationship of other gas pipeline projects to the proposed Project. Table 2 indicates the comments we received and where they are addressed in the document.

The United States Fish and Wildlife Service (USFWS) provided a comment that indicated that the Project is not likely to adversely affect federally listed or candidate species including the northern long-eared bat and bog turtle. Stockbridge-Munsee Tribal Historic Preservation indicated that they had no concerns with the Project; however, they request notification should an unanticipated discovery of cultural resources occur. The State of New Jersey Department of Environmental Protection (NJDEP), Office of Permit Coordination and Environmental Review, provided comments on environmental review that is addressed in relevant sections of this EA.

Delaware Riverkeeper submitted a motion to intervene in response to Transco’s application filing. They expressed concern that the Project would negatively impact the recreational, aesthetic, and commercial interests of their members, and that Transco is improperly segmenting its expansion. They suggested that four other projects – Transco’s Northeast Supply Link, the Atlantic Sunrise, Leidy Southeast Expansion, and the PennEast Pipeline – may be functionally and operationally dependent and are designed to operate in concert with one another. The assertion that segmentation is occurring is non-environmental in nature and will be addressed in any Certificate Order issued for the Project. However, the cumulative impacts of the above projects are addressed in section C, Cumulative Impacts.

Some commenters requested that an environmental impact statement, rather than an EA, be prepared to assess the impact of the Project. The Commission’s regulations under 18 CFR 306(b)

| <b>Table 1. Status of Permits, Licenses, Authorizations, and Clearances for the Southern Reliability Link Project</b> |   |  |
|---|---|--|
| <b>Permit/Clearance/Approval</b>  | <b>Agency</b>   | <b>Status</b>  |
| <b>Federal</b>  |   |  |
| Section 7 Endangered Species Act (Rare, Threatened and Endangered Species Consultation)                               | United States Fish and Wildlife Service (USFWS)   | Consultation ongoing   |
| Section 106 National Historic Preservation Act  | NJ Historic Preservation Office (NJHPO)   | Submitted September 16, 2015   |
| <b>State (New Jersey)</b>   |   |  |
| Determination that the Project is Reasonably Necessary for the Service, Convenience, or Welfare of the Public         | New Jersey Board of Public Utilities  | Petitions submitted April 2 and June 5, 2015   |
| New Jersey Coastal Zone Management Permit   | New Jersey Department of Environmental Protection (NJDEP) (Coastal Area Facility Review Act Review) | Submitted June 26, comment response submitted September 25, 2015   |
| Threatened and Endangered Species Consultation  | NJDEP (Natural Heritage Program)  | Submitted June 26, comment response submitted September 25, 2015   |
| New Jersey Freshwater Wetlands Permit – General Permit 2  | NJDEP (Division of Land Use Regulation)   | Submitted June 26, comment response submitted September 25, 2015   |
| New Jersey Flood Hazard Permit – Permit-by-Rule   | NJDEP (Division of Land Use Regulation)   | Submitted June 26, comment response submitted September 25, 2015   |
| New Jersey Pollutant Discharge Elimination System (NJPDES) Stormwater (Construction)                                  | NJDEP (Division of Water Quality)   | Submission Pending; will file 5G3 permit application closer to construction.   |
| NJPDES General Permit - Hydrostatic Test Water Discharge  | NJDEP (Bureau of Nonpoint Pollution Control)  | Submission Pending – required 2 weeks prior to discharge   |
| Determination that the project conforms to the requirements of the New Jersey Pinelands Commission Comprehensive Plan | New Jersey Pinelands Commission   | Initial submittal April 9, followup sent September 18, 2015.   |
| Notice of Intent for Non-Agricultural Development in Agricultural Development Areas                                   | State Agriculture Development Committee   | Response to comments from Burlington and Monmouth Counties and State submitted August 27; Ocean County application approved August 4, 2015 |
| <b>Local</b>  |   |  |
| Soil Erosion and Sediment Control Plan  | Burlington, Monmouth, and Ocean Counties  | Submitted September 18, 2015   |

| <b>Table 2. Public Scoping Comments</b>   |                                   |
|---|-----------------------------------|
| <b>Comment</b>  | <b>Section</b>                    |
| Southern Reliability Link Project, non-jurisdictional 28-mile pipeline including soils, well/septic systems, property values, traffic/road closures, hydraulic fracturing, document scope, and eminent domain | A.4, A.5, A.8, B.2, B.3, B.6, C.1 |
| Land use including recreation, aesthetic, and commercial interests of landowners  | B.6, C.4.0                        |
| Water and wetlands  | B.3, C.1.0                        |
| Wildlife  | B.4, C.2.0                        |
| Cultural resources  | B.5, C.3.0                        |
| Noise, air quality, safety, radon, and vibration  | B.7, C.6, C.7                     |

state that “if the Commission believes that a proposed action...may not be a major federal action significantly affecting the quality of the human environment, an EA, rather than an environmental impact statement, will be prepared first. Depending on the outcome of the EA, an environmental impact statement may or may not be prepared.” In preparing this EA, we are fulfilling our obligation under the National Environmental Policy Act to consider and disclose the environmental impacts of the Project. As noted above, this EA addresses the impacts that could occur on a wide range of resources should the Project be approved and constructed. Based on our analysis, the extent and content of comments received during the scoping period, and considering that a portion of the Project facilities would be collocated with existing facilities, we conclude that the impacts associated with this Project can be sufficiently mitigated to support a finding of no significant impact and, thus, an EA is warranted.

As noted above, the majority of the comments received on the Garden State Expansion Project docket (approximately 33 of 39) were primarily related to the Southern Reliability Link Project. Concerns included those noted above as well as the safety of the pipeline, need for the Project, alternate routes, and the impact on sensitive resources. The NJNG Southern Reliability Link Project is not an interstate transmission project under our jurisdiction and is not proposed as part of Transco's Project. The facilities described in section A.4 are subject to state and local permitting requirements; however, we have considered the environmental impacts associated with constructing the non-jurisdictional facilities, and they are addressed in Section C, Cumulative Impacts.

All written comments received throughout the scoping period have been addressed in the appropriate areas within sections B and C of this EA.

## **6.0 PERMITS, APPROVALS, AND REGULATORY CONSULTATIONS**

Transco would obtain all necessary permits, licenses, clearances, and approvals related to construction and operation of the Garden State Expansion Project. The company would provide all relevant permits and approvals to the contractor, who would be required to adhere to applicable requirements. Table 3 displays the major anticipated federal and state permits for Transco’s Project.

| <b>Table 3. Permit Status Table - Major Permits, Licenses, Authorizations, and Clearances</b> |  |   |
|---|--|---|
| <b>Permit/Clearance/Approval</b>  | <b>Agency</b>                                    | <b>Status</b>   |
| <b>Federal</b>  |  |   |
| Certificate of Public Convenience and Necessity   | FERC   | Application submitted February 2015.  |
| Section 404 Clean Water Act Delegated to State  | Environmental Protection Agency (EPA) - Region 2 | Application submitted to NJDEP July 24, 2015<br>EPA allowed the right to request concurrent review and comment.   |
| Section 7 Endangered Species Act (Rare, Threatened and Endangered Species Consultation)       | United States Fish and Wildlife Service (USFWS)  | Submitted request for technical assistance on December 19, 2014.<br><br>USFWS clearance letter with timing restriction received March 23, 2015.<br><br>Summer Mist Net Survey Report submitted July 14, 2015.<br><br>USFWS clearance letter with no timing restriction (for bats) received August 18, 2015. |
| Section 106 National Historic Preservation Act  | NJ Historic Preservation Office (NJHPO)          | Consultation initiated with NJHPO September 12, 2014.<br><br>Response (concurrence) received October 15, 2014.<br><br>Public Service Enterprise Group Addendum report submitted June 3, 2015.<br><br>Response (concurrence) received June 23, 2015.   |
| Hydrostatic test water withdrawal   | Delaware River Basin Commission                  | Application to be submitted 4 <sup>th</sup> Quarter 2015.   |
| <b>State (New Jersey)</b>   |  |   |
| Threatened and Endangered Species Consultation  | NJDEP (Natural Heritage Program)                 | Consultation initiated with NJDEP September 16, 2014.<br>Responses provided from NJDEP September 24, 2014.  |
| New Jersey Freshwater Wetlands Permit   | NJDEP (Division of Land Use Regulation)          | Application submitted July 24, 2015 for Individual permit, September 8, 2015 for survey activities.   |
| New Jersey Flood Hazard Permit - Individual   | NJDEP (Division of Land Use Regulation)          | Application submitted July 24, 2015.  |

| <b>Table 3. Permit Status Table - Major Permits, Licenses, Authorizations, and Clearances</b> |  |  |
|---|--|--|
| <b>Permit/Clearance/Approval</b>  | <b>Agency</b>  | <b>Status</b>  |
| New Jersey Pollutant Discharge Elimination System (NJPDES) Stormwater (Construction)          | NJDEP (Division of Water Quality)  | Application to be submitted 4 <sup>th</sup> Quarter 2015.                      |
| Temporary Dewatering Permit (BWA-002)   | NJDEP (Division of Water Quality – Bureau of Water Allocation)                   | Application to be submitted 4 <sup>th</sup> Quarter 2015.                      |
| Request for Authorization for Construction Activities (5G3)                                   | NJDEP (Bureau of Nonpoint Pollution Control)                                     | Application to be submitted 4 <sup>th</sup> Quarter 2015.                      |
| Request for Authorization for Construction Activities (5G3)                                   | NJDEP (Bureau of Nonpoint Pollution Control)                                     | Form to be filed electronically following Soil Conservation District Approval. |
| NJPDES General Permit - Hydrostatic Test Water Discharge                                      | NJDEP (Bureau of Nonpoint Pollution Control)                                     | Application to be submitted 4 <sup>th</sup> Quarter 2015.                      |
| <b>Local</b>  |  |  |
| Soil Erosion and Sediment Control Plan  | Burlington County Conservation District, and Mercer County Conservation District | Application to be submitted 4 <sup>th</sup> Quarter 2015.                      |

## 7.0 CONSTRUCTION, OPERATION, AND MAINTENANCE

Transco would construct, operate, and maintain the proposed Project in compliance with all applicable federal and state permit requirements, regulations, and environmental guidelines. The key relevant federal regulations are those of the U.S. Department of Transportation (DOT) under 49 CFR 192 - *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*. These regulations ensure adequate protection for the public and prevent natural gas facility accidents and failures.

Transco adopted FERC staff’s *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan), and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures)<sup>2</sup> with no modifications. Transco would also provide site-specific Soil Erosion and Sediment Control Plans (SESCPs), to minimize sediment outside of the project area, prior to construction. To protect surface and groundwater resources during construction and protect areas from inadvertent releases of fuel and other mechanical fluids, Transco has a standard Construction Spill Plan (CSP). The CSP would be tailored for each site prior to construction. In addition, Transco maintains standard Waste Management Procedures (WMP) that would be tailored for each site prior to construction. The WMP contains an Unanticipated Discovery of Contamination Plan

<sup>2</sup> The Plan and Procedures includes best management practices for pipeline facility construction to minimize resource impacts. Copies of the Plan and Procedures may be accessed on our website (<http://www.ferc.gov/industries/gas/enviro/guidelines.asp>).

(UDCP), which addresses planning, response, and required forms to be completed in the event of an unanticipated discovery of contamination. The WMP and UDCP can be found in Transco's application dated February 18, 2015 on the docket for the Project (CP15-89-000), and we find these plans acceptable. The finalized SESCO and CSP would be provided to FERC prior to construction.

In addition, a Spill Prevention Control and Countermeasures (SPCC) Plan would be developed to ensure proper handling of lubricants, fuel, or other potentially toxic materials and prevent spills for Station 203, within approximately 6 months of commissioning, that would be used for operation of the facilities. The SPCC Plan at Station 205 would be updated as necessary to address Project updates. These plans would be developed and implemented in compliance with the FERC, NJDEP, Burlington County Conservation District (for the Chesterfield M&R and Compressor Station 203), and Mercer County Conservation District (for Compressor Station 205).

During construction, Transco would clear and grade the sites for the aboveground facilities. Erosion control devices would be installed prior to initiation of construction to prevent erosion and offsite impacts in accordance with Transco's SESCOs, FERC's Plan, and applicable state permit requirements. Access to the aboveground facilities would be provided by extension/modification of existing access roads. At the Station 203/Chesterfield M&R parcel, two new access roads would be constructed providing separate access to the station and to the M&R, both from County Road 528. In addition, a new access road would be installed providing access from County Road 528 directly into the electrical substation property, providing access to the tie-in and valve site location situated south of the substation. An additional temporary access road would be utilized to provide access during construction between the Station 203/Chesterfield M&R location and the electrical substation parcel. No access roads are proposed for modifications or construction at Station 205 or block valve J736. After construction, all temporary workspaces would be revegetated in accordance with measures contained in Transco's SESCOs and FERC's Plan. In addition, fencing would be placed around each facility (Chesterfield M&R, Station 203, and the electrical substation) for security purposes.

Transco would utilize at least one full-time environmental inspector (EI) during construction of the Project. The EI would be on site during construction activities to ensure compliance with the construction procedures contained in Transco's SESCOs and FERC's Plan and Procedures. The EI's responsibilities include:

- ensuring compliance with applicable federal, state, and local environmental permits;
- ordering corrective actions for acts that violate the environmental conditions of the Commission's Certificate, or any other authorizing document;
- ensuring compliance with site-specific construction and restoration plans or other mitigation measures and landowner agreements; and
- maintaining construction status reports.

Transco would conduct environmental training sessions in advance of and during construction to ensure that all individuals working on the Project are familiar with the environmental mitigation measures appropriate to their jobs and the EI's authority.

## 8.0 LAND REQUIREMENTS

Construction of Transco’s Garden State Expansion Project would temporarily impact 47.3 acres of land during construction, and of this, 27.6 acres would be permanently affected by operation of the proposed facilities. Table 4 indicates the amount of impact that would occur at each site. Construction activity at Station 203, Chesterfield M&R, the Electrical Substation, and Block Valve J736 (including access roads) would impact a total of 27.6 acres during construction, all of which would be retained for operation. Activities at the Station 205 would require 19.7 acres of temporary impacts within an existing facility; therefore additional operational footprint would not be required.

| <b>Table 4. Summary of Land Requirements</b>   |  |   |
|--|--|---|
| <b>Facility</b>  | <b>Land Affected During Construction (acres)<sup>a</sup></b> | <b>Land Affected During Operation (acres)<sup>b</sup></b> |
| <b>Station 203</b>   |  |   |
| Station 203 <sup>c</sup>   | 8.8  | 8.8   |
| Chesterfield M&R <sup>c</sup>  | 4.4  | 4.4   |
| Electrical Substation  | 9.4  | 9.4   |
| Tie-in, Station Piping and Temporary Access Road <sup>e</sup>  | 4.6  | 4.6   |
| Permanent Access Road <sup>d</sup>   | 0.3  | 0.3   |
| <b>Station 203 Subtotals</b>   | <b>27.6</b>  | <b>27.6</b>   |
| <b>Block Valve J736</b>  |  |   |
| Block Valve J736 Automation  | 0.1  | 0.00  |
| <b>Station 205<sup>f</sup></b>   |  |   |
| Station 205  | 8.5  | 0.00  |
| Station 205 Temporary Construction Workspace   | 11.1   | 0.00  |
| <b>Station 205 Subtotals</b>   | <b>19.7</b>  | <b>0.00</b>   |
| <b>Project Totals</b>  | <b>47.3</b>  | <b>27.6</b>   |
| Notes:   |  |   |
| a Includes temporary construction workspace and permanent operational facility limits for the complete facility.   |  |   |
| b Includes permanent facility limits and land maintained for life of the Project that would result in a permanent land use change.   |  |   |
| c Station 203 and the Chesterfield M&R contain small permanent access roads, but due to their short length, and location within the facility footprint, they were accounted for within the operation acreage for these facilities. |  |   |
| d Permanent access road consists of the road leading to the electrical substation and to the tie-in valve.   |  |   |
| e Temporary access road consists of a travel lane paralleling the station piping connecting the two parcels containing the electrical substation, Station 203, and the Chesterfield M&R.   |  |   |
| f At Station 205 all upgrades would occur inside an existing facility and would not incur any additional operation footprint.  |  |   |

## **B. ENVIRONMENTAL ANALYSIS**

### **1.0 GEOLOGY**

All aspects of the proposed Project are located within the Piedmont and Coastal Plain physiographic provinces. The Piedmont province is characterized by gently rolling plains separated by higher ridges, which are underlain by igneous rocks, with an elevation typically ranging from 300 to 400 feet above sea level. Piedmont Providence geology includes normal faults, slight foldings, and joints. The Piedmont Province is situated along the southern edge of the Highlands to the northern edge of the Coastal Plain Province. The Coastal Plain Province is characterized by terraced lowlands to hills, ranging in elevation from sea level to 400 feet. Coastal Plain geology includes unfolded, flat-lying formation, which are exposed in low relief areas (Widmer 1964 and New Jersey Geological Service [NJGS] 2003).

The majority of Station 203 is underlain by sand and clay from Pleistocene-aged weathered Coastal Plain Formations (NJDEP/NJGS 2010). It also includes narrow sporadic areas of alluvium and colluvium, and pebbles created from erosional outcrops of formations. The thickness is discontinuous and is less than 10 feet thick (NJDEP/NJGS 2013). Remaining surficial bedrock is the Pliocene-aged Pensauken Formation, which mainly consists of gravel, sand, and clayey sand. The thickness is between 0 to 50 feet (NJDEP/NJGS 2013).

The majority of Station 205 and the temporary workspace are underlain by silty sand to silty clay from Pleistocene-age weathered shale, mudstone, or sandstone fragments (NJDEP/NJGS 2010). The thickness is discontinuous and is less than 10 feet thick (NJDEP/NJGS 2013). Remaining surficial bedrock is the Pleistocene-age shale, mudstone and sandstone colluvium, which mainly consists of sandy silt to clayey silt (NJDEP/NJGS 2010). The thickness is between 0 to 50 feet (NJDEP/NJGS 2013).

Based on the limited ground surface disturbance at Compressor Station 205 and Chesterfield M&R/Compressor Station 203, the proposed facilities would result in minimal impact on geologic resources. Transco's adherence to measures contained in its SESCOs and FERC's Plan would ensure that all disturbed areas at these sites are adequately restored following construction.

#### **1.1 Seismic Hazards and Soil Liquefaction**

Several normal faults are in the vicinity of Station 205 with one fault crossing the station. The closest faults to Station 203 are approximately 7 miles to the northwest of the Project area and consist of reserve faults (NJGS 1999). Three earthquakes have been reported within 5 miles of Station 203: a 2.8 magnitude earthquake in Hamilton Township in 1933, a 2.1 magnitude earthquake in Mansfield Township in 1987, and a 2.3 magnitude earthquake in Mansfield Township in 1999. The closest earthquake to Station 205 was reported in 1949 in Hopewell Township approximately 5 miles from the Project area. The earthquake was less than 1 magnitude (NJDEP/NJGS, 2014). According to the U.S. Geological Survey (USGS) seismic hazard mapping website, it is unlikely that a "major" earthquake would occur in the vicinity of the Project in the next 50 years of a magnitude that would cause severe or even mildly severe structural damage.

Soil liquefaction is a phenomenon caused by cyclic shaking of the ground and typically is associated with strong earthquakes. Due to the general absence of significant seismic activity in the region, soil liquefaction is not anticipated to be a major concern to the Project (Frankel, et al. 2002). Blasting is not expected for the installation of the proposed facilities. If blasting is determined to be required, procedures would be employed to minimize vibration; therefore, the chance of Project-induced soil liquefaction is not anticipated. Based on the unlikelihood of a major earthquake in the vicinity of the Project areas, the potential for seismic activity and soil liquefaction is low.

## **1.2 Landslides**

According to the USGS, which uses data from Radbruch-Hall et al. (1982), Stations 203 and 205 have low landslide susceptibility (less than 1.5 percent of area involved). The low slopes and types of soils found within the Project areas minimize the landslide exposure. Based on the low likelihood of a landslide at the Project areas, we conclude that there is a low likelihood of landslide hazards impacting the proposed facilities.

We find that Transco's adherence to its proposed construction, operation, and mitigation procedures would ensure that geologic hazards would not significantly impact the proposed facilities.

## **2.0 SOILS**

Thirteen soil types would be affected by the Project. Table 5 indicates the soil types affected by the Project (United States Department of Agriculture [USDA] 2014a and 2014a).

Table 6 indicates the soil characteristics within the Project area (USDA 2013). These soil characteristics indicate erosion potential, potential for compaction, and revegetation potential. These qualities would be considered during construction and restoration.

A portion of the soils at the Station 203/Chesterfield M&R sites would be permanently converted by construction and operation of the aboveground facilities. During operation approximately 27.6 acres of soils would be permanently converted to industrial facilities. Permanent soil impacts include the loss of agricultural land, though the property is owned by Transco and is no longer being farmed. Construction within Station 205 would be completed within the limits of the existing building and property, but temporary workspace would be utilized both inside and outside the fence line. No additional operational workspace would be necessary at Station 205.

Construction activities generally result in minor soil impacts with appropriate best management practices (BMPs) implemented, which are included in FERC's Plan and Procedures. Temporary impacts would result from direct soil disturbance due to clearing, grading, excavation, and heavy machinery traveling over the work area during construction. Soil resource impacts would occur only during the construction period and/or post-construction monitoring period. Impacts may include reduction of soil quality from the intermixing of topsoil and subsoil and soil settling or slumping. Depending on soil conditions, impacts could also include loss of excavated soil through water and wind erosion, soil compaction from construction equipment, and mixing of wetland topsoil and subsoil. The characteristics of soil types, vegetative cover, and slope are also important factors in determining whether the potential exists for these construction-related impacts

| <b>Table 5. Soils Affected by the Project</b>                                      |  |   |
|--|--|---|
| <b>Soil Type/Map Unit</b>  | <b>Soils Disturbed by Construction (acres)<sup>a</sup></b> | <b>Soils Disturbed by Operation (acres)<sup>b</sup></b> |
| <b>Station 203<sup>c</sup></b>   |  |   |
| Woodstown fine sandy loam, 0 to 2 percent slopes (WofA)                            | 0.1  | 0.1   |
| Woodstown fine sandy loam, clayey substratum, 0 to 5 percent slopes (WofkA, WofkB) | 8.7  | 8.7   |
| <b>Subtotals</b>   | <b>8.8</b>   | <b>8.8</b>  |
| <b>Chesterfield M&amp;R<sup>c</sup></b>  |  |   |
| Colemantown loam, 0 to 2 percent slopes, occasionally flooded (CoeAs)              | 2.1  | 2.1   |
| Woodstown fine sandy loam, clayey substratum, 0 to 5 percent slopes (WofkA, WofkB) | 2.3  | 2.3   |
| <b>Subtotals</b>   | <b>4.4</b>   | <b>4.4</b>  |
| <b>Electrical Substation</b>   |  |   |
| Fallsington fine sandy loam, 0 to 2 percent slopes (FanA)                          | 1.9  | 1.9   |
| Woodstown fine sandy loam, 0 to 2 percent slopes (WofA)                            | 2.6  | 2.6   |
| Woodstown fine sandy loam, clayey substratum, 0 to 5 percent slopes (WofkA, WofkB) | 5.0  | 5.0   |
| <b>Subtotals</b>   | <b>9.5</b>   | <b>9.5</b>  |
| <b>Tie-in and Station Piping and Temporary Access Road<sup>d</sup></b>             |  |   |
| Fallsington fine sandy loam, 0 to 2 percent slopes (FanA)                          | 0.7  | 0.7   |
| Woodstown fine sandy loam, 0 to 2 percent slopes (WofA)                            | 3.9  | 3.9   |
| Woodstown fine sandy loam, clayey substratum, 0 to 5 percent slopes (WofkA)        | 0.1  | 0.1   |
| <b>Subtotals</b>   | <b>4.6</b>   | <b>4.6</b>  |
| <b>Permanent Access Road<sup>e</sup></b>   |  |   |
| Woodstown fine sandy loam, 0 to 2 percent slopes (WofA)                            | 0.1  | 0.1   |
| Woodstown fine sandy loam, clayey substratum, 0 to 5 percent slopes (WofkA, WofkB) | 0.3  | 0.3   |
| <b>Subtotals</b>   | <b>0.4</b>   | <b>0.4</b>  |
| <b>Block Valve J736</b>  |  |   |
| Fallsington fine sandy loam, clayey substratum, 0 to 2 percent slopes (FankA)      | 0.1  | 0.0   |
| <b>Station 205<sup>f</sup></b>   |  |   |
| Bucks silt loam, 2 to 6 percent slopes (BucB)                                      | 2.2  | 0.0   |
| Penn channery silt loam, 2 to 6 percent slopes (PeoB)                              | 0.5  | 0.0   |
| Penn channery silt loam, 6 to 12 percent slopes (PeoC)                             | 3.2  | 0.0   |
| Penn channery silt loam, 12 to 18 percent slopes (PeoD)                            | 0.4  | 0.0   |
| Readington and Abbottstown silt loams, 2 to 6 percent slopes (RefB)                | 2.4  | 0.0   |

| <b>Table 5. Soils Affected by the Project</b>   |  |   |
|---|--|---|
| <b>Soil Type/Map Unit</b>   | <b>Soils Disturbed by Construction (acres)<sup>a</sup></b> | <b>Soils Disturbed by Operation (acres)<sup>b</sup></b> |
| <b>Subtotals</b>  | <b>8.7</b>   | <b>0.0</b>  |
| <b>Station 205 Temporary Construction Workspace</b>   |  |   |
| Bucks silt loam, 2 to 6 percent slopes (BucB)   | 5.5  | 0.00  |
| Bucks silt loam, 2 to 6 percent slopes, eroded (BucB2)  | 0.4  | 0.00  |
| Chalfont silt loam, 2 to 6 percent slopes (ChcB)  | 1.2  | 0.00  |
| Penn channery silt loam, 2 to 6 percent slopes (PeoB)   | 2.9  | 0.00  |
| Penn channery silt loam, 12 to 18 percent slopes (PeoD)   | 0.06   | 0.00  |
| Readington and Abbottstown silt loams), 2 to 6 percent slopes, eroded (RefB2)   | 1.1  | 0.00  |
| <b>Subtotals</b>  | <b>11.2</b>  | <b>0.00</b>   |
| <b>Project Totals</b>   | <b>47.8</b>  | <b>27.8</b>   |
| Notes:  |  |   |
| a Includes temporary construction workspace and permanent operational facility limits for the complete facility.  |  |   |
| b Includes permanent facility limits and land maintained for life of the Project that would result in a permanent land use change.  |  |   |
| c Station 203 and the Chesterfield M&R contain small permanent access roads, but due to their short length, and location within the facility footprint, they were accounted for within the operation acreage for these facilities.. |  |   |
| d Temporary access road consists of a travel lane paralleling the station piping connecting the two parcels containing the electrical substation, Station 203, and the Chesterfield M&R.  |  |   |
| e Permanent access road consists of the road leading to the electrical substation and to the tie-in valve.  |  |   |
| f At Station 205 all upgrades would occur inside an existing facility and would not incur any additional operation footprint.   |  |   |

to occur. Additional soil-related impacts due to construction and operation could include encountering areas of shallow bedrock and the potential to encounter acid-producing soils.

To minimize or avoid potential impacts due to soil erosion and sedimentation, Transco would utilize erosion and sedimentation control devices in accordance with its SESCO and FERC's Plan during construction. Temporary erosion controls, including interceptor diversions and sediment filter devices (including, but not limited to, hay bales and silt fences) would be installed immediately following any clearing activities. Some areas may require the controls be installed prior to clearing. These areas would be evaluated accordingly prior to construction. Temporary

erosion control devices would be inspected on a regular basis as well as after each rainfall event of 0.5 inch or greater to ensure that the controls are functioning properly.

In addition, Transco would perform the following to minimize impacts on soils:

- minimize the quantity and duration of soil exposure;
- protect critical areas during construction by reducing the velocity of and redirecting runoff;
- install and maintain erosion and sediment control measures during construction;
- reestablish vegetation as soon as possible following final grading; and

| <b>Table 6. Characteristics of Soils Within the Project Area</b> |                                   |   |   |                 |   |                     |   |
|--|-----------------------------------|---|---|-----------------|---|---------------------|---|
| <b>Soil Series and Map Unit</b>                                  | <b>Erosion Hazard<sup>a</sup></b> | <b>Revegetation Potential<sup>b</sup></b> | <b>Compaction Potential<sup>c</sup></b> | <b>Drainage</b> | <b>Shallow Rock<sup>d</sup> (Y/N)<sup>e</sup></b> | <b>Hydric (Y/N)</b> | <b>Prime Farmland<sup>f</sup> (Y/N)</b> |
| <b>Station 203 and Chesterfield M&amp;R</b>                      |                                   |   |   |                 |   |                     |   |
| CoeAs  | Slight                            | Good                                      | Severe                                  | Poor            | N   | Y                   | Y(FSI)                                  |
| FanA   | Slight                            | Fair                                      | Severe                                  | Poor            | N   | Y                   | Y (FSI)                                 |
| WofA   | Slight                            | Good                                      | Limited                                 | Moderately well | N   | N                   | Y(PF)                                   |
| WofkA  | Slight                            | Good                                      | Limited                                 | Moderately well | N   | N                   | Y(PF)                                   |
| WofkB  | Slight                            | Good                                      | Limited                                 | Moderately well | N   | N                   | Y(PF)                                   |
| <b>Electrical Substation</b>                                     |                                   |   |   |                 |   |                     |   |
| FanA   | Slight                            | Fair                                      | Severe                                  | Poor            | N   | Y                   | Y (FSI)                                 |
| WofA   | Slight                            | Good                                      | Limited                                 | Moderately well | N   | N                   | Y (PF)                                  |
| WofkA  | Slight                            | Good                                      | Limited                                 | Moderately well | N   | N                   | Y(PF)                                   |
| WofkB  | Slight                            | Good                                      | Limited                                 | Moderately well | N   | N                   | Y(PF)                                   |
| <b>Tie-in, Station Piping and Temporary Access Road</b>          |                                   |   |   |                 |   |                     |   |
| FanA   | Slight                            | Fair                                      | Severe                                  | Poor            | N   | Y                   | Y (FSI)                                 |
| WofA   | Slight                            | Good                                      | Limited                                 | Moderately well | N   | N                   | Y (PF)                                  |
| <b>Permanent Access Road</b>                                     |                                   |   |   |                 |   |                     |   |
| WofA   | Slight                            | Good                                      | Limited                                 | Moderately well | N   | N                   | Y (PF)                                  |
| WofkB  | Slight                            | Good                                      | Limited                                 | Moderately well | N   | N                   | Y(PF)                                   |
| <b>Block Valve J736</b>  |                                   |   |   |                 |   |                     |   |
| FankA  | Slight                            | Fair                                      | Severe                                  | Poor            | N   | Y                   | Y (FSI)                                 |
| <b>Station 205</b>   |                                   |   |   |                 |   |                     |   |
| BucB   | Slight                            | Good                                      | Very limited                            | Well            | Y   | N                   | Y (PF)                                  |
| PeoC   | Slight                            | Poor                                      | Very limited                            | Well            | Y   | N                   | Y (FSI)                                 |
| PeoD   | Moderate                          | Poor                                      | Very limited                            | Well            | Y   | N                   | N                                       |
| REFB   | Slight                            | Fair                                      | Limited                                 | Well            | Y   | N                   | Y (PF)                                  |
| <b>Station 205 Temporary Workspace</b>                           |                                   |   |   |                 |   |                     |   |
| BucB   | Slight                            | Good                                      | Very limited                            | Well            | Y   | N                   | Y (PF)                                  |
| BucB2  | Slight                            | Good                                      | Very limited                            | Well            | Y   | N                   | Y (PF)                                  |
| ChcB   | Slight                            | Fair                                      | Severe                                  | Somewhat poor   | Y   | N                   | Y (FSI)                                 |

| Table 6. Characteristics of Soils Within the Project Area |                             |                                     |                                   |                 |  |              |                                   |
|---|-----------------------------|-------------------------------------|-----------------------------------|-----------------|--|--------------|-----------------------------------|
| Soil Series and Map Unit                                  | Erosion Hazard <sup>a</sup> | Revegetation Potential <sup>b</sup> | Compaction Potential <sup>c</sup> | Drainage        | Shallow Rock (Y/N) <sup>d</sup> <sup>e</sup> | Hydric (Y/N) | Prime Farmland <sup>f</sup> (Y/N) |
| PeoB  | Slight                      | Fair                                | Very limited                      | Well            | Y  | N            | Y (PF)                            |
| PeoD  | Moderate                    | Poor                                | Very limited                      | Well            | Y  | N            | N                                 |
| REFB2   | Slight                      | Fair                                | Very limited                      | Moderately well | Y  | N            | Y (PF)                            |

a. Based on slope and on soil erodibility factor K.  
b. Based on soils which contain a capability class of three (3) or greater, low available water capacity, and slopes greater than 8 percent.  
c. Based on soils that have clay loam or finer textures in somewhat poor, poor, and very poor drainage classes.  
d. Based on soils that have bedrock within 60 inches of the soil surface  
e. Y/N = Yes or No  
f. PF = Prime Farmland; FSI = Farmland of Statewide Importance

- inspect and maintain erosion and sediment controls as necessary until final stabilization is achieved.

The movement of heavy construction equipment over soils can cause soil compaction. To avoid rutting and compaction when soil moisture is high, measures such as restricting vehicular traffic, reducing loads, using lower ground-pressure equipment, and employing equipment ground support such as timber matting may be used. Ripping and soil mixing may cause revegetation problems despite erosion control. In accordance with the measures contained in the SESCOs, Transco would apply soil amendments in areas with poor revegetation potential in order to create a favorable environment for the re-establishment of vegetation. Transco would consult with the USDA’s National Resources Conservation Service to obtain recommendations for seed mixtures to be used during restoration of the Project’s construction work spaces and those portions of the property that would be maintained in a vegetated state. Introduction of rock into topsoil results in the reduction of soil quality, potential difficulty in tilling, and damage to farm equipment. If bedrock is encountered during construction, Transco would use rock pickers or other rock removal equipment to remove large rock fragments prior to clean up. In accordance with the measures in the SESCO and FERC’s Plan, Transco would remove any excess stone and rock from surface soils within the Project areas so that rock contents in soils would be no higher than similar soils in adjacent locations.

Although Station 205 is not located on acid-producing soils, the Project area for Station 203 and the Chesterfield M&R station are located on the Woodbury formation, an acid-producing soil. Prior to construction on Station 203 and the Chesterfield M&R, pH testing would occur to determine the location of acid-producing soils. Because of the ability of acid producing soils to impact water quality and alter natural communities, additional mitigation measures may be required, including topsoil dressing and extensive liming.

To minimize or avoid impacts on soils, Transco proposes to adopt and implement soil mitigation procedures during construction and operation of the Project in its site-specific SESCOs. The SESCOs would incorporate FERC’s Plan and Procedures requirements and additional BMPs following New Jersey Standards and Specifications for Erosion and Sedimentation Control. The

SESCPs would be provided to the Mercer and Burlington County Conservation Districts for review and approval prior to construction. With these measures in place, we conclude that impacts on soils in the Project areas would be minimized.

### **3.0 WATER RESOURCES**

#### **3.1 Groundwater Resources**

The U.S. Environmental Protection Agency (EPA) defines Sole Source or Principal Source Aquifers as those aquifers which supply at least 50 percent of the drinking water consumed in the area overlying the aquifer. These areas typically have no alternative drinking water source(s) that could be physically, legally, and/or economically supplied to all those who depend on the aquifer for their potable water supply (EPA 2014). The portion of the Project located within Burlington County, New Jersey is located entirely within an area designated by the EPA in 1988 as the New Jersey Coastal Plain Sole Source Aquifer. The Project area located within Mercer County, New Jersey is located within the Northwest New Jersey 15 Basin Sole Source Aquifer (EPA 2014).

We received comments on potential impacts on residential cisterns, wells, and septic systems in the Project area. However, no public or private supply wells were identified within 150 feet and up to one mile, respectively, of or from any construction area associated with either Station 205 or Station 203 (Environmental Data Resources 2014). An unoccupied residential home that contains a private well is present at the Station 203 property. This home has been acquired by Transco, and the existing well would be abandoned in accordance with NJDEP requirements. No seeps or springs are present in the Project area. Therefore, we do not anticipate any significant impacts on cisterns, wells, or septic systems in the Project areas.

No wells or septic infrastructure are proposed, existing public water pipes and sources would be utilized for the Project. As detailed in table 7, three community water systems, which supply water to the same population year-round, occur within the Station 205 Project area. A community groundwater well is also present approximately 1.5 miles north of Station 203 and Chesterfield M&R.

Seventeen State Hazardous Waste Sites, two Voluntary Cleanup Program sites, and one Resource Conservation Recovery Act Non-Generator site are located within 0.25 mile of the construction work areas for the Chesterfield M&R, Station 203, and the electrical substation. However, based on their distance from the construction area, regulatory status (i.e., closed, no violations found), media impacted (i.e., soil only), and/or topographical position from the Project area (i.e., down-gradient or cross-gradient), these sites are not expected to impact the Project. No leaking underground storage tanks or large scale remedial actions were identified on or near the proposed activities that would pose a high risk to encounter contamination during construction (AECOM 2014).

Minor, temporary impacts on groundwater infiltration could occur as a result of tree, herbaceous vegetation, or scrub-shrub vegetation clearing. Minor tree clearing is anticipated in an area of forest during installation of station piping and around the periphery of the Station 203 / Chesterfield M&R construction area. In addition, only herbaceous vegetation clearing is anticipated during aboveground facility construction. Clearing of vegetation known to enhance groundwater infiltration could result in some minor, temporary impacts on local aquifer recharge;

however, following completion of construction activities, Transco would restore and revegetate cleared areas to pre-construction conditions to the maximum extent practicable.

| <b>Table 7. Public Water Supply Watershed Areas Within 3.0 Miles of the Project</b> |                                 |   |                              |                             |
|---|---------------------------------|---|------------------------------|-----------------------------|
| <b>Principal County Served</b>  | <b>Public Water Source Type</b> | <b>Public Water System Name</b>                     | <b>Distance from Project</b> | <b>Surface Water Supply</b> |
| <b>Station 203, Chesterfield M&amp;R Station, and Electrical Substation</b>         |                                 |   |                              |                             |
| Burlington  | Community Water Systems         | NJ Dept. of Corrections<br>Albert C Wagner Youth Co | 1.50 miles north             | Groundwater                 |
| <b>Station 205</b>  |                                 |   |                              |                             |
| Mercer  | Community Water Systems         | Lawrenceville Water Company                         | 2.84 miles south             | Groundwater                 |
| Mercer  | Community Water Systems         | Lawrenceville School                                | 2.68 miles south             | Groundwater                 |
| Mercer  | Community Water Systems         | Pennington Water Department                         | 2.54 miles west              | Groundwater                 |

Should groundwater be encountered during construction, Transco would adhere to the measures in FERC’s Plan and Procedures for all dewatering activities. If contamination is encountered during construction, Transco would employ BMPs working with the NJDEP Water Quality Management Division in order to minimize re-suspension of sediments. In addition Transco would follow its WMPs, which includes the UDCP. Should dewatering of the station piping trench be necessary due to a high water table, impacts would be minor as piping construction activities are typically completed within several days and any localized lowering of groundwater would be temporary. In order to recharge the aquifer and prevent silt and sediment from flowing into nearby streams and wetlands, Transco proposes to discharge all water from dewatering activities into well-vegetated upland areas, or into hay bale/dissipation structures where dense vegetation is absent.

Accidental spills of fuels, lubricants, and other petroleum products could occur during construction activities. The potential for this impact would be avoided or minimized by the proper implementation of the Project’s CSP and WMPs during construction activities. These plans would detail preventative measures that would be followed to avoid a hazardous waste spill as well as mitigation measures that would be followed to immediately contain and clean up a spill, should one occur. These site-specific plans would be developed prior to construction.

With the implementation of the Project’s site-specific SESCOs, CSP, WMPs, and the UDCP, as well as the measures in FERC’s Plan and Procedures, we conclude that impacts on groundwater would be adequately minimized.

### **3.2 Surface Water**

No sensitive or high-quality surface waters would be impacted by the Project. Two waterbodies, one intermittent and one perennial (both considered minor waterbodies), are within or adjacent to the Project areas of Station 203 and Chesterfield M&R. However, these waterbodies would not be directly impacted by construction. No community surface water supplies were identified near the Project areas.

No Project activities would occur within the 500- or 100-year floodplain. Several segments of Stony Brook in Mercer County are listed as 303(d) Listed Waters, or impaired streams, due to arsenic, fecal coliform, mercury, and phosphorus listed as the cause of impairment. However, these segments are located two to three miles from Station 205. The proposed Project would not impact Stony Brook and would not occur within the vicinity of the waterway. No impaired streams are present within the Project area for Station 203.

Specialized procedures that would be followed when working adjacent to streams include: storing chemicals, lubricating, washing, or refueling equipment in designated areas, in containment sufficient to contain the single largest container, more than 100 feet away from the waterbody; and mixing concrete greater than 100 feet from a river, stream bank, or any area where contamination may reach a water course. Spoil pile placement and erosion control devices would also be monitored and placed to minimize impacts. The SESCO would be submitted to the both the Mercer and Burlington County Soil Conservation Districts for review and approval.

Streambank erosion, turbidity, and sedimentation would be reduced by the implementation of the measures contained in Transco's SESCO and FERC's Plan and Procedures. Spills would be prevented and minimized by the implementation of Transco's CSP. Transco would obtain all necessary permits, approvals and licenses related to installation of the proposed Project components at Station 203, as necessary. With these protective measures in place, we conclude that impacts on surface water resources from construction and operation would be minimized and insignificant.

### **3.3 Hydrostatic Testing**

Transco would hydrostatically test all station pipelines in accordance with DOT pipeline safety regulations. Hydrostatic testing involves filling the pipeline facilities with water and pressurizing the pipeline facilities above their maximum allowable operating pressure. The pressure in the facilities is then monitored for several hours. If a drop in pressure is recorded, then the pipeline facilities would be examined to determine if any leaks have occurred. Transco would remove approximately 100,000 gallons of municipal surface water for hydrostatic testing. Permits from the Delaware River Basin Commission would be required for withdrawal.

Transco would dispose the water used for hydrostatic testing directly back to the closest natural waterway, to an upland area, or to an approved dewatering structure, depending on the applicable local, state, and federal guidelines. Where appropriate, test water would be discharged to well-vegetated upland areas through a manifold and hay/straw bale energy dissipating structure. If discharged back to a waterway, an energy dissipating device would be used. Transco would not use chemical additives in the hydrostatic test water.

All hydrostatic test discharge activities would be performed in accordance with FERC's Procedures and applicable permit requirements. Water withdrawals in the Project area in New Jersey are regulated by the NJDEP, Division of Water Resources, Bureau of Water Allocation under the New Jersey Water Supply Allocation Rules. Transco would comply with the requirements of the NJDEP Bureau of Water Allocation for water use associated with the proposed Project including hydrostatic testing and construction dewatering activities. For the reasons discussed above, we conclude that the hydrostatic testing of the Project would not have a significant impact on water resources.

### 3.4 Wetlands

Field surveys identified one palustrine forested (PFO) wetland and one palustrine emergent (PEM)/PFO wetland within the property boundaries of the proposed Chesterfield M&R, Station 203, and electrical substation.

Table 8 indicates the verified or estimated amount of construction and operational impacts that would occur on wetlands in the Project area.

| <b>Table 8. Wetlands Impacted by Construction and Operation of the Project</b>  |                                  |                          |                                 |                              |
|---|----------------------------------|--------------------------|---------------------------------|------------------------------|
| <b>Wetland ID</b>   | <b>Wetland Class<sup>a</sup></b> | <b>Project Component</b> | <b>Wetland Impact (acres)</b>   |                              |
|   |                                  |                          | <b>Construction<sup>b</sup></b> | <b>Operation<sup>c</sup></b> |
| <b>Station 203, Chesterfield M&amp;R, Electrical Substation</b>   |                                  |                          |                                 |                              |
| W-BU-001  | PEM                              | Electrical Substation    | 3.6                             | 2.0                          |
| W-BU-001  | PEM                              | Electrical Conduit       | 0.4                             | 0.1                          |
| W-BU-001  | PEM                              | Station Piping           | 1.1                             | 0.1                          |
| W-BU-001  | PEM                              | Valve Site               | 0.6                             | 0.6                          |
| W-BU-001  | PFO                              | Electrical Substation    | 0.1                             | 0.1                          |
| W-BU-001  | PFO                              | Electrical Conduit       | 0.1                             | 0.1                          |
| W-BU-001  | PFO                              | Station Piping           | 0.3                             | 0.3                          |
| W-BU-002  | PFO                              | Station 203              | 0.0                             | 0.0                          |
| <b>Station 203 Subtotals</b>  |                                  |                          | <b>6.2</b>                      | <b>3.3</b>                   |
| <b>Station 205</b>  |                                  |                          |                                 |                              |
| No regulated features identified  |                                  |                          |                                 |                              |
| <b>Block Valve J736</b>   |                                  |                          |                                 |                              |
| No regulated features identified  |                                  |                          |                                 |                              |
| <b>Project Totals</b>   |                                  |                          | <b>6.2</b>                      | <b>3.3</b>                   |
| <sup>a</sup> Cowardin Classification – PEM = Palustrine emergent wetland PFO = Palustrine forested wetland<br><sup>b</sup> Includes construction workspace and permanent facility limits.<br><sup>c</sup> Includes Project-related permanent facility limits and land maintained for life of the Project that would result in a permanent land use change. For emergent wetlands the operation impact consists of permanent fill and for forested wetlands the impact consists of conversion to emergent/scrub-shrub wetland. |                                  |                          |                                 |                              |

The Project would impact an estimated total of 6.2 acres of wetlands, including 3.3 acres of permanent impact for operation. All impacts would occur at Station 203, the electrical substation, the valve site, and the station piping tie-in access road, as no jurisdictional wetlands occur at Station 205 or block valve J736. The operational impacts resulting from the conversion of 0.3 acre of PFO to PEM wetlands for the station piping include maintenance mowing of the right-of-way. Transco proposes to permanently fill a historically modified agricultural wetland during Project activities at Station 203 for the electrical substation, and the station piping and electrical conduit installation would result in the conversion of PFO to PEM wetland. Temporary impacts within a small portion of PFO as well as PEM wetlands would also occur to accommodate the proposed timber mat temporary access road necessary for installation of the station piping and to provide temporary access to Station 203.

Transco would work with the NJDEP to create an approved mitigation plan for the wetlands permanently and temporarily impacted by the Project. At this time, Transco proposes to purchase wetland mitigation credits to address the permanent conversion of PFO wetland and the permanent fill of modified agricultural wetland at one of the three mitigation bank available within the Assiscunk, Crosswicks and Doctors Watershed Management Area. Transco's preference is to use credits, if available. Otherwise, a cash contribution pursuant to the NJDEP Mitigation Checklist would be proposed.

As indicated in table 8, Transco has proposed placing aboveground facilities, including Station 203, the electrical substation, and valve site, within wetlands. The FERC's Procedures prohibit locating aboveground facilities in any wetland (Section VI.A.6) without further justification. To date, Transco's proposed Station 203's footprint does not totally avoid wetlands and Transco has not requested a modification from FERC's Procedures. Therefore, **we recommend:**

- **Prior to construction, Transco should file with the Secretary of the Commission (Secretary), for review and approval of the Director of the Office of Energy Projects (OEP), a revised plot plan for all aboveground structures at Compressor Station 203 to avoid permanent wetland impacts. If Transco is unable to avoid permanent aboveground facility impacts on wetlands at Compressor Station 203, Transco should provide further justification why it is unable to avoid locating aboveground structures within wetlands and its consultation with the NJDEP regarding its plans to further mitigate these permanent wetland impacts.**

Transco's compliance with the FERC Plan and Procedures during construction, employing the wetland construction techniques specified in the Procedures, and adherence to the CSP would minimize impacts on wetlands. Following restoration, those portions of the modified agricultural wetland temporarily impacted and restored would be monitored in accordance with our Procedures and/or in accordance with protocols specified by the NJDEP (whichever is most restrictive). Based on Transco's consultation with NJDEP, revegetation of temporarily impacted emergent wetlands is expected to be sufficient mitigation. The NJDEP would be consulted regarding forested wetlands and mitigation options for these permanent impacts, as necessary.

In conclusion, Transco would prepare site-specific SESCOs, which contain measures to minimize the potential for releases of fuels or hazardous materials and the measures to be taken in

the event of a release. Given Transco's commitment to the measures identified in FERC's Plan and Procedures, and adherence to other relevant permits and our above recommendation, impacts on wetlands during construction and operation would be minimized.

#### **4.0 VEGETATION, WILDLIFE, AND THREATENED AND ENDANGERED SPECIES**

##### **4.1 Vegetation**

Four vegetative communities occur within the Project area – open land (meadow, utility corridor), agricultural, forest, and industrial/commercial land. Table 9 indicates the amount of each vegetative community that would be temporarily and permanently impacted by construction and operation, respectively, of the Project.

The vegetation types within the Project area are open land (21.4 acres of temporary impacts), industrial/commercial (10.9 acres), agricultural (9.4 acres), forested (5.4), and residential (0.2). The primary habitat types onsite are disturbed, with the exception of open land, which can contain emergent wetlands. There is little to no vegetation at the existing Transco Station 205. Forest/woodland is characterized by deciduous forest and includes species such as sweetgum (*Liquidambar styraciflua*), American beech, shagbark hickory (*Carya ovata*), and sweet birch (*Betula lenta*). No sensitive vegetation types or habitats of concern would be impacted by the Project (see section B.3.4 for wetlands discussion). Approximately 5.4 acres of forest would be removed during construction of the Project, 4.5 acres of which would be permanently removed for operation of the facilities.

Impacts on vegetation as a result of the Project would include short-term temporary, long-term temporary, or permanent disturbances. Short-term temporary impacts are associated primarily with the preparation of the construction workspace, where impacts would last through construction until the subsequent completion of successful restoration. Potential impacts include compaction of soils by construction equipment, trampling/crushing of herbaceous plants, removal of herbaceous and woody plant cover, and removal of root stock. Areas that are already vegetated with grasses or early successional species would be restored after the conclusion of construction activities. The short-term temporary disturbance areas would provide forage and habitat for wildlife within three years following successful reclamation.

The long-term temporary disturbance areas would be associated primarily with areas where temporary workspace impacted trees or shrub areas. These areas would be allowed to revert to their pre-existing conditions; however, they involve slower growing vegetation. The length of recovery time would depend on the sensitivity of the plant communities, the timing and extent of the disturbance, precipitation in the years following construction, and the geographic and topographic locations. Vegetation management may be required within areas in the event that post-construction monitoring identifies unsuccessful revegetation.

Permanent vegetation impacts associated with operational activities would occur primarily where permanent appurtenances impact vegetation. Removal of open land and trees would be considered a temporal reduction of associated wildlife habitat. Permanent vegetation loss as a result of construction includes conversion to industrial land from open space (compressor station, buildings, and meter station) and some 4.5 acres of forest removal (Station 203 workspace, temporary access road, station piping tie-in).

| <b>Table 9. Habitat/Vegetation Types Affected by Construction and Operation of the Project</b>   |  |   |
|--|--|---|
| <b>Habitat Type/Name</b>   | <b>Area Affected</b>   |   |
|  | <b>Construction<br/>(Temporary Acres Impacted)<sup>a</sup></b> | <b>Operation<br/>(Permanent Acres Impacted)<sup>b</sup></b> |
| <b>Station 203<sup>c</sup></b>   |  |   |
| Agricultural   | 6.7  | 6.7   |
| Forest   | 1.3  | 1.3   |
| Residential  | 0.2  | 0.2   |
| Open Land  | 0.6  | 0.6   |
| <b>Subtotals</b>   | <b>8.8</b>   | <b>8.8</b>  |
| <b>Chesterfield M&amp;R<sup>c</sup></b>  |  |   |
| Agricultural   | 2.7  | 2.7   |
| Forest   | 1.7  | 1.7   |
| <b>Subtotals</b>   | <b>4.4</b>   | <b>4.4</b>  |
| <b>Electrical Substation</b>   |  |   |
| Forest   | 0.6  | 0.6   |
| Open Land  | 8.8  | 8.8   |
| <b>Subtotals</b>   | <b>9.4</b>   | <b>9.4</b>  |
| <b>Tie-in and Station Piping and Temporary Access Road<sup>d</sup></b>   |  |   |
| Forest   | 0.9  | 0.9   |
| Open Land  | 3.8  | 3.8   |
| <b>Subtotals</b>   | <b>4.7</b>   | <b>4.7</b>  |
| <b>Permanent Access Road<sup>e</sup></b>   |  |   |
| Forest   | 0.02   | 0.02  |
| Open Land  | 0.3  | 0.3   |
| <b>Subtotals</b>   | <b>0.3</b>   | <b>0.3</b>  |
| <b>Block Valve J736</b>  |  |   |
| Commercial/Industrial  | 0.1  | 0.0   |
| <b>Station 205<sup>f</sup></b>   |  |   |
| Commercial/Industrial  | 8.5  | 0.0   |
| <b>Station 205 Temporary Workspace</b>   |  |   |
| Forest   | 0.9  | 0.0   |
| Open Land  | 7.9  | 0.0   |
| Commercial/Industrial  | 2.3  | 0.0   |
| <b>Subtotals</b>   | <b>11.1</b>  | <b>0.0</b>  |
| <b>Project Totals</b>  | <b>47.3</b>  | <b>27.6</b>   |
| PEM - palustrine emergent<br>PFO - palustrine forested<br>Notes:<br>a Includes temporary construction workspace and permanent operational facility limits for the complete facility. |  |   |

| <b>Table 9. Habitat/Vegetation Types Affected by Construction and Operation of the Project</b>  |  |   |
|---|--|---|
| <b>Habitat Type/Name</b>  | <b>Area Affected</b>   |   |
|   | <b>Construction<br/>(Temporary Acres Impacted)<sup>a</sup></b> | <b>Operation<br/>(Permanent Acres Impacted)<sup>b</sup></b> |
| b Includes permanent facility limits and land maintained for life of the Project that would result in a permanent land use change.<br>c Station 203 and the Chesterfield M&R contain small permanent access roads, but due to their short length, and location within the facility footprint, they were accounted for within the operation acreage for these facilities..<br>d Temporary access road consists of a travel lane paralleling the station piping connecting the two parcels containing the electrical substation and Station 203 and the Chesterfield M&R.<br>e Permanent access road consists of the road leading to the electrical substation and to the tie-in valve.<br>f: At Station 205 all upgrades would occur inside an existing facility and would not incur any additional operation footprint. |  |   |

Installation of the station piping for Station 203 and the limits the Station 203 property would result in permanent conversion of upland and wetland forest to open, herbaceous land. Clearing forest vegetation would result in a long-term impact on wildlife and vegetation. Transco states that the Project has been designed to minimize the amount of workspace needed to only that which is necessary to safely construct the interconnect piping, particularly in forested areas. The long-term impact on forest vegetation is not expected to have a significant impact on wildlife because of the already disturbed conditions surrounding much of the Project area, its adjacency to the New Jersey Turnpike and utility rights-of-way, and the location of Transco’s proposed electrical substation and Station 203 on existing cleared parcels.

After construction of temporary workspace areas, Transco proposes to use its typical seed mix to restore vegetation to the areas disturbed by the Project, in accordance with each approved SESCO. This mix is formulated to ensure germination and vigorous growth in the area of the Project. Within the compressor station grounds, the grass would be mowed on a regular basis during the growing season. Outside the station fence, routine vegetation maintenance clearing occurs along the station piping route no more than once every three years.

Implementation of measures in FERC’s Plan and Procedures would promote revegetation at Project areas following construction. Transco would revegetate all temporary construction areas in accordance with its SESCO after construction is complete. Therefore, we conclude that the Project would not result in any significant impacts on vegetation.

#### **4.2 Wildlife**

As discussed in section B.4.1, the proposed Project areas consist of open land (meadow, utility corridor), agricultural, forest/woodland, and industrial/commercial land. Although wildlife can occur in any of these habitats, the most valuable wildlife habitat is the least disturbed by human activity. Therefore, this discussion primarily focuses on impacts on forest/woodland and portions of open land that are undisturbed.

No sensitive wildlife habitats (National Wildlife Refuges, National Park Service Wilderness Areas, or other state-managed properties) are present in the Project area. The forested upland areas of the Project provide habitat for a number of wildlife species and consists of small portions located within the limits of the Station 203 Project area. The different vegetation layers present from the canopy to the leaf litter support a variety of wildlife species. Upland forests support mammals such as the white-tailed deer, raccoon, and gray squirrel, and birds such as red-

tailed hawk, sharp-shinned hawk, rose-breasted grosbeak, pileated woodpecker, and northern flicker.

Open land includes all non-forested vegetated areas that are not in agricultural production or landscaped. This vegetation class includes grasslands, successional scrub-shrub areas, fields, and maintained utility rights-of-way. These habitat types are present within the temporary workspace proposed outside the Station 205 facility fenceline and the majority of the Station 203 area, consisting of the electrical substation property, temporary access road and station piping tie-in. Grasslands, old fields, and brushy areas can be utilized as foraging and nesting habitat by mammals and songbirds. Shrublands provide sources of food and nesting sites for various birds, as well as cover for invertebrates, reptiles, and amphibians. Shrublands and grassland habitats are attractive to many wildlife species, because they provide protection, nesting, and food sources. Species such as the Eastern cottontail, gray squirrel, red fox, Virginia opossum, raccoon, wild turkey, field sparrow, northern mockingbird, blue jay, American crow, red-tailed hawk, woodchuck, white-footed deer mouse, meadow vole, coyote, and white-tailed deer utilize these types of habitats. Typical wildlife species found in emergent wetlands may include a variety of amphibians, such as eastern newt, green frog, and bullfrog; reptiles, such as northern water snake, and birds, such as American black duck, gadwall, redwing blackbird, common yellowthroat, and Canada goose. Common wildlife species typically found in scrub-shrub and forested wetlands include northern black racer, Carolina wren, striped skunk, and raccoon.

Potential impacts on wildlife include habitat loss and construction-related ground disturbance and noise. Some less mobile individuals could be inadvertently injured or killed by construction equipment. However, more mobile species such as birds and mammals would relocate to other suitable nearby habitat once construction activities begin. The temporary disturbance of local habitat would not have a population-level impact on wildlife because the amount of habitat disturbed represents a small portion of the available habitat throughout the project areas. Therefore, we conclude that the Project would not have a significant impact on wildlife.

### **4.3 Migratory Birds**

Migratory birds are species that nest in the United States and Canada during the summer and then migrate to and from the tropical regions of Mexico, Central and South America, and the Caribbean for the non-breeding season. Most migratory birds are protected under the Migratory Bird Treaty Act (16 U.S. Code 703-711) and Bald and Golden Eagles are additionally protected under the Bald and Golden Eagle Act (16 U.S. Code 668-668d). The Migratory Bird Treaty Act, as amended, prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. Executive Order 13186 (66 FR 3853) was enacted in 2001 to, among other things, ensure that environmental analyses of federal actions evaluate the impacts of actions on migratory birds. Executive Order 13186 directs federal agencies to identify where unintentional take is likely to have a measurable negative effect on migratory bird populations and avoid or minimize adverse impacts on migratory birds through enhanced collaboration with the USFWS. The environmental analysis should further emphasize species of concern, priority habitats, key risk factors, and that particular focus should be given to population-level impacts.

On March 30, 2011, the USFWS and the Commission entered into a Memorandum of Understanding regarding implementation of Executive Order 13186, "Responsibilities of Federal

Agencies to Protect Migratory Birds” that focuses on avoiding or minimizing adverse impacts on migratory birds and strengthening migratory bird conservation through enhanced collaboration between the two agencies. This voluntary Memorandum of Understanding does not waive legal requirements under the Migratory Bird Treaty Act, Bald and Golden Eagle Act, Endangered Species Act, Federal Power Act, NGA, or any other statutes and does not authorize the take of migratory birds.

The Project would involve construction of new facilities and expansion of existing facilities, which necessitate clearing of vegetation at locations as previously described, resulting in both temporary and permanent impacts to vegetation. Bird species known as USFWS Birds of Conservation Concern (USFWS 2008) in Burlington and Mercer Counties, New Jersey and within the vicinity of the Project such as pied-billed grebe, American bittern, least bittern, snowy egret, bald eagle, black-billed cuckoo, Canada warbler, American oystercatcher, purple sandpiper, wood thrush, golden-winged warbler, worm-eating warbler, and rusty blackbird could lose potential breeding habitat as would other migratory bird species that use the same habitat. Clearing of vegetation can also result in colonization or expansion of invasive plant species altering remaining habitat.

Most impacts associated with the Project are expected to be temporary in nature and are not expected to significantly affect the resident or migratory bird populations located within the Project vicinity. Construction of the Project within the open land and former agricultural land would avoid fragmenting large contiguous tracts of wildlife habitat by utilizing existing facilities, previously disturbed open land, and other previously disturbed habitats. Forest interior habitats would therefore not be affected by the Project and fragmentation effects are not expected. The proposed Project would impact a small fragmented portion of trees adjacent to the New Jersey Turnpike associated with the station piping. The proposed temporary access road connecting the electrical substation parcel to the Station 203 parcel would traverse two areas of trees along the western and eastern boundary of the Public Service Enterprise Group Incorporated (a New Jersey utility) electric transmission line right-of-way. This area consists of a 50-foot-wide area of maintained/topped trees fringing an intermittent ditch and a 140-foot-wide-area of trees situated between the right-of-way and the parcel proposed for Station 203 and the Chesterfield M&R. The southeastern limit of the Station 203 property would also encroach slightly into an area of forest, requiring minimal clearing.

The NJDEP recommended mechanical trimming or removal of trees not to occur during the nesting season (considered March 15 through September 30) in their March 25, 2015 comment letter. If the trees are checked for nesting and no nests are observed, the NJDEP permits non-mechanical tree trimming during that time. The USFWS New Jersey Field Office did not comment on migratory birds in either their January 23, 2014 or August 18, 2015 correspondence, nor did they mention migratory birds in their March 4, 5, or 23, 2015 email correspondence with Transco’s representative. The Project would permanently remove 4.5 acres of forest habitat. Given the amount of habitat removal proposed, Transco’s proposed minimization measures, and the disturbed existing nature of the majority of the habitats that would be impacted, we conclude that construction and operation of the Project would not result in significant or population level impacts on migratory bird species within the Project area.

#### 4.4 Special Status, Threatened, and Endangered Species

Federal agencies are required under section 7 of the Endangered Species Act, as amended, to ensure that any actions authorized, funded, or carried out by the agency would not jeopardize the continued existence of a federally listed endangered or threatened species, or result in the destruction or adverse modification of the designated critical habitat of a federally listed species. As the lead federal agency authorizing the Project, the FERC is required to consult with the USFWS and/or the National Oceanic and Atmospheric Administration Fisheries to determine whether federally listed endangered or threatened species or designated critical habitat are found in the vicinity of the Project, and to evaluate the proposed action's potential effects on those species or critical habitats.

Transco submitted a categorical determination from USFWS that certain minor maintenance projects proposed in New Jersey by Williams Gas Pipeline - Transco are not likely to adversely affect federally listed species. However, this letter does not cover projects that impact wetlands, and the Project would temporarily and permanently impact 6.2 and 3.3 acres of wetlands, respectively. Therefore, individual consultation was required for the Project. Summer habitat for the federally threatened northern long-eared bat is also present within the Project area. Therefore, USFWS New Jersey Field Office recommended a summer mist net survey. Surveys conducted between June 9 and 16, 2015 resulted in no northern long-eared bats found throughout the Project area. Although transient northern long-eared bat may occasionally forage or roost at the site, it is unlikely that summer maternity colonies of this species are currently present on the subject site. Impacts on this species from the proposed Project are anticipated to be insignificant and discountable. We have determined that the Project *may affect but is not likely to adversely affect* the northern long-eared bat. The USFWS concurred with this determination, and did not require vegetation removal timing restrictions related to bats, in correspondence dated August 18, 2015, and posted to the Commission's public record on September 17, 2015.

Based on the Information, Planning, and Conservation System (iPac) USFWS species list, the federally threatened bog turtle (*Clemmys muhlenbergii*) was also identified as potentially occurring in the Project area. A USFWS-recognized surveyor completed a wetland delineation and determined that the wetlands were not suitable habitat for this species. The report states that within the Project area, the wetlands either did not contain enough herbaceous cover, no tussock-forming vegetation that could be used for nesting or cover, too few forest openings for potential basking locations, no "muck," and/or unsuitable hydrology to meet the criteria of potential bog turtle habitat. We have determined that this Project *may affect but is not likely to adversely affect* the bog turtle, and the USFWS concurred with this determination on March 19, 2015. Therefore Section 7 consultation under the Endangered Species Act is complete for this Project.

The Project would not impact any waterways; therefore, no fisheries of special concern or commercial value would be impacted by the Project. Transco's representatives consulted with the NJDEP, New Jersey Natural Heritage Program, Office of Natural Lands Management on potentially state-threatened or endangered species on September 16, 2014. The NJDEP sent correspondence on September 24, 2014, stating that no rare, threatened, or endangered species occur within more than ¼-mile of either Station. On March 25, 2015, the NJDEP Office of Permit Coordination and Environmental Review stated that it concurs with the conclusion by Transco that no unique, sensitive or protected vegetation types, or individual trees, were identified by any of the agencies within either the limits of the Project area or within a half-mile radius of the Project, and

that habitat is not found onsite for sensitive species. We also find that seasonal vegetation removal restrictions would sufficiently minimize impacts on sensitive bird species, and that effects on state-listed or special status species would be sufficiently minimized.

## 5.0 CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act, as amended, requires the Commission to take into account the effects of its undertakings (including the issuance of Certificates) on properties listed or eligible for listing on the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation an opportunity to comment on the undertaking. Transco provided us with information, analyses, and recommendations necessary to complete the process of complying with Section 106, as allowed by the Advisory Council on Historic Preservation's implementing regulations at 36 CFR Part 800.2(a)(3), and outlined in our *Guidelines for Reporting on Cultural Resources Investigations for Pipeline Projects* (OEP Cultural Resources Guidelines, December 2002, as specified in 18 CFR Part 380.12(f)).

We sent copies of our NOI for this Project to a wide range of stakeholders, including the Advisory Council on Historic Preservation, U.S. Department of the Interior National Park Service, New Jersey Historic Preservation Office, and federally-recognized Indian tribes (Indian tribes) that may have an interest in the Project area. The NOI contained a paragraph about Section 106 of the National Historic Preservation Act, and stated that we use the notice to initiate consultations with the State Historic Preservation Officer (SHPO)<sup>3</sup>, and to solicit their views and those of other government agencies, interested Indian tribes, and the public on the Project's potential effects on historic properties.

Transco submitted a letter dated September 12, 2014, to the SHPO, to inform them of the Project, recommend an area of potential affect (APE), describe field methodology, and request a list of Indian tribes to contact. In a letter dated October 15, 2014, the SHPO agreed with the proposed survey methodology. In a separate email to Transco, dated October 15, 2014, the SHPO provided a list of Indian tribes and state-recognized Native American groups that may have an interest in the project area. Transco sent an Unanticipated Discoveries Plan to the SHPO for comments dated December 12, 2014, and the SHPO responded in a letter dated January 14, 2015. On February 16, 2015, Transco sent cultural resources survey reports to the SHPO for comments. The SHPO responded on March 13, 2015, stating that the Project would have no effects on historic properties, excluding the remaining acreage (about 4.7 acres) that requires investigation. In a response dated March 20, 2015, the SHPO stated that the Project would have no adverse effects on historic structures.

The survey consisted of reviewing about 68 acres. The direct APE consisted of areas such as the M&R station, additional temporary workspaces, and ancillary facilities. Three new permanent and one temporary access road are also proposed. The indirect APE is considered 0.5 mile area surrounding the Project or historic resources that may be impacted by vibratory, auditory, or visual changes resulting from the Project. The direct APE has been previously disturbed and no archaeological sites were identified. However, about 4.7 acres still require

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<sup>3</sup> The SHPO is represented by the Historic Preservation Office in New Jersey.

investigations. No historic districts listed on the NRHP were identified within the APE. However, there were three historic architectural resources (GAI-01, GAI-02, and GAI-03) identified within the indirect APE. Two of these resources (GAI-01 and GAI-02) were constructed in the early and mid-20<sup>th</sup> century. GAI-01 is a workshop and a shed and likely part of a circa 1920 agricultural complex that is no longer in use. Both resources are deteriorated and lack integrity. GAI-02 is a Cape Cod style house and associated shed built circa 1954. None of these resources are considered eligible for listing on the NRHP. One historic property is the Singleton-Lather-Large House (GAI-03) and is composed of three building sections. The earliest section was the original house constructed circa 1685, an addition followed in 1725, and the last addition was built around 1880. A barn build in the mid-20<sup>th</sup> century is northeast of the house. GAI-03 was listed on the NRHP in 1979 and retains historic integrity. While portions of Station 203 may be visible from GAI-03, the viewshed has been compromised by modern transportation developments (New Jersey Turnpike, etc.) and was recommended that the Project would not have adverse effects on historic properties.

In letters dated October 23, 2014, Transco contacted four Indian tribes, the Delaware Nation, Delaware Tribe of Indians, Shawnee Tribe of Oklahoma, and the Stockbridge-Munsee Band of Mohicans regarding the Project. The Delaware Tribe of Indians responded on November 7, 2014, requesting the survey reports, to continue to be consulted and to be notified of any unanticipated discovery. The Stockbridge-Munsee Band of Mohicans responded in an email dated November 19, 2014, that they have interest in Mercer County and requested survey reports. In correspondence dated December 4 and 10, 2014, respectively, the Shawnee Tribe of Oklahoma and Delaware Nation noted that the Project would not impact cultural or religious sites of interest to the Nation but requested to be contacted in the case of an unanticipated discovery. We sent the NOI to the same Indian tribes. In a letter dated March 6, 2015, the Stockbridge-Munsee Band of Mohicans stated that they did not have significant cultural resource concerns but requested to be contacted in the case of an unanticipated discovery.

Transco included an unanticipated discovery plan (UDP) as Appendix 1-F-1 attached to the Environmental Reports included with its application to the FERC. In response to FERC's April 7, 2015, data request, Transco filed a revised UDP on April 23, 2015. The revised plan was forwarded to the SHPO. Transco has not filed the comments of the SHPO on the UDP; however, we found the plan acceptable.

### **Compliance with the National Historic Preservation Act**

Compliance with section 106 of the National Historic Preservation Act has not been completed for the Project. To ensure that the FERC's responsibilities under the National Historic Preservation Act and its implementing regulations are met **we recommend that:**

- **Transco should not begin construction of facilities and/or use of any staging, storage, or temporary work areas and improved access roads until Transco files with the Secretary:**
  1. **remaining cultural resources survey report(s) and addendum(s);**
  2. **site evaluation report(s) and avoidance/treatment plan(s), as required; and**
  3. **comments on the cultural resources reports, addendums and plans from the New Jersey SHPO;**

- **the Advisory Council on Historic Preservation is afforded an opportunity to comment if historic properties would be adversely affected; and**
- **the FERC staff reviews and the Director of OEP approves the cultural resources reports and plans, and notifies Transco in writing that treatment plans/mitigation measures (including archaeological data recovery) may be implemented and/or construction may proceed.**

All materials filed with the Commission containing **location, character, and ownership** information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: **“CONTAINS PRIVILEGED INFORMATION - DO NOT RELEASE.”**

## **6.0 LAND USE, RECREATION, AND VISUAL RESOURCES**

### **6.1 Land Use**

Construction of the Project would disturb about 47.3 acres of land during construction and 27.6 acres for operation. The Project would affect forest, open land, agricultural, residential, and commercial/industrial land use types. A summary of the impacts on land use types are outlined in table 4.

After construction of the Project, the land used for operation of the aboveground facilities would be considered commercial/industrial land use. No change in land use type would occur at Station 205. All vegetation and agricultural land would be converted to aboveground facilities at Station 203, the Chesterfield M&R, the communication tower, and the electrical substation. The station piping would be kept free of trees and large vegetation to ensure operational safety and to allow for routine maintenance. Land used for temporary workspace would be re-graded, stabilized and re-vegetated and allowed to revert to open/agricultural space in accordance with FERC’s Plan and Procedures.

Although the proposed activities would only occur within the limits of property owned by Transco, the local townships in the Project area did not identify proposed residential or commercial developments within 0.25 miles of Station 203 or Station 205. No residences or buildings are present within 50 feet of the proposed Project footprint at the Station 205, Station 203, Chesterfield M&R, or electrical substation. A residential home that has been purchased by Transco is adjacent to the Chesterfield M&R and Station 203 property. Since Transco already owns or has acquired easements for the proposed facilities, which are all above-ground, the use of eminent domain for this Project is not anticipated.

The proposed Project would require the construction of three new permanent access roads and one temporary access road. Chesterfield M&R and Station 203 would each require the addition of a new, separate access driveway leading from the existing public roadway (County Road 528) into the facilities locations. A third access road (driveway) would be required, also from County Road 528, providing direct access to the electrical substation property that would travel to the tie-in station piping. The temporary access road would extend from Station 203

across the adjacent Public Service Enterprise Group property and pipeline right-of-way to the electrical substation to facilitate construction between these Project parcels.

One commenter had a concern about long-term road closures as a result of the Project. Construction of the proposed Project may result in minor, short-term impacts along some roads and highways due to the movement and delivery of equipment and materials. In addition, there may be additional temporary traffic due to commuting workers. A short-term, temporary increase in traffic is expected from commuter (worker) traffic. Construction crews would generally arrive at the worksite in the early morning and work during daylight hours. However, Transco states that for Station 203/Chesterfield M&R, once in operation, minimal to no impacts would occur to traffic and transportation due to the small number of permanent workers and infrequent deliveries of materials. Similarly, the operation of the upgraded Station 205 should not impact transportation networks as no new employees are being added and Station operations would remain the same.

The construction phase is expected to result in minor, short-term increases in the region's population levels. Transco expects that temporary construction workers would be supplied by the local population whenever possible, anticipating that the construction workforce would consist of an approximately equal number of local and non-local employees. Non-local employees are required due to the specialized nature of the craft positions needed. Although the in-service dates reflect two phases, actual construction would proceed continuously between phases.

The new Station 203/Chesterfield M&R would require 10 workers on a permanent basis. Approximately eight qualified staff for this new facility would relocate from Transco's Mount Laurel Station, with an additional two employees expected to be new hires. Since the total number of new workers is small, no impact on the Project area population is expected. The upgrades at Station 205, an existing station, would not require additional full-time employees.

## **6.2 Recreation**

Public grade schools, public parks, are playgrounds are not located within 0.25 mile of the Project construction work areas. One church is located within approximately 0.25 mile of the electrical substation parcel, the Holy Cross Lutheran Church; this church also has a pre-school program. None of the following resources have been identified within 0.25 mile of the Project construction work areas:

- National or state parks and forests;
- Indian reservations;
- Wilderness areas;
- Wildlife management areas;
- Nature preserves;
- National trails;
- National Wild and Scenic Rivers;

- Registered natural landmarks;
- Flood control land, and
- Other federal, county, local or private conservation land.

Although the Project would not directly impact the church, noise and visual impacts as well as increased traffic during construction could temporarily impact church members (see section B.7.2 for discussion of noise impacts).

We received a comment about temporary fencing around the facilities during construction. Station 205 does not require the use of additional property, and would require an area of temporary workspace outside the fenced facility but within the station property that can be described as open land associated with the Transco pipeline right-of-way and surrounding facility driveway. Station 203 would occur within an area that is already fenced. However, a small portion of the workspace would occur along the electrical substation, and would be restored once construction is complete. Additional fencing would be installed per all local ordinances and permit requirements.

The Green Acres program provides for the acquisition of land and the construction of parks throughout New Jersey and currently protects over 1.2 million acres of open space. Table 10 indicates the Green Acres properties located within 1/4 mile of the Project. Since the proposed Project would be situated within and only involve property owned by Transco, there would be no impacts on any Green Acres properties within 1/4 mile of the Project. While adjacent undeveloped properties are deeded as Green Acres, the construction and operation of the Station 203, Chesterfield M&R, communication tower, associated buildings, and electrical substation would not impact or interfere with the conservation status of these properties. The Holy Cross Lutheran Church is located across the New Jersey Turnpike from the Project, which would minimize any potential impact. At Station 205 a portion of the undeveloped property surrounding the station consists of Green Acre property owned by Transco but is deeded under a conservation easement to Delaware & Raritan Greenway, Inc. The proposed activities and temporary workspace at Station 205 would not be situated within any portion of the deeded Green Acres and therefore would not impact this public land.

Because of the existing infrastructure and limited scope of the construction and operation of facilities at the Project sites, minimal impacts are expected on recreational activities in the Project areas.

### **6.3 Visual Resources**

The proposed Project would not impact or be located near any local, state, or federally designated visual resources of significance (e.g., scenic roads/highways or National Wild and Scenic Rivers, or historic structures). Construction would result in temporary visual and aesthetic impacts including increased numbers of company and contractor personnel, presence/storage of additional equipment and materials, removal of vegetative and woody cover and disturbance of soils. These impacts would cease following the completion of construction and successful restoration. The visual effects resulting from installation and operation of the station piping would be most noticeable within the small portion of forest traversed by the piping. In most cases, the visual impact of the permanent facilities would lessen over time as vegetation becomes reestablished.

| <b>Table 10. Green Acres Properties Located Within 0.25 Mile of the Project</b> |                 |  |                  |   |
|---|-----------------|--|------------------|---|
| <b>County</b>   | <b>Township</b> | <b>Approximate Distance (feet)<sup>a</sup></b> | <b>Block/Lot</b> | <b>Ownership</b>                                  |
| <b>Station 205</b>  |                 |  |                  |   |
| Mercer  | Lawrence        | onsite   | 7201/17.01       | Transco   |
|   |                 | 1,112  | 7201/11          | Delaware & Raritan Greenway, Inc.                 |
| <b>Electrical Substation and Station Piping</b>                                 |                 |  |                  |   |
| Burlington  | Chesterfield    | None   |                  |   |
|   | Bordentown      | 670  | 93/9.01          | Board of Chosen Freeholders of BC                 |
|   |                 | 250  | 93/10            | Bordentown Township                               |
|   |                 | 540  | 92.01/1          | Bordentown Township (Holloway Meadows Open Space) |
|   |                 | 1,150  | 90/6             | Bordentown Township (Veterans Park Open Space)    |
| <b>Chesterfield M&amp;R Station and Station 203</b>                             |                 |  |                  |   |
| Burlington  | Chesterfield    | None   |                  |   |
|   | Bordentown      | 785  | 93/9.01          | Board of Chosen Freeholders of BC                 |
|   |                 | 945  | 93/10            | Bordentown Township                               |
| a: From proposed construction activity  |                 |  |                  |   |

The proposed activities for Station 205 would occur on property already consisting of an existing compressor station with an industrial land use and presence within the surrounding viewshed. At Station 203, construction and operation of the proposed aboveground facilities would have a permanent, and typically minor, impact on the visual landscape. The surrounding land use is a mix of agricultural, undeveloped land, residential developments, singular homes associated with larger tracts of land, electric and natural gas pipeline rights-of-way, an electrical substation, and the New Jersey Turnpike. Hence, there is currently a mix of land uses and the surrounding area does not consist solely of undeveloped property that would observe a more pinpointed visual impact.

The site of the Station 203 has several hundred feet of frontage on County Road 528. Where possible, Transco has committed to preserving existing trees along the compressor station property boundaries abutting existing roadways. Station 203 would contain lights affixed to pole structures within the station yard. The floodlights would be used to facilitate work at night or during inclement weather. Additional lighting would be installed on the building structure within the station yard for safety and security purposes; however, these lights would be designed to minimize visual effects at night. Transco would design the exterior lighting for the compressor station to be as non-intrusive as practicable. Lighting is not expected to affect existing residences in the vicinity of the Project site. The proposed communication tower (estimated to be up to

approximately 150 feet above grade) would be situated on property proximate to the New Jersey Turnpike. While this structure would be visible from a further field due to its height, it is located adjacent to a linear transportation corridor and electric transmission right-of-way with large steel towers that already alter the visual aesthetics of the area. The addition of the communication tower would not significantly alter the existing viewshed.

Based on the proximity of existing industrial infrastructure, we conclude that the Project would not have a significant impact on visual resources.

#### **6.4 Coastal Zone Management Areas**

The coastal boundary of New Jersey encompasses the Coastal Area Facility Review Act area and the New Jersey Meadowlands District. The coastal area includes coastal waters to the limit of tidal influence including: the Atlantic Ocean (to the limit of New Jersey's seaward jurisdiction); Upper New York Bay, Newark Bay, Raritan Bay and the Arthur Kill; the Hudson, Raritan, Passaic, and Hackensack Rivers, and the tidal portions of the tributaries to these bays and rivers. The Delaware River and Bay and other tidal streams of the Coastal Plain are also in the coastal area, as is a narrow band of adjacent uplands in the Waterfront Development area beyond the Coastal Area Facility Review Act area. The Project is not located within a Coastal Area Facility Review Act area, the New Jersey Meadowlands District, or the Waterfront Development area and would not have any impact on coastal zones. Therefore, no impacts would occur to Coastal Zone Management Areas as a result of this Project.

### **7.0 AIR QUALITY AND NOISE**

#### **7.1 Air Quality**

Air quality would be affected by construction and operation of the Project. During construction of the Project, short-term emissions would be generated by operation of equipment, land disturbance, and increased traffic from worker and delivery vehicles. Operation of Stations 203, Station 205, and the Chesterfield M&R would result in minimal long-term air emissions, as presented below.

#### **Existing Air Quality**

New Jersey is characterized as a humid continental climate with warm, humid summers and cold winters. The area experiences average annual precipitation of 46 inches and average daily temperatures range from about 23 °F in January to 85 °F in July.

Ambient air quality is protected by federal and state regulations. The EPA established National Ambient Air Quality Standards (NAAQS) to protect human health and welfare.<sup>4</sup> Primary standards protect human health, including the health of sensitive subpopulations, such as children, the elderly, and those with chronic respiratory problems. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. NAAQS have been developed for sulfur dioxide (SO<sub>2</sub>), particulate matter (PM) with a diameter of 10 microns or less (PM<sub>10</sub>), PM with a diameter of 2.5 microns or less (PM<sub>2.5</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), ozone (O<sub>3</sub>), and lead (Pb), and

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<sup>4</sup> The current NAAQS are listed on EPA's website at <http://www.epa.gov/air/criteria.html>.

include levels for short-term (acute) and long-term (chronic) exposures. However, O<sub>3</sub> is not a pollutant emitted into the air. It is formed from a chemical reaction between oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOC) in the presence of sunlight. Consequently, emissions of NO<sub>x</sub> and VOCs are regulated by the EPA as “precursors” to the formation of O<sub>3</sub>. New Jersey has adopted the majority of the EPA’s NAAQS, but also applies its own standard for total suspended particulates.

Air quality control regions (AQCRs) are areas established by EPA and local agencies for air quality planning purposes, in which State Implementation Plans describe how the NAAQS would be achieved and maintained. The AQCRs are intra- and interstate regions such as large metropolitan areas where improvement of the air quality in one portion of the AQCR requires emission reductions throughout the AQCR. Each AQCR, or smaller portion within an AQCR (such as a county), is designated, based on compliance with the NAAQS, as attainment, unclassifiable, maintenance, or nonattainment, on a pollutant-by-pollutant basis. Areas in compliance or below the NAAQS are designated as attainment, while areas not in compliance or above the NAAQS are designated as nonattainment. Areas previously designated as nonattainment that have since demonstrated compliance with the NAAQS are designated as maintenance for that pollutant. Maintenance areas may be subject to more stringent regulatory requirements to ensure continued attainment of the NAAQS. Areas that lack sufficient data to determine attainment status are designated unclassifiable and treated as attainment areas.

In addition, New Jersey is included in the Ozone Transport Region (OTR). The OTR, established under the Clean Air Act (CAA) amendments, and includes 11 northeastern states in which O<sub>3</sub> transports from one or more states and contributes to a violation of the O<sub>3</sub> NAAQS in one or more other states. Emissions in this region are subject to more stringent permitting requirements and various regulatory thresholds are lower for the pollutants that form ozone, even if they meet the O<sub>3</sub> NAAQS.

The EPA and state and local agencies have established a network of ambient air quality monitoring stations to measure and track the background concentrations of criteria pollutants across the United States. This data is then used by regulatory agencies to compare the air quality of an area to the NAAQS. Burlington and Mercer Counties, New Jersey are in attainment for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO, and Pb. However, both counties are designated nonattainment for O<sub>3</sub> and maintenance for PM<sub>2.5</sub>.

The EPA now defines air pollution to include the mix of six long-lived and directly emitted greenhouse gases (GHGs), finding that the presence of the following GHGs in the atmosphere may endanger public health and welfare through climate change: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. As with any fossil-fuel fired project or activity, the Project would contribute GHG emissions. The principle GHGs that would be emitted by the Project are CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. No fluorinated gases would be emitted by the Project. GHG emissions are quantified and regulated in units of CO<sub>2</sub> equivalents (CO<sub>2</sub>e). The CO<sub>2</sub>e takes into account the global warming potential (GWP) of each GHG. The GWP is a ratio relative to CO<sub>2</sub> of a particular GHG’s ability to absorb solar radiation as well its residence time within the atmosphere. Thus, CO<sub>2</sub> has a GWP of 1, CH<sub>4</sub> has a GWP of 25, and

N<sub>2</sub>O has a GWP of 298.<sup>5</sup> In compliance with EPA’s definition of air pollution to include GHGs, we have provided estimates of GHG emissions for construction and operation, as discussed throughout this section. Impacts from GHG emissions (i.e., climate change) are discussed in more detail in section C.7.

### Permitting/Regulatory Requirements

The CAA, as amended in 1977 and 1990, is the basic federal statute governing air pollution. The provisions of the CAA that are potentially relevant to the Project are discussed further below.

#### Air Permitting

New and modified equipment at Stations 203 and 205 would include electric-driven compressors, and a natural gas-fired stand-by generator<sup>6</sup> at Station 203. Therefore, the only new emission sources for the Project would be fugitive emissions or blow-downs at the compressor stations and new meter station releasing natural gas, and related to the stand-by generator. Table 11 presents the new operating air emissions at these facilities. The proposed emissions at these facilities do not trigger any federal stationary source air permitting requirements. However, the new stand-by generator at Station 203 would be subject to state permitting requiring a general permit.

| Table 11. Estimates Operation Emissions (tons per year) |             |             |                 |             |                  |                   |             |                         |
|---|-------------|-------------|-----------------|-------------|------------------|-------------------|-------------|-------------------------|
| Facilities  | NOx         | CO          | SO <sub>2</sub> | VOC         | PM <sub>10</sub> | PM <sub>2.5</sub> | HAPs        | GHG (CO <sub>2</sub> e) |
| Stand-by Generator                                      | 0.55        | 0.36        | 0.01            | 0.01        | 0.01             | 0.01              | 0.03        | 102                     |
| Fugitive Emissions                                      | --          | --          | --              | --          | --               | --                | --          | 19,326                  |
| Total Station 203                                       | --          | --          | --              | --          | --               | --                | --          | 19,428                  |
| Total Station 205                                       | --          | --          | --              | --          | --               | --                | --          | 19,326                  |
| Total Chesterfield M&R                                  | --          | --          | --              | --          | --               | --                | --          | 420                     |
| <b>Project Total</b>                                    | <b>0.55</b> | <b>0.36</b> | <b>0.01</b>     | <b>0.01</b> | <b>0.01</b>      | <b>0.01</b>       | <b>0.03</b> | <b>39,174</b>           |

#### New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants

The EPA promulgates New Source Performance Standards (NSPS) to establish emission limits and fuel, monitoring, notification, reporting, and recordkeeping requirements for stationary source types or categories that cause or contribute significantly to air pollution. NSPS Subpart JJJJ (*Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*) sets emission standards for NO<sub>x</sub>, CO, and VOC. Subpart JJJJ would apply to the stand-by generator at Station 203. Based on manufacturer data, the generator would comply with the applicable requirements of subpart JJJJ.

<sup>5</sup> These GWPs are based on a 100-year time period. We have selected their use over other published GWPs for other timeframes because these are the GWPs EPA has established for reporting of GHG emissions and air permitting requirements. This allows for a consistent comparison with these regulatory requirements.

<sup>6</sup> The stand-by generator is categorized as such because it would operated less than 500 hours per year. These units are typically operated for maintenance/emergency use or testing.

The CAA Amendments established a list of 189 hazardous air pollutants (HAPs), resulting in the promulgation of National Emission Standards for Hazardous Air Pollutants (NESHAPs). The NESHAPs regulate HAP emissions from stationary sources by setting emission limits, monitoring, testing, record keeping, and notification requirements. Subpart ZZZZ (*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*) would apply to the stand-by generator at Station 203. The generator would comply with NESHAPs Subpart ZZZZ by complying with NSPS Subpart JJJJ requirements.

### General Conformity

The General Conformity Rule was developed to ensure that federal actions in nonattainment and maintenance areas do not impede states' attainment of the NAAQS. The lead federal agency must conduct a conformity determination if a federal action's construction and operational activities is likely to result in generating direct and indirect emissions that would exceed the General Conformity Applicability threshold levels of the pollutant(s) for which an air basin is designated nonattainment or maintenance. Conforming activities or actions should not, through additional air pollutant emissions:

- cause or contribute to new violations of the NAAQS in any area;
- increase the frequency or severity of any existing violation of any NAAQS; or
- delay timely attainment of any NAAQS or interim emission reductions.

The General Conformity Rule entails both an applicability analysis and a subsequent conformity determination, if triggered. A General Conformity Determination must be completed when the total direct and indirect emissions of a project would equal or exceed the specified pollutant thresholds on a calendar year basis for each nonattainment or maintenance area.

As noted earlier, the Project would be located in a nonattainment and maintenance area. Areas designated as nonattainment or maintenance for O<sub>3</sub> need to be evaluated for VOC and NO<sub>x</sub> precursors, and areas designated as nonattainment or maintenance areas for PM<sub>2.5</sub> need to be evaluated for PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub>. Table 12 presents the applicability analysis for each nonattainment or maintenance area and the precursor pollutants. Although Transco proposes to construct the Project over two phases spanning 2016 to 2017, emissions were conservatively assumed to all occur in one calendar year for comparison with the General Conformity thresholds. Also, Transco conservatively assumed that all Project emissions would occur within the same designated area.<sup>7</sup> As shown, the General Conformity Applicability thresholds, expressed in tons per year (tpy), would not be exceeded in any non-attainment or maintenance area. Therefore, a General Conformity Determination is not required.

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<sup>7</sup> Mercer and Burlington Counties are within the same Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE O<sub>3</sub> nonattainment area. However, Mercer County is within the New York-N. New Jersey-Long Island, NY-NJ-CT PM<sub>2.5</sub> maintenance area and Burlington County is within the Philadelphia-Wilmington, PA-NJ-DE PM<sub>2.5</sub> maintenance area.

## State Air Quality Regulations

In addition to federal regulations, New Jersey has its own regulations that Transco would comply with during construction and operation of the Project, as discussed below.

Transco would be required to obtain a general permit for the stand-by generator at Station 203. Further, because the stand-by generator would burn pipeline-quality natural gas, the generator would be in compliance with New Jersey’s Control and Prohibition of Smoke from

| <b>Designated Pollutant</b>   | <b>Designated Area and Counties</b>                        | <b>Threshold (tpy)</b> | <b>Pollutant or Precursor</b> | <b>Total Emissions (tons)<sup>a</sup></b> |
|---|--|------------------------|-------------------------------|---|
| Ozone   | Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE         | 50                     | VOC                           | 2.98                                      |
|   | Mercer County, NJ<br>Burlington County, NJ                 | 100                    | NO <sub>x</sub>               | 18.89                                     |
| PM <sub>2.5</sub>   | New York – N. New Jersey – Long Island, NY-NJ-LI-CT        | 100                    | PM <sub>2.5</sub>             | 54.9                                      |
|   | Mercer County, NJ  | 100                    | SO <sub>2</sub>               | 0.13                                      |
|   | Philadelphia-Wilmington, PA-NJ-DE<br>Burlington County, NJ | 100                    | NO <sub>x</sub>               | 18.89                                     |
| a Includes construction emissions and any non-exempt operating emissions. |  |                        |                               |   |

Combustion of Fuel, Control and Prohibition of Particles from Combustion of Fuel, and Sulfur requirements.

Construction of the Project facilities would also comply with the following state regulations:

- Anti-Idling Rules for Diesel and Gasoline Vehicles – Transco would limit idling time of on-road vehicles and non-road construction equipment to three minutes;
- Ultra-Low Sulfur Diesel Fuel – Transco would use ultra-low sulfur diesel fuel for all diesel non-road construction equipment;
- Nonroad Diesel Tier 4 Construction Equipment – Based on equipment availability, construction equipment greater than 100 horsepower that would be used for more than 10 days would meet EPA Tier 4 nonroad emission standards or utilize best available control technology; and
- Designated Truck Routes – On-road diesel vehicles used to haul materials would use designated truck routes pertaining to state, county, and township roadways (except for Station 205 and Valve J736 which would require use of local roadways given their existing locations).

### **Air Emission Impacts and Mitigation**

The Project would produce air pollutant emissions primarily from construction. Construction of all facilities during both phases would occur over an 18-month period. The air

quality impacts of Project construction are considered short-term. Following construction, air quality would revert back to previous conditions.

### Construction Emissions

Construction of the Project would result in short-term, localized increases in emissions of some pollutants from the use of fossil fuel-fired equipment and the generation of fugitive dust due to earthmoving activities. There may also be some temporary indirect emissions attributable to construction workers commuting to and from work sites during construction and from on-road and off-road construction vehicle traffic. Large earth-moving equipment and other mobile equipment are sources of combustion-related emissions, including criteria pollutants (i.e., NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, and PM<sub>10</sub>). Construction emissions are presented in table 13. These emissions present the combined emissions of construction equipment combustion, on-road vehicle travel, off-road vehicle travel, and earthmoving fugitives. Detailed emissions for each activity are provided in Transco's Resource Report 9 to its application and supplemental filings.

| <b>Table 13. Estimated Construction Emissions (tons)</b> |                       |             |                       |            |                        |                         |             |                              |
|--|-----------------------|-------------|-----------------------|------------|------------------------|-------------------------|-------------|------------------------------|
| <b>Construction Activity</b>                             | <b>NO<sub>x</sub></b> | <b>CO</b>   | <b>SO<sub>2</sub></b> | <b>VOC</b> | <b>PM<sub>10</sub></b> | <b>PM<sub>2.5</sub></b> | <b>HAPs</b> | <b>GHG (CO<sub>2e</sub>)</b> |
| Phase 1  |                       |             |                       |            |                        |                         |             |                              |
| Off-road Construction Equipment                          | 2.9                   | 20.8        | 0.01                  | 0.5        | 0.1                    | 0.09                    | 0.01        | 388.6                        |
| On-road Vehicles   | 0.6                   | 1.5         | <0.01                 | 0.1        | 0.03                   | 0.03                    | 0.01        | 104.3                        |
| Fugitive Dust  | --                    | --          | --                    | --         | 109.1                  | 15.8                    | --          | --                           |
| <b>Total for Phase 1</b>                                 | <b>3.5</b>            | <b>22.3</b> | <b>0.01</b>           | <b>0.6</b> | <b>109.2</b>           | <b>15.9</b>             | <b>0.02</b> | <b>492.9</b>                 |
| Phase 2  |                       |             |                       |            |                        |                         |             |                              |
| Off-road Construction Equipment                          | 12.9                  | 25.9        | 0.1                   | 1.7        | 0.5                    | 0.4                     | 0.04        | 2,047.6                      |
| On-road Vehicles   | 2.5                   | 7.9         | 0.01                  | 0.6        | 0.1                    | 0.1                     | 0.05        | 463.1                        |
| Fugitive Dust  | --                    | --          | --                    | --         | 279.6                  | 38.4                    | --          | --                           |
| <b>Total for Phase 2</b>                                 | <b>15.4</b>           | <b>33.8</b> | <b>0.1</b>            | <b>2.3</b> | <b>280.2</b>           | <b>38.9</b>             | <b>0.09</b> | <b>2,510.7</b>               |
| <b>Total All Phases</b>                                  | <b>18.9</b>           | <b>56.1</b> | <b>0.1</b>            | <b>2.9</b> | <b>389.4</b>           | <b>54.8</b>             | <b>0.1</b>  | <b>3,003.6</b>               |

Construction related emission estimates were based on a typical construction equipment list, hours of operation, and vehicle miles traveled by the construction equipment and supporting vehicles. These emission-generating activities would include earthmoving, construction equipment exhaust, on-road vehicle traffic, and off-road vehicle traffic. Transco conservatively utilized emission factors from EPA's AP-42, along with EPA's NONROAD2008 and MOVES2010b emission modeling softwares.

The volume of fugitive dust generated by surface disturbance and vehicle travel on unpaved roads would be dependent upon the area disturbed and the type of construction activity, along with the soil's silt and moisture content, wind speed, and the nature of vehicular/equipment traffic. The fugitive dust emissions from construction equipment on unpaved roads included in the table assume no mitigation, so actual emissions would be much lower than shown. Transco has developed an acceptable Fugitive Dust Control Plan identifying several mitigation measures it would implement to reduce construction emissions and fugitive dust, including:

- using water at the construction sites as necessary to reduce fugitive dust;
- paving/grading roadways and maintaining them, where possible;

- removing spilled or tracked dirt/materials from paved streets;
- limiting vehicle speeds to 15 miles per hour during construction on unsurfaced roads;
- covering open-bodied haul trucks, as appropriate; and
- installing gravel/stone entrances in transition from unpaved to paved roads to limit sediment transport.

Total Project emissions would result in short-term, localized impacts. However, these emissions may be further reduced by implementation of state regulations, as identified above.

### Operation Emissions

We received comments regarding potential air quality and health impacts from operation of the compressor stations. The Project does not include the installation of any new primary stationary point sources of air pollutants. Long-term operating emissions of the Project facilities may result from the intermittent release of non-criteria pollutants from fugitive emissions or blow-downs at Station 203, Station 205, or the Chesterfield M&R, releasing natural gas, or from the stand-by generator at Station 203. Emission estimates from each facility, per year of operation, are presented in table 13. Emissions from operating these facilities would result in minimal long-term air quality impacts.

Transco sufficiently avoided air quality or health impacts by selecting electric driven compressor units for the Project which would not emit any pollutants. Emissions generated during operation would not have significant impacts on local or regional air quality.

We also received comments concerning the risk of radon exposure associated with the burning of natural gas sourced from Pennsylvania Marcellus Shale. We have previously evaluated general background information, studies, and literature on radon in natural gas in several past project Environmental Impact Statements.<sup>8</sup> These studies include samples taken at well sites, pre-processing facilities, post processing facilities, and transmission pipelines. We have also reviewed the recent Pennsylvania Department of Environmental Protection's Technologically Enhanced Naturally Occurring Radioactive Materials Study Report issued in January 2015. The recent Pennsylvania Department of Environmental Protection report is consistent with past studies, which identify indoor radon concentrations ranging from 0.0042 picocuries per liter (pCi/L) to 0.13 pCi/L.

In the United States, the EPA has set the indoor action level for radon at 4 pCi/L. If concentrations of radon are high enough to exceed these activity levels, the EPA recommends remedial actions, such as improved ventilation, be implemented to reduce levels below this threshold. Further, the Indoor Radon Abatement Act established the long-term goal that indoor air radon levels be equal to or better than outdoor air radon levels. The average home in the United States has a radon activity level of 1.3 pCi/L, while outdoor levels average approximately 0.4

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<sup>8</sup> New Jersey-New York Expansion Project final Environmental Impact Statement (Docket CP11-56) issued March 2012, Rockaway Delivery Lateral and Northeast Connector Projects final Environmental Impact Statement (Dockets CP13-36 and CP13-132) issued February 2014, and the Algonquin Incremental Market Project final Environmental Impact Statement (Docket CP14-96) issued January 2015.

pCi/L. Past studies demonstrate that indoor radon concentrations from Pennsylvania Marcellus Shale sourced gas would remain below the EPA action level and the Indoor Radon Abatement Act long-term goal. Therefore, we find that the risk of exposure to radon in natural gas is not significant.

## 7.2 Noise

The Project would contribute to noise in the Project area during construction and operation. Due to natural and anthropogenic influences such as weather conditions, seasonal vegetative cover, and human activity, the magnitude and frequency of environmental noise may vary considerably over the course of a day and throughout the year.

Noise levels are expressed as decibels on the A-weighted scale (dBA) to put more emphasis on frequencies in the range that humans hear best, thereby mimicking the human ear. Two measurements that relate the time-varying quality of environmental noise to its known effect on people are the 24-hour equivalent sound level ( $L_{eq24}$ ) and day-night sound level ( $L_{dn}$ ). The  $L_{eq24}$  is the level of steady sound with the same total energy as the time-varying sound of interest, averaged over a 24-hour period. However, because noise levels are perceived differently, depending on length of exposure and time of day, the  $L_{dn}$  takes into account the duration and time the noise is encountered. Specifically the  $L_{dn}$  is the  $L_{eq24}$  plus 10 dBA added to nighttime sound levels between the hours of 10 p.m. and 7 a.m. to account for a people's greater sensitivity to sound during the night. For an essentially steady sound source that operates continuously over a 24-hour period and controls the environmental sound level, the  $L_{dn}$  is approximately 6.4 dB above the measured  $L_{eq}$ .

In 1974, the EPA published its Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. This document provides information for state and local governments to use in developing their own ambient noise standards. The EPA has indicated that an  $L_{dn}$  of 55 dBA protects the public from indoor and outdoor activity interference. We have adopted this criterion and use it to evaluate the potential noise impacts from the proposed Project at noise sensitive areas (NSAs), such as residences, schools, or hospitals. Due to the 10 dBA nighttime penalty added prior to calculation of the  $L_{dn}$ , for a facility to meet the  $L_{dn}$  55 dBA limit, it must be designed such that actual constant noise levels on a 24-hour basis do not exceed 48.6 dBA  $L_{eq}$  at any NSA. Also, in general, a person's threshold of perception for a perceivable change in loudness on the A-weighted sound level is about 3 dBA, whereas a 5 dBA change is clearly noticeable, and a 10 dBA change is perceived as either twice or half as loud.

Additionally, the State of New Jersey's Noise Control Act of 1971 includes the promulgation of noise control standards for stationary commercial and industrial sources. Continuous noise between 7:00 a.m. and 10:00 p.m. must remain below 65 dBA at any residential property line, and continuous noise between 10:00 p.m. and 7:00 a.m. must remain below 50 dBA at any residential property line. In order to comply with the New Jersey regulation, these compressor stations, which would operate on a 24-hour basis, should be designed to meet a sound level of 50 dBA  $L_{eq}$  at the residential property line.

## Noise Level Impacts and Mitigation

### Construction Noise

Construction of the facilities would involve operation of general construction equipment and noise would be generated during the installation of the Project components. Construction noise would be highly variable because the types of equipment in use at a construction site changes with the construction phase and the types of activities. The noise from construction activities may be noticeable at nearby NSAs; however, noise would be localized and short-term and construction equipment would be operated on an as-needed basis during the short-term construction period. Measures to mitigate construction noise would include compliance with federal regulations limiting noise from trucks, proper maintenance of equipment, and ensuring that sound muffling devices provided by the manufacturer are kept in good working condition. Further, nighttime noise levels would not increase during construction because construction activities would generally be limited to daylight hours. Therefore, construction noise would not result in significant noise impacts on residents or the surrounding communities.

### Operational Noise

The existing Station 205 currently is comprised of two 10,500 hp electric motor-driven compressor units (units #1 and 2) and one 16,000 hp electric motor-driven compressor unit (unit #3). Transco proposes to uprate the units # 1 and 2 to 16,000 hp and unit #3 to 25,000 hp (for a total station increase of 9,000 hp). In November 2014, Transco conducted a noise survey at Station 205. Transco identified three NSAs surrounding the compressor station. The nearest residences are 1,300 feet east of the station. The existing noise levels at each NSA are presented in table 14.

| <b>NSA</b> | <b>Distance/<br/>Direction</b> | <b>Existing Noise<br/>Level<br/>(dBA Ldn)</b> | <b>Post Project Total<br/>Noise Level<br/>(dBA Ldn)</b> | <b>Total<br/>Increase<br/>(dBA)</b> |
|------------|--------------------------------|---|---|-------------------------------------|
| NSA 1      | 1,300 feet East                | 50.6  | 52.5  | 1.9                                 |
| NSA 2      | 1,600 feet North               | 49.5  | 51.4  | 1.9                                 |
| NSA 3      | 2,230 feet North-Northeast     | 49.4  | 51.3  | 1.9                                 |

Transco also proposes to construct the new Station 203 which would include one new 30,500 hp electric motor-driven compressor unit. At this location, Transco also would install the new Chesterfield M&R. Transco conducted an ambient noise survey at the location of Station 203/ meter station in December 2014. Transco identified three NSAs surrounding the compressor station/meter station. The nearest residence is 600 feet northeast of the proposed facility. The existing noise levels at each NSA are presented in table 15.

| <b>NSA</b> | <b>Distance/<br/>Direction</b> | <b>Existing Noise<br/>Level<br/>(dBA Ldn)</b> | <b>Post Project<br/>Noise Level<br/>(dBA Ldn)</b> | <b>Total<br/>Combined<br/>(dBA Ldn)</b> | <b>Total<br/>Increase<br/>(dBA)</b> |
|------------|--------------------------------|---|---|---|-------------------------------------|
| NSA 1      | 600 feet Northeast             | 60.8  | 50.0  | 61.1                                    | 0.3                                 |
| NSA 2      | 820 feet East                  | 54.1  | 46.9  | 54.9                                    | 0.8                                 |
| NSA 3      | 1,550 feet Northwest           | 62.3  | 40.4  | 62.3                                    | 0.0                                 |

Noise would generally be produced on a continuous basis at Station 205 and Station 203/Chesterfield M&R by the compressor units and associated equipment. A noise analysis for these facilities was completed using sound level data for the specific equipment proposed for each facility and calculations for the noise attenuation over distance. The results of the noise analysis are summarized in tables 14 and 15 for the impacts at the nearest NSAs.

The noise analyses account for several noise control measures, including insulation, acoustically treated compressor buildings, mufflers, and equipment specific maximum noise levels. The noise analysis for Station 205 conservatively includes ambient noise as part of the noise contribution of the compressor station. The noise analysis for Station 203 also conservatively estimates the noise contribution from the compressor station at some NSAs by excluding the existing noise wall along the New Jersey Turnpike. As indicated in tables 14 and 15, the noise levels from the modified Station 205 and new Station 203/meter station, including noise mitigation, would be below 55 dBA  $L_{dn}$  at the nearest NSAs. Also, projected noise levels at the property lines would comply with the New Jersey noise requirement and Lawrence Township agreement.

Additionally, the estimated noise increase at the nearby NSAs would range from 0.0 to 1.9 dBA at the NSAs, which is below the 3 dBA threshold of noticeable difference for humans. To further ensure that the actual noise levels resulting from operation of the modified Station 205 and new Station 203/Chesterfield M&R are not significant, **we recommend that:**

- **Transco should file noise surveys with the Secretary no later than 60 days after placing the modified Station 205 and new Station 203 in service. If a full load condition noise survey is not possible, Transco should provide an interim survey at the maximum possible horsepower load and provide the full load survey within 6 months. If the noise attributable to the operation of all of the equipment at either compressor station, under interim or full horsepower load conditions, exceeds an  $L_{dn}$  of 55 dBA at any nearby NSAs, Transco should file a report on what changes are needed and should install the additional noise controls to meet the level within 1 year of the in-service date. Transco should confirm compliance with the above requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.**

In addition to normal operational noise, there may also be sources of noise due to maintenance or emergency operation. Specifically, emergencies and maintenance activities involve blow downs (depressurizing/emptying station equipment to remove natural gas). Based on information from Transco, the blow downs at the compressor stations are typically infrequent and may be silenced or unsilenced.

Silenced blow down events are more frequent for scheduled maintenance of the compressor equipment. These scheduled events may occur multiple times per year. Transco's unit blowdown silencers would reduce the gas velocity of the exiting gas and muffle the resulting noise to 60 dBA at 50 feet.

We received several comments concerning increase in noise/vibration from the existing Transco Trenton-Woodbury Lateral. Transco maintains two separate pipelines as part of the Trenton-Woodbury Lateral System - a 16-inch-diameter pipeline and a 36-inch-diameter pipeline.

The 16-inch-diameter pipeline is the pipeline commentors appear to be referring to in their concerns about vibration. The new Station 203 would not tie-into the existing 16-inch-diameter Trenton-Woodbury Lateral pipeline, and therefore would have no impact on the operation of this pipeline. Station 203 would tie-in to the 36-inch Trenton-Woodbury Lateral and could, under certain operating conditions, increase the operating pressure on this pipeline. However, the maximum allowable operating pressure on this pipeline would remain the same. Further, compression at Station 203 would include centrifugal type equipment, which avoids pipeline vibration that can occur with reciprocating type equipment. Therefore, we find the potential for an increase in vibration in the existing pipelines to be insignificant.

Based on the operating noise analyses conducted, and mitigation measures proposed at these compressor/meter stations, and post-construction verification survey that we recommend, we conclude that the Project would not result in significant noise impacts on residents and the surrounding communities.

## **8.0 RELIABILITY AND SAFETY**

A natural gas compressor station, meter station, or pipeline involves some risk to the public in the event of an accident and subsequent release of gas. The greatest hazard is a fire or explosion following a leak, or rupture at the facility. Methane, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentration, oxygen deficiency can result in serious injury or death.

The modifications to Station 205 and the new Station 203/Chesterfield M&R must be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR Part 192. The regulations are intended to ensure adequate protection for the public and to prevent facility accidents and failures, including emergency shutdowns and safety equipment. The DOT - Pipeline and Hazardous Materials Safety Administration's mission is to ensure that people and the environment are protected from the risk of pipeline facility incidents. This work is shared with state agency partners and others at the federal, state, and local level.

Title 49, U.S. Code Chapter 601 provides for a state agency to assume all aspects of the safety program for intrastate facilities by adopting and enforcing the federal standards. The DOT federal inspectors perform inspections and enforce the pipeline safety regulations for interstate gas pipeline facilities in New Jersey.

The DOT also defines area classifications, based on population density in the vicinity of the pipeline facility, and specifies more rigorous safety requirements for populated areas. This includes design requirements for compressor station piping. The four area classifications are defined below:

- |         |  |
|---------|--|
| Class 1 | Location with 10 or fewer buildings intended for human occupancy.  |
| Class 2 | Location with more than 10 but less than 46 buildings intended for human occupancy.  |
| Class 3 | Location with 46 or more buildings intended for human occupancy or where the pipeline lies within 100 yards of any building, or small well-defined |

outside area occupied by 20 or more people on at least 5 days a week for 10 weeks in any 12-month period.

Class 4 Location where buildings with four or more stories aboveground are prevalent.

Class locations representing more populated areas require higher safety factors in pipeline design, testing, and operation. Station 205 is located in a Class 1 area and Station 203 is proposed in a Class 3 location. Therefore, the compressor station piping at these locations must meet the design requirements of each class.

Part 192 also requires a pipeline operator to establish a written emergency plan that includes procedures to minimize the hazards in an emergency. Additionally, the operator must establish a continuing education program to enable the public, government officials, and others to recognize an emergency at the facility and report it to appropriate public officials. Transco would provide the appropriate training to local emergency service personnel before the facilities are placed in service.

We received multiple comments regarding safety impacts from a new pipeline planned by NJNG, the Southern Reliability Link Project. The NJNG Southern Reliability Link Project is not an interstate transmission project under FERC's jurisdiction and is not proposed as part of Transco's Project. However, NJNG's Project is also subject to DOT Minimum Federal Safety Standards in 49 CFR Part 192. Through a certification by the DOT, the state inspects and enforces the pipeline safety regulations for intrastate pipeline facilities in New Jersey (e.g. NJNG's system).

The DOT requires all operators of natural gas transmission pipeline systems to notify the DOT of any significant incident and to submit a report within 30 days. Significant incidents are defined as any leaks that: caused a death or personal injury requiring hospitalization; or involve property damage of more than \$50,000 in 1984 dollars.<sup>9</sup> The available data from the DOT shows that natural gas transmission pipeline systems continue to be a safe, reliable means of energy transportation. From 1995 to 2014, there were a nationwide average of 63 significant incidents, 9 injuries, and 2 fatalities per year. Over that same time period, there were seven total significant incidents in New Jersey with no injuries or fatalities. The number of significant incidents over the more than 300,000 miles of natural gas transmission pipelines nationwide and 1,500 miles of natural gas transmission pipeline in New Jersey indicates that the risk is low for an incident at any given location.

The construction and operation of the modified Station 205 and new Station 203/Chesterfield M&R would represent a minimum increase in risk to the nearby public and we are confident that with implementation of the required design criteria for the design of these facilities, that they would be constructed and operated safely.

### **C. CUMULATIVE IMPACTS**

Cumulative impacts associated with this Project would be the result of multiple projects' impacts on the resources located near the project areas. Although the individual impact of the separate projects might be minor, the additive or synergistic effects from multiple projects could

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<sup>9</sup> \$50,000 in 1984 dollars is about \$115,000 as of March 2014 (U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Index, February 2014).

be significant. Cumulative impact is the incremental impact on the environment of multiple projects occurring within the same timeframe and vicinity as the proposed action. When evaluating cumulative impacts, we consider past, present, and reasonably-foreseeable future projects within the area affected by the proposed Project. For this analysis, we initially considered 0.25 mile from each Project component as the main region of influence in which impacts have the potential to be cumulative. However, to address the projects identified specifically by Delaware Riverkeeper (accession number 20140420-5122), we considered these projects in our cumulative impact analysis.

Five projects – Transco’s Northeast Supply Link Project (Docket No. CP12-30-000), Transco’s Atlantic Sunrise Project (Docket No. CP15-138-000), Transco’s Leidy Southeast Expansion Project (Docket No. CP13-551-000), PennEast Pipeline Company, LLC’s PennEast Pipeline Project (Docket No. CP15-558-000), and NJNG’s Southern Reliability Link Projects - were identified as having the potential to contribute to cumulative impacts. No additional planned developments, FERC jurisdictional projects, energy infrastructure, or other construction projects were identified.

The Northeast Supply Link Project does not occur within the same region of influence as the Garden State Expansion Project, as project activities occurred greater than 0.25 mile away and not in Mercer County, but in Essex, Passaic, Bergen, Hudson, Somerset, and Hunterdon Counties, New Jersey. It was also constructed and placed in service in 2012 and 2013 and is currently fully restored. As part of the Northeast Supply Link Project, an electric driven compressor station was installed; therefore, that station would not contribute cumulatively to air emissions. Therefore, from a geographic and timing perspective, cumulative impacts of the Project would not add to the impacts of the Northeast Supply Link Project, and this project was not considered further in our analysis.

The Atlantic Sunrise Project has no facilities proposed in New Jersey. The draft Environmental Impacts Statement is currently being prepared for this proposal. Given this project is outside the range of influence for the Project, it would not contribute cumulatively to the Garden State Expansion Project.

The application for the Leidy Southeast Expansion Project was filed in September 2013 and approved by the Commission in December 2014. This project is currently under construction with an anticipated in-service of December 1, 2015. Therefore, no direct overlap of construction timing would occur with the Garden State Expansion Project. However, project activities include a 2,000-hp uprate, modification of existing electric compressor units, and yard piping and vales at Compressor Station 205 in Mercer County, New Jersey. Approximately 6.2 miles of 42-inch-diameter pipeline loop<sup>10</sup> for the Skillman Loop will be installed in Mercer and Somerset Counties beginning approximately 4.5 miles northeast of the Compressor Station 205. As of October 6, 2015, the horizontal directional drill and crossings are approximately 50 percent complete, Station 205 valve modifications have not begun, and Skillman Loop construction (including access roads) is approximately 90 percent complete (Williams/Transco 2015). Transco requested in-service for

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<sup>10</sup> A loop is a segment of pipe that is usually installed adjacent to an existing pipeline and connected to it at both ends. The loop allows more gas to be moved through the system.

the Pleasant Run Loop facilities in Somerset and Hunterdon Counties, New Jersey on October 9, 2015. The components of project activities within Mercer County are considered further below.

The PennEast Pipeline Project consists of approximately 118 miles of variable size diameter pipeline, various aboveground facilities, and a compressor station in Carbon County, Pennsylvania. The pipeline would originate in Luzerne County, Pennsylvania and terminate in Mercer County, New Jersey. Penneast Pipeline Company, LLL (PennEast) proposes to begin construction starting 3<sup>rd</sup> quarter of 2016, but the primary construction activities would occur in 2017. Penneast proposes to place facilities in-service in November 2017. Therefore, the timing of construction may overlap slightly with the Garden State Expansion Project. The terminus of the PennEast Pipeline Project occurs approximately 2.5 miles southwest of Transco's Compressor Station 205 in Mercer County, New Jersey (PennEast 2015). PennEast submitted its formal application for a Certificate on September 25, 2015. The components of the project within Mercer County (approximately 9.6 miles of mainline pipeline, and project terminus including Transco Interconnect and Transco Receiver Site, both aboveground facilities) are considered further below.

The Southern Reliability Link Project, as previously described, is a 28-mile, 30-inch-diameter lateral pipeline project planned by NJNG to strengthen its southern distribution territory, and would provide diversity and reliability of supply and pressures on NJNG's system. The project would also include aboveground permanent facilities including valves and a pig<sup>11</sup> launcher and receiver. The pig launcher would be located at Transco's existing facility in Chesterfield Township, and the valve settings would be located along the pipeline route to provide sectionalized shut-down points. An alternatives analysis was conducted that analyzed the amount of impacts on natural, cultural, and social environments of the various routes studied. According to NJNG, the pipeline route minimizes combined impacts on communities and the environment while still being practicable to construct (AECOM 2015). The study area for the alternatives analysis was determined based on the physical location of the project start and end points, the geographic characteristics of the region and engineering and design.

The Southern Reliability Link Project would occur within Burlington, Monmouth, and Ocean Counties, New Jersey. As stated previously, construction is proposed to begin in March 2016 and take approximately one year to complete. NJNG would utilize a 10-foot-wide permanent right-of-way that would occur mostly (85 percent) within existing rights-of-way. Based on a 10-foot-wide permanent easement and with a 28-mile-long pipeline, approximately 33.9 acres of operational impacts would result from the project (Sturn 2015). Based on a 100-foot-wide temporary construction workspace, we assume temporary project impacts to be approximately 339.4 acres.

## **CUMULATIVE IMPACT ANALYSIS**

The Project would result in minimal impacts on geological and soil resources that would be limited to the Project sites, and would not result in cumulative impacts. The following discussion analyzes the cumulative impacts on the following resources: water resources; vegetation and wildlife; cultural resources; land use and visual resources; socioeconomics; and air quality and noise.

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<sup>11</sup> A pig generally is a device inserted into a pipeline to clean, inspect, or maintain pipelines.

## 1.0 WATER RESOURCES

Impacts on wetlands would result from construction and operation of the proposed Project and from NJNG’s Southern Reliability Link Project. Types of wetlands identified in the Southern Reliability Link Project area include PFO, palustrine scrub-shrub (PSS), and PEM. Wetlands that are components of the Barnegat Bay tributary are present in the Southern Reliability Link Project area, and considered EPA Priority Wetlands. Wetlands for the Southern Reliability Link Project were evaluated based on the value of the wetland. The type of wetland was identified, as PFO wetlands are regarded as having higher habitat value, and the presence of wildlife including threatened or endangered species in the analysis of habitat value. Wetland impacts would be minimized where possible, and permanent impacts mitigated through consultation with NJDEP (AECOM 2015). Table 16 indicates the proposed temporary and permanent impacts on wetlands within the Southern Reliability Link Project area.

| Facility   | Permanent Disturbance |                               |                          |                         | Temporary Disturbance |                                 |                            |            |
|--|-----------------------|-------------------------------|--------------------------|-------------------------|-----------------------|---------------------------------|----------------------------|------------|
|  | PFO                   | Wetland transition (forested) | Riparian Zone (forested) | CAFRA <sup>a</sup> Zone | Freshwater Wetlands   | Wetland Transition (herbaceous) | Riparian Zone (herbaceous) | CAFRA Zone |
| <b>Pipeline</b>  |                       |                               |                          |                         |                       |                                 |                            |            |
| 10' Permanent right-of-way   | 0.01                  | 0.1                           | 0                        | 0.08                    | 0                     | 0                               | 0                          | 1.1        |
| Temporary workspace  | 0                     | 0                             | 0                        | 0                       | 0.03                  | 3.5                             | 0.07                       | 3.6        |
| <b>Valve</b>   |                       |                               |                          |                         |                       |                                 |                            |            |
| Valve Pad  | 0                     | 0.01                          | 0                        | 0.01                    | 0                     | 0                               | 0                          | 0          |
| <b>TOTAL</b>   | <b>0.01</b>           | <b>0.1</b>                    | <b>0</b>                 | <b>0.09</b>             | <b>0.03</b>           | <b>3.5</b>                      | <b>0.07</b>                | <b>4.7</b> |
| <sup>a</sup> Coastal Area Facility Review Act = CAFRA. The CAFRA law regulates certain development activities including residential, commercial, public or industrial development within the defined CAFRA area of New Jersey. These activities include construction, relocation and enlargement of buildings or structures; and all related work, such as excavation, grading, shore protection structures, and site preparation.<br><i>Source: NJNG, 2015.</i> |                       |                               |                          |                         |                       |                                 |                            |            |

Proposed impacts on wetlands within the Skillman Loop in Mercer County and for construction activities at Compressor Station 205 from the Leidy Southeast Expansion Project include 3.4 acres of construction and 1.0 acre of operational impacts on emergent wetland, less than 0.1 acre of construction and less than 0.1 acre of operational impacts on scrub-shrub wetland, and 0.1 acre of construction and 0.1 acre of operational impacts to forested wetland. Access roads in this area will add an additional 0.1 acre of temporary, construction impacts on emergent wetland. The primary impact of the Leidy Southeast Expansion Project on wetlands will be the alteration of wetland value due to vegetation clearing. Construction could also impact water quality within the wetland due to sediment loading or inadvertent spills of fuel or chemicals.

No permanent impacts on water resources would be expected as a result of the PennEast Pipeline Project (PennEast 2015). However, permanent conversion of PFO wetlands to PSS or PEM wetlands is anticipated to establish a new right-of-way. Site-specific wetland restoration or mitigation plans would be developed where needed in accordance with state permitting requirements and in accordance with FERC’s Procedures. No net loss of wetland areas, but a conversion from one type to another (e.g. PFO or PSS to PEM), would occur as a result of the PennEast Pipeline Project. Appropriate mitigation would be implemented in accordance with the U.S. Army Corps of Engineers and NJDEP requirements. Table 17 describes the impacts

proposed on wetlands in all of New Jersey, which includes Hunterdon County. A total of 23 wetlands would be impacted in Mercer County (PennEast 2015). The Mainline portion of the pipeline is the only portion that occurs within New Jersey.

**Table 17. Proposed Wetland Disturbance (acres) for the proposed PennEast Pipeline Project in New Jersey**

| <b>NJDEP Classification</b> | <b>Length crossed (feet)</b> | <b>Wetland area affected during construction (acres)</b> | <b>Wetland area affected during operation (acres)</b> |
|-----------------------------|------------------------------|--|---|
| PEM                         | 550                          | 1.25   | 0.65  |
| PFO                         | 8,449                        | 5.10   | 9.07  |
| PSS                         | 1,131                        | 1.11   | 1.25  |
| PUB                         | 150                          | 0.003  | 0.0   |
| MODAg                       | 3,874                        | 6.59   | 4.25  |
| MODL                        | 993                          | 0.27   | 0.59  |

PUB – not defined in the PennEast application  
 MODAg – Agricultural wetland  
 MODL – Modified Managed Wetland (NJDEP, 1986)

We received a comment about the cumulative impacts associated with hydraulic fracturing. In New Jersey, the permitting of upstream facilities associated with the development of the Marcellus shale is under the jurisdiction of the New Jersey Board of Public Utilities. Activities associated with Marcellus shale development would occur outside of the Project area’s region of influence. As a result, the local resources that may be affected by Marcellus shale development would not be affected by the Project, and local resources affected by the Project would not be affected by development in the Marcellus shale region.

Wetland impacts associated with the proposed Project in combination with other projects identified within the region of influence would be relatively minor overall. We have included recommendations in the EA to further reduce the environmental impacts associated with the Garden State Expansion Project, as summarized in section E. Additionally, the Transco Project is located in areas that are previously disturbed.

The Garden State Expansion Project would not impact any waterbodies or add to the cumulative waterbody impacts of projects in the region. As detailed within section B.3.3, the Garden State Expansion Project would result in the temporary disturbance of approximately 6.2 acres of wetland, of which 3.3 acres would be permanently impacted for operation of the Project. The operational wetland impacts associated with the station piping pertains to maintenance mowing of the right-of-way for the life of the Project that would convert 0.5 acre of forested wetland to emergent. These impacts would be permitted by the NJDEP and appropriately mitigated per agency requirements, and short-term impacts would be minimized with implementation of Transco’s sites-specific SESCOs and CSPs and our recommendations. Therefore, these construction and operation impacts for the Project would not contribute significantly to cumulative long-term impacts on wetlands with the Leidy Southeast Expansion, PennEast Pipeline, or the Southern Reliability Link Projects.

Although there is the potential that cumulative impacts would result from the Project since it would occur at the same time as the PennEast Pipeline and the Southern Reliability Link Projects, the geographic extent and duration of disturbances caused by construction of the Garden State Expansion Project would be minimal and further minimized by the implementation of the protective measures contained in and required by FERC’s Plan and Procedures. All three FERC

jurisdictional projects would also mitigate any permanent impacts in New Jersey through consultation with NJDEP. As a result, the cumulative effects of these projects on groundwater and surface water resources are expected to be minor.

## **2.0 VEGETATION AND WILDLIFE**

The Skillman Loop portion of the Leidy Southeast Expansion Project in Mercer County will cross the Princeton Ridge, an environmentally sensitive area. The Princeton Ridge is an ecological area in Mercer County that extends westward from the Millstone River and the Delaware and Raritan Canal State Park across the northern part of Princeton Township into Hopewell. The area consists of forest and wetlands that support several endangered and threatened species as well as other wildlife species. To minimize impacts on forested areas, Transco would implement measures outlined in the FERC's Plan, Procedures, and its SESCOs, including the installation of erosion control measures following initial disturbance of the soil. Impacts on wildlife and wildlife habitat will also be minimized by collocating the proposed loop to a large extent with Transco's existing maintained right-of-way, and by implementing the restoration methods outlined in these plans as well as Transco's other site-specific plans along the Skillman Loop for the Princeton Ridge area. No clearing will occur during the migratory bird nesting season.

The Penneast Pipeline Project is proposed to be co-located within, or parallel to, existing, previously disturbed, and maintained rights-of-way to the extent possible (45%). With the successful use of horizontal directional drill and in-the-dry construction techniques for pipeline installation across the Delaware River and other specified waterbodies, PennEast anticipates minimal impacts would occur on fish, mussel, or other aquatic species of concern. Although PennEast is in the process of consulting with multiple wildlife agencies, it states it would implement measures to minimize impacts on sensitive and listed species (PennEast 2015), which include but are not limited to clearing timing restrictions for bats and birds; avoidance of in-water work to avoid the dwarf wedgemussel, eastern redbelly turtle, and sturgeon species; additional surveys for the northern copperhead and long-tailed salamander; and pre-construction surveys for certain bird species. PennEast would implement protective measures in FERC's Plan and Procedures, BMPs, and an approved Erosion and Sediment Control Plan to minimize impacts on upland and wetland habitats that may support sensitive species (PennEast 2015).

The Southern Reliability Link Project would occur mostly within existing road rights-of-way (AECOM 2015). However, vegetation communities surrounding Southern Reliability Link Project area include vegetated lands and maintained plant communities such as agricultural fields, lawns, and landscaped areas. Forest and agricultural lands are the primary vegetative cover types. Pinelands Villages is an existing residential, commercial, and industrial development within the planned project area that allows natural gas transmission and distribution. In Burlington and Monmouth Counties, upland forest composition is primarily dominated by American beech, black cherry, tulip poplar, and various oak species with an understory comprised of multiflora rose and honeysuckle. Forested wetlands consist of communities largely dominated by red maple, sweet gum, and silky dogwood. In Ocean County, the study area extends through portions of the Pinelands Area, and upland forested plant communities transition to a mixed deciduous/coniferous forest dominated by pitch pine, various oak species, and lowbush blueberry as is typical of vegetative communities within the New Jersey Pinelands Area. Development is regulated in the New Jersey Pinelands Area by the New Jersey Pinelands Commission through the implementation

of the New Jersey Pinelands Comprehensive Management Plan. Forested wetlands consist of communities dominated by pitch pine, sweet gum, and highbush blueberry as well as Atlantic white cedar wetlands (AECOM 2015).

A diversity of wildlife habitats exist within the Southern Reliability Link Project study area primarily within special use areas such as preserved open space lands. The project area is likely to contain numerous common and state listed birds, including waterfowl, wading birds, raptors, woodpeckers and songbirds. The project area also contains suitable habitat for federally and New Jersey state listed threatened and endangered species such as the bald eagle, bog turtle, least tern, timber rattlesnake, upland sandpiper, barred owl, red-headed woodpecker, northern pine snake, pine barrens treefrog, Long's woolgrass, narrow-leaf vervain, pine barrens boneset, sickle-leaved golden-aster, and the slender rattlesnake root (AECOM 2015). No protocol surveys have been completed for these species, and consultation with NJDEP and USFWS is ongoing. With approximately 288.5 acres of 339.4 total temporary project impacts occurring within existing rights-of-way and roads, approximately 50.9 acres would occur in forested, agricultural, or other habitats.

Existing conditions and vegetation and wildlife resource impacts associated with the proposed Garden State Expansion Project are presented in section B.4.1 and B.4.2. When projects are constructed at or close to the same time, they could have a cumulative impact on vegetation and wildlife occurring in the area. Clearing and grading and other construction activities associated with the Project, along with the Leidy Southeast Expansion, PennEast Pipeline, and the Southern Reliability Link Projects, would result in the removal of vegetation; alteration of wildlife habitat; displacement of wildlife; and other potential secondary effects such as increased population stress, predation, and the establishment of invasive plant species. These effects would be greatest where the other project is constructed within the same timeframe and general area as the proposed Project and where the recovery time of the vegetation/habitat is equal to that of the Project (i.e., long term).

As detailed within the sections above, the Garden State Expansion Project activities would permanently impact land uses that currently consist of fallow or active agricultural land and forest. Implementation of the measures in our Plan and Procedures would promote revegetation of temporarily disturbed areas following construction. With the implementation of measures in Transco's SESCOs and CSPs, the minor construction and operation impacts for the Project would likely not contribute to significant cumulative long-term impacts on vegetation and wildlife when added with the Leidy Southeast Expansion, PennEast Pipeline, or Southern Reliability Link Projects or within the region. No federally-listed or state-listed threatened or endangered species or their critical habitats are expected to be adversely affected by the proposed Project so no cumulative impacts are anticipated on federally listed species.

### **3.0 CULTURAL RESOURCES**

The Garden State Expansion Project is currently proposed as a federal action and would include mitigation measures designed to avoid or minimize additional direct impacts on cultural resources. Surveys and consultation would be completed to identify such resources. Where direct impacts on significant cultural resources are unavoidable, mitigation (e.g., recovery and curation of materials) would occur before construction. Non-federal actions would need to comply with any mitigation measures required by the affected states. While there could be the potential for

cumulative impacts on cultural resources since portions of the Project, Penneast Pipeline, and the Southern Reliability Link Project would be constructed concurrently and within the same Project area, any cumulative impacts on these resources would be minimized by the implementation of our recommendations for the Garden State Expansion Project and the required mitigation measures for the Leidy Southeast Expansion, PennEast, and Southern Reliability Link Projects.

#### **4.0 LAND USE AND VISUAL RESOURCES**

The Skillman Loop portion of the Leidy Southeast Expansion Project will impact a total of 53.9 acres of land during construction and of this, 16.6 acres will be maintained for operation. Environmental impacts will be minimized because the Skillman Loop will be offset approximately 25 feet from an existing pipeline right-of-way (not greenfield construction). All aboveground facilities, which are not limited to activities in Mercer County, will temporarily impact 290.0 acres during construction and 1.3 acres of this amount would be maintained for operation of the facilities (FERC 2014).

In Mercer County, PennEast would permanently impact 3.3 acres of agricultural, 0.1 forest/woodland, and 0.5 acre of residential land use within the existing right-of-way at the Transco Interconnect. At the Transco Receiver Site, PennEast would impact 0.9 acre of open land temporarily. PennEast would utilize a 100-foot-wide temporary right-of-way for construction and a 50-foot-wide permanent right-of-way would be maintained for operation. Land use types crossed by the pipeline in Mercer County would include approximately 46.0 acres of temporary and 23.0 acres of permanent impacts on agricultural land, 57.5 acres of temporary and 28.8 acres of permanent impacts on forest/woodland, 6.3 acres of temporary and 3.2 acres of permanent impacts on open land, 2.9 acres of temporary and 1.5 acres of permanent impacts on residential land, 3.2 acres of temporary and 1.6 acres of permanent impacts on industrial/commercial land, and 0.9 acres of temporary and 0.4 acres of permanent impacts on open water (which includes only crossings greater than 100 feet). Approximately 7.7 miles of pipeline in Mercer County would be collocated with other transmission or pipeline rights-of-way. There are 23 parcels of land located within the proposed PennEast pipeline route that have been identified as being Green Acres-encumbered lands. PennEast has proposed to minimize the potential impacts to these parklands through co-location with an existing transmission right-of-way (PennEast 2015).

The pipeline installed as part of the Southern Reliability Link Project would be buried underground but a cleared right-of-way would be visible. As previously stated, over 85 percent of the selected route for the Southern Reliability Link Project would be within existing rights-of-way and the roads of the Joint Base McGuire-Dix Lakehurst in the Trenton area of New Jersey, thus minimizing impacts on land use resources (AECOM 2015).

The most significant change in land use resulting from the Garden State Expansion Project is the conversion of active and fallow farmland into industrial land associated with Station 203. The Project is not located in any natural, recreational, or scenic areas. No national or state-designated Wild and Scenic Rivers, or candidates for such designation, are located in or within one mile of the Project areas. Therefore, there would be no impacts on any national or state-designated Wild and Scenic Rivers. The Project, the Leidy Southeast Expansion, PennEast Pipeline, and the NJNG Southern Reliability Link Projects would result in both temporary and permanent changes to current land uses. The Garden State Expansion Project would impact a total of 47.3 acres, of which 27.6 acres would have a permanent land use impact due to operation of the proposed

facilities at Station 203. Of the 27.6 acres that would be affected by the Project for operation, the most common land use type is open land (13.5 acres) consisting of utility rights-of-ways, agricultural land, upland meadow, and herbaceous wetland all associated with Station 203, Chesterfield M&R and the electrical substation. Only a small portion of forested land use would be impacted by the operation of the proposed permanent access road, station piping, electrical conduit for Station 203, and the station piping valve site. These impacts would not contribute significantly to the cumulative impacts of the other projects in the region. Since the Leidy Southeast Expansion, PennEast Pipeline, and NJNG Southern Reliability Link Projects include a linear pipeline, those projects would result in greater temporary and permanent impacts in acreage and affect a variety of land uses.

The visual character of the existing landscape for the Project and the Leidy Southeast Expansion, PennEast Pipeline, and Southern Reliability Link Projects are defined by historic and current land uses such as agricultural, recreation, conservation, and development uses. The visual qualities of the landscape are further influenced by existing linear installations such as highways, railroads, pipelines, and electrical transmission and distribution lines. Within this context, aboveground facilities would have the most visual impact, while pipelines would be visually subordinate to the existing landscape character and would contribute only incrementally to overall visual conditions, particularly after completion of reclamation and the reestablishment of vegetation. The Project would include activities within both the limits of an existing station property and the construction of a new station. Station 205 has an existing presence within the viewshed and the proposed activities would not greatly alter the current visual impact of these facilities, and therefore would have minimal cumulative impact on surrounding projects. Station 203 would have the greatest visual impact since it would be constructed in an area historically consisting of open agricultural land. To further address visual impact, the majority of the Station 203 components were sited further within the property and not fronting the public roadway. Transco would take measures to minimize visual impacts through fencing, vegetation, and building colors. Since the PennEast Pipeline and Southern Reliability Link Projects consist of a linear underground pipeline that provides minimal and limited visual impact, concurrent construction with the Garden State Expansion Project should not result in significant cumulative visual impacts.

## **5.0 SOCIOECONOMICS**

Construction and operation of the Leidy Southeast Expansion Project could impact socioeconomic resources in the area. Some of these potential effects are related to the number of construction workers that would work on the Project and their impact on population, public services, and temporary housing during construction. Other potential effects are related to construction, such as increased traffic or disruption of normal traffic patterns. Other effects associated with the Project include increased property tax revenue, increased job opportunities, and increased income associated with local construction employment. The primary potential socioeconomic effects of the project will be from construction and operation of the pipeline loops, including the Skillman Loop. The aboveground facilities associated with the project would occur within existing facilities or developed rights-of-way and represent relatively minor activities. Therefore, construction and operation of these facilities would not have a significant socioeconomic impact (FERC 2014).

With the simultaneous construction of three natural gas projects, a variety of jobs would be available and have a positive impact on the average unemployment rates of the affected counties.

If specialized construction personnel, such as supervisory personnel and inspectors, need to be hired from outside the project areas, these individuals would temporarily relocate to the project vicinity, which would not have a measurable impact on the population or employment. Availability of hotels, motels, and campgrounds near the Project areas and current vacancy rates indicate that construction workers should not encounter any difficulty in finding temporary housing within the Project area.

According to Lahr and Mantell (2015), the Southern Reliability Link Project would produce 470 direct and 856 indirect and induced one-time job-years, \$9,464 thousand in business and household local taxes, and \$6,186 thousand in business and household state taxes.

As stated in Section B.6.1, the construction phase of the Garden State Expansion Project is expected to result in minor, short-term increases in the region's population levels. Transco expects that temporary construction workers would be supplied by the local population whenever possible. Some non-local employees are required due to the specialized nature of the craft positions needed. Construction would proceed continuously between the two proposed phases.

The Project and NJNG's Southern Reliability Link Project would generate temporary construction jobs. The local supply of construction workers needed for both projects may be derived from workers employed in the area, which would provide a direct economic benefit to those individuals and the communities in which they reside. The non-local laborers could represent an increase in the percent of the total population in the project area; however, it is anticipated that the potentially vacant rental units available in the project areas would offer enough housing for non-local workers.

Potentially, positive cumulative economic benefits would occur as a result of the construction and operation of the Project, Leidy Southeast Expansion, PennEast Pipeline, and the Southern Reliability Link Projects. Taxes generated from operation of these projects would result in an annual tax revenue increase. Both temporary and permanent employment would also increase as a result of the construction and operation of these projects.

## **6.0 AIR QUALITY AND NOISE**

Because the modifications at Station 205 and the new Station 203 would include electric motor-driven compressors, the facilities would not contribute additional air emissions during operation (with the exception of the insignificant emissions associated with the stand-by generator at Station 203). Phased construction of Transco's Project would contribute short-term, localized impacts on air quality beginning in the first quarter of 2016 through the third quarter of 2017. The Project and other identified local projects would involve the use of heavy equipment that would generate emissions of air contaminants, fugitive dust, and noise. PennEast would begin construction starting 3<sup>rd</sup> quarter of 2016, but the primary construction activities would occur in 2017. The NJNG Southern Reliability Link Project plans construction to begin in late 2015 through late 2016. Construction of the Project would partially overlap in time with other nearby projects.

Section B.7.1 identifies the total Project construction emissions at each facility and combined. The combined emissions would be below the general conformity thresholds. Further, Transco would implement a fugitive dust control plan, and adhere to New Jersey regulations for construction equipment and emissions. Similarly, the relevant portions of the PennEast Pipeline

and Southern Reliability Link Projects would be subject to the New Jersey's regulations regarding construction equipment and emissions. The combined emissions would contribute to short-term, localized air impacts and air quality would revert back to previous conditions following construction.

Noise impacts from construction of the Project facilities may overlap with the Southern Reliability Link Project. Due to the distance from the project facilities and the amount of noise attenuation that would occur, there would be no cumulative noise impact from construction of the PennEast Pipeline Project. Transco's Project would not contribute to nighttime noise during construction and cumulative noise impacts with the Southern Reliability Link Project would be short-term and localized. Combined noise is not additive, but logarithmically combined. Assuming the Southern Reliability Link Projects emitted noise during construction at the same level as the Transco Project (as it would involve similar construction type equipment), the combined noise levels would be three dBA higher than either project alone. As three dBA is the threshold of perceptible noise change for the human ear, the combined impact would not result in a significant impact over either project alone. The operating noise analysis for Station 203 presented in section B.7.2 includes the modifications to the facility for the Southern Reliability Link Project. Projected noise from the existing facility and the other proposed projects at Station 205 would remain below our 55 dBA  $L_{dn}$  criterion. Further, environmental recommendation 13 requires a post-construction noise of the entire station demonstrating noise levels from the compressor station's operation does not exceed our 55 dBA  $L_{dn}$  criterion. Therefore, cumulative operational noise impacts would not be significant.

## **7.0 CLIMATE CHANGE**

Climate change is the change in climate over time, whether due to natural variability or as a result of human activity, and cannot be represented by single annual events or individual anomalies. For example, a single large flood event or particularly hot summer are not indications of climate change, while a series of floods or warm years that statistically change the average precipitation or temperature over years or decades may indicate climate change.

The Intergovernmental Panel on Climate Change is the leading international, multi-governmental scientific body for the assessment of climate change. The United States is a member of the Intergovernmental Panel on Climate Change and participates in the Intergovernmental Panel on Climate Change working groups to develop reports. The leading U.S. scientific body on climate change is the U.S. Global Change Research Program (USGCRP).

In May 2014, the USGCRP issued a report, *Climate Change Impacts in the United States*, summarizing the impacts that climate change has already had on the United States and what projected impacts climate change may have in the future (USGCRP, 2014). The report includes a breakdown of overall impacts by resource and impacts described for various regions of the United States. Although climate change is a global concern, for this cumulative analysis, we will focus on the potential cumulative impacts of climate change in the Project area. The USGCRP's report notes the following observations of environmental impacts that may be attributed to climate change in the Northeast region:

- average temperatures have risen about 2 °F between 1895 and 2011 and are projected to increase another 1 to 8 °F over the next several decades, with more frequent days above 90 °F;
- areas that currently experience ozone pollution problems are projected to experience an increase in the number of days that fail to meet the NAAQS;
- an increase in health risks and costs for vulnerable populations due to projected additional heat stress and poor air quality;
- precipitation has increased by about 5 inches and winter precipitation is projected to increase 5 to 20 percent by the end of the century;
- extreme/heavy precipitation events have increased more than 70 percent between 1958 and 2010 and are projected to continue to increase;
- sea levels have risen about 1 foot since 1900 and are projected to continue increasing 1 to 4 feet by 2100 stressing infrastructure (e.g. communications, energy, transportation, water and wastewater);
- severe flooding is likely to occur more frequently;
- crop damage from intense precipitation events, delays in crop plantings and harvest, and heat stress negatively affect crop yields;
- invasive weeds may become more aggressive;
- a change in range, elevation, and intra-annual life cycle events of vegetation and wildlife species; and
- an increase in carrier habitat and human exposure to vector-borne diseases (e.g. Lyme disease or West Nile).

The GHG emissions associated with construction and operation of the Project are discussed in more detail in section B.7.1. The GHG emissions from other nearby projects are unknown. Emissions of GHGs from the proposed Project and other regional projects would not have any direct impacts on the environment in the Project area. Currently, there is no standard methodology to determine how a project's relatively small incremental contribution to GHGs would translate into physical effects on the global environment. However, Transco has selected electric-driven compressor units, which avoid the majority of GHG emissions associated with compressor stations and significantly minimizes the Project's contribution. Therefore, the Project would not contribute significantly to GHG emissions or climate change.

## **8.0 CONCLUSION**

Past, present, and reasonably foreseeable actions could potentially contribute to a cumulative impact when considered with the proposed Projects. Each of the projects considered would result in temporary and minor effects during construction, but each project would be designed to avoid or minimize impacts on water quality, forest, and wildlife resources.

Additionally, potential impacts on sensitive resources resulting from these projects would be mitigated, as appropriate, and mitigation generally leads to the minimization of cumulative impacts.

## **D. ALTERNATIVES**

### **1.0 INTRODUCTION**

In accordance with National Environmental Policy Act and Commission policy, we identified and evaluated alternatives to the Project to determine whether they would be reasonable and environmentally preferable to the proposed action. These alternatives include the no action alternative, system alternatives, and compressor station site alternatives. The criteria used for selecting potentially environmentally preferable alternatives are: the ability to meet the Project objectives; technical and economic feasibility and practicality; and significant environmental advantage over the proposed Project.

### **2.0 NO ACTION ALTERNATIVE**

The no-action alternative would consist of not constructing the Project and continuing with the status quo. The no-action alternative for the Project would avoid the temporary and permanent environmental impacts associated with construction and operation of the proposed Project. However, the result of the no-action alternative is that the objectives of the Project would not be met. By not constructing the proposed Project, Transco would not have the ability to provide the natural gas transportation service requested by NJNG, which has executed a binding precedent agreement for the Project's capacity. If the no-action alternative is chosen, NJNG's gas distribution system's reliability, resiliency and operating flexibility would not be improved.

The no-action alternative is not a viable alternative since this Project would provide gas supply as requested by NJNG. It is purely speculative to predict the resulting actions that could be taken by another company, including NJNG, and any resulting direct or indirect environmental impacts that would result from the actions taken by other companies, including NJNG, in the event that the no-action alternative were to be chosen. Lacking access to an additional affordable supply of natural gas, NJNG may seek other options, including the use of other sources of fuel. To date, no other natural gas pipeline projects have been proposed or are known to be in development to meet the purpose and need of the proposed Project by the targeted in-service date of November 1, 2016 for Phase 1 and August 1, 2017 for Phase 2.

### **3.0 SYSTEM ALTERNATIVES**

The purpose of identifying and evaluating system alternatives is to determine whether the environmental impacts associated with the construction and operation of the proposed Project could be avoided or reduced by using existing, modified, or other proposed facilities rather than constructing new facilities. System alternatives are alternatives that are able to meet the objectives of the Project, but use a different facility (existing or proposed), or are able to otherwise use existing infrastructure to eliminate the need for the proposed facility. A viable system alternative would make it unnecessary to construct all or part of the proposed Project, and would involve the transportation of all or a portion of the additional natural gas volumes by expansion of another existing pipeline system or construction of a new pipeline system. Such modifications or additions

would result in environmental impacts; however, the impacts would in all likelihood be similar to, and potentially greater than that associated with construction of the proposed Project.

In order to be a viable system alternative to the proposed Project, potential system alternatives must meet three criteria:

- The resulting pipeline system must be hydraulically capable of transporting up to 20,000 Dt/d for Phase 1 and up to 180,000 Dt/d of natural gas from the requisite receipt point to Transco's Project customers' requisite delivery point;
- the resulting pipeline system alternative must be capable of transporting the required volumes and constructed within the same schedule as the proposed Project; and
- use of an alternative system must be able to meet the criteria above and at the same time result in some reduced environmental impacts when compared to the proposed Project.

In order to deliver the 20,000 Dt/d of natural gas load toward the Chesterfield M&R for Phase 1, a system alternative that was considered in lieu of the proposed Project required looping Transco's Mainline from approximately milepost (MP) 1775 to MP 1777 in Mercer County, New Jersey with 2 miles of 42-inch-diameter piping. The Transco Mainline looping alternative would result in greater environmental impacts, affect a much larger number of new landowners resulting in new easement agreements, and increase the Project cost and duration when compared to the proposed Project. Because of these reasons, we determined that installing 2 miles of 42-inch-diameter Mainline looping is not a preferable alternative.

For Phase 2 the delivery capacity increases by 160,000 Dt/d for a total of 180,000 Dt/d of natural gas load toward the Chesterfield M&R. A system alternative that was considered in lieu of the proposed Project required looping Transco's Mainline from approximately MP 1771 to MP 1775 in Mercer County, New Jersey with 4 miles of 42-inch-diameter piping. This alternative would replace the scope items identified for Phase 2 at Station 205, but would not eliminate the need for Compressor Station 203. The addition of Compressor Station 203 would be necessary to sustain commitments with existing customers and to accommodate the incremental customer's requirements. Transco's Mainline looping alternative would result in greater environmental impacts, affect a much larger number of new landowners and require additional easements, and increase the Project cost and duration when compared to the proposed Project. For these reasons, we determined that looping Transco's Mainline from approximately MP 1771 to MP 1775 in Mercer County, New Jersey with 4 miles of 42-inch piping is not a preferable alternative.

No other existing, modified, or proposed pipeline systems that have the available capacity to meet the requisite receipt / delivery stated objectives of the proposed Project were identified to provide the required capacity to NJNG. In order to do so, a greenfield pipeline with compression would need to be constructed from the Station 210 pooling point to a new interconnection with NJNG. This alternative would result in significantly more environmental impacts and more landowners, and would increase project cost and duration when compared to the proposed Project. Therefore, we do not find any systems alternatives that offer an advantage over the proposed Project.

## **4.0 SITE ALTERNATIVES**

### **4.1 Chesterfield M&R and Station 203 Alternate Sites**

To meet the needs of NJNG, we considered site alternatives for Station 203 and associated meter station (Chesterfield M&R) that would meet the needs of the Project and work within the geographical constraints of Transco's system and NJNG's proposed pipeline route. The review of potential locations was restricted to a general area that would be in proximity to the NJNG facilities. These site alternatives were reviewed to avoid or minimize impacts on environmental resources, in particular, the wetlands at the proposed site. Five locations were analyzed for Station 203 and the Chesterfield M&R, each situated off Transco's Trenton-Woodbury Lateral in the vicinity of MP 15 in Bordentown, Burlington County, New Jersey. These sites are:

- MP 14.5 SW – MP 14.5, southwest corner of Ward Avenue and Shanahan Lane
- MP 13.8 NE – MP 13.8, northeast corner of the New Jersey Turnpike and Ward Avenue
- MP 13.8 NW – MP 13.8, northwest corner of New Jersey Turnpike and Ward Avenue
- MP 15.2 SE – MP 15.2, southeast corner of the New Jersey Turnpike and Bordentown Chesterfield Road (County Route 528)
- MP 15.3 SW – MP 15.3, southwest corner of New Jersey Turnpike and Bordentown Chesterfield Road (County Road 528)

Since the sites are geographically proximate, some of the potential environmental constraints were the same at all five sites. These similarities include: potential to contain acid producing soils, potential presence of the federally threatened bog turtle, and potential occurrence of rare and protected plant species. Foraging habitat for a species of special concern, the great blue heron, occurs within 0.25 mile of all of the five sites that were examined. The area within 0.25 mile of the site located at MP 15.3 SW also contains nesting habitat for a species of special concern, the Cooper's hawk. Foraging habitat for a state endangered species, the bald eagle, occurs within 0.25 mile of the sites located at MP 13.8 NE and MP 13.8 NW. The majority of present land use at each site is also the same, which is either fallow or active farmland, except for the land at the site located at MP 13.8 NE, which consists of undeveloped land. Each of the sites examined except for the proposed site is in close proximity to areas of sensitive land use consisting of residential developments, community sports fields, and a State Youth Correctional Facility.

Based on a review of the differentiating site factors, none of the potential sites had a flaw that would prohibit development, but the proposed site for the Station 203/Chesterfield M&R facilities offers the following advantages: (i) the site's proximity to Transco's existing pipeline, NJNG's planned lateral, and an electrical source for the substation; (ii) the proposed site enables Transco to site Project facilities in proximity to other corridors (transportation and utility); and (iii) the proposed site's increased distance from residential developments. Some sites were eliminated due to the potential impacts as well as proximity to residential developments and recreational sports fields.

Based on our review of the alternative sites, we have determined that none offer a significant environmental advantage over the proposed Station 203 site.

#### **4.2 Electrical Substation**

Based on the Project location and design at Station 203/Chesterfield M&R, an electrical substation is also part of the Project. The substation would be used to power Station 203 on a permanent basis. We reviewed two locations for this substation: one on the same parcel as Station 203/Chesterfield M&R or the second, proposed location on a neighboring parcel. The proposed electrical substation location on the neighboring parcel was selected due to overall size limitations at the Station 203/Chesterfield M&R site and design limitations relating to the ability to tie-in to the Public Service Energy Group powerline. Since the proposed site for the electrical substation is a former agricultural field with sufficient flat space to site the substation and provide practical tie-in to the high voltage powerline, we find this location acceptable.

#### **4.3 Station 205**

The proposed activities at Station 205 consist of the replacement of compressors and an associated increase in horsepower within an existing station building. These upgrades at an existing facility are required in order to meet the Project's objectives and would not result in any station expansion or installation of new facility buildings. Since the improvements at an existing station are more cost effective and provide for the least environmental impact, alternate sites for this activity were not considered.

## E. CONCLUSIONS AND RECOMENDATIONS

Based on the analysis in this EA, we have determined that if Transco constructs and operates the proposed facilities in accordance with its applications and supplements and the staff's recommended mitigation measures, approval of the proposal would not constitute a major federal action significantly affecting the quality of the human environment. We recommend that the Commission's Order contain a finding of no significant impact and include the mitigation measures listed below as conditions to any Certificate the Commission may issue.

1. Transco shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EA, unless modified by the Order. Transco must:
  - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;
  - b. justify each modification relative to site-specific conditions;
  - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
  - d. receive approval in writing from the Director of OEP before using that modification.
2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the Project. This authority shall allow:
  - a. the modification of conditions of the Order; and
  - b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.
3. **Prior to any construction**, Transco shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.
4. The authorized facility locations shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Transco shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

Trasnco's exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized

facilities and locations. Transco's right of eminent domain granted under NGA section 7(h) does not authorize them to increase the size of their natural gas facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. Transco shall file with the Secretary detailed alignment maps and aerial photographs at a scale not smaller than 1: 6,000 identifying all facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area.**

This requirement does not apply to extra workspace allowed by our Plan and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all facility location changes resulting from:

- a. implementation of cultural resources mitigation measures;
  - b. implementation of endangered, threatened, or special concern species mitigation measures;
  - c. recommendations by state regulatory authorities; and
  - d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.
6. **Within 60 days of the acceptance of the Certificate and before construction begins,** Transco shall file an Implementation Plan for the Project with the Secretary for review and written approval by the Director of OEP. Transco must file revisions to its plan as schedules change. The plan shall identify:
    - a. how the company will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by the Order;
    - b. how the company will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
    - c. the number of EIs assigned, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
    - d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;

- e. the location and dates of the environmental compliance training and instructions the company will give to all personnel involved with construction and restoration (initial and refresher training as the Project progresses and personnel change);
  - f. the company personnel (if known) and specific portion of the company's organization having responsibility for compliance;
  - g. the procedures (including use of contract penalties) the company will follow if noncompliance occurs; and
  - h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
    - (1) the completion of all required surveys and reports;
    - (2) the environmental compliance training of onsite personnel;
    - (3) the start of construction; and
    - (4) the start and completion of restoration.
7. Beginning with the filing of its Implementation Plan, Transco shall file updated status reports for the Project with the Secretary on a **monthly basis until all construction and restoration activities are complete**. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
- a. an update on efforts to obtain the necessary federal authorizations;
  - b. the construction status of the Project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally-sensitive areas;
  - c. a listing of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
  - d. a description of the corrective actions implemented in response to all instances of noncompliance, and their cost;
  - e. the effectiveness of all corrective actions implemented;
  - f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
  - g. copies of any correspondence received by the company from other federal, state, or local permitting agencies concerning instances of noncompliance, and Transco's response.
8. **Prior to receiving written authorization from the Director of OEP to commence construction of its project facilities**, Transco shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).
9. Transco must receive written authorization from the Director of OEP **before placing its Project into service**. Such authorization will only be granted following a determination that rehabilitation and restoration of the areas affected by the Project are proceeding satisfactorily.

10. **Within 30 days of placing its authorized facilities in service**, Transco shall file an affirmative statement with the Secretary, certified by a senior company official:
  - a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
  - b. identifying which of the Certificate conditions Transco has complied with or will comply with. This statement shall also identify any areas affected by the Project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
  
11. **Prior to construction**, Transco shall file with the Secretary, for review and approval of the Director of the OEP, a revised plot plan for all aboveground structures at Compressor Station 203 to avoid permanent wetland impacts. If Transco is unable to avoid permanent aboveground facility impacts on wetlands at Compressor Station 203, Transco shall provide further justification why it is unable to avoid locating aboveground structures within wetlands and its consultation with the NJDEP regarding its plans to further mitigate these permanent wetland impacts.
  
12. Transco **shall not begin construction** of facilities and/or use of any staging, storage, or temporary work areas and improved access roads **until Transco files with the Secretary**:
  - a. remaining cultural resources survey report(s) and addendum(s); site evaluation report(s) and avoidance/treatment plan(s), as required; and comments on the cultural resources reports, addendums and plans from the New Jersey State Historic Preservation Officer;
  - b. the Advisory Council on Historic Preservation is afforded an opportunity to comment if historic properties would be adversely affected; and
  - c. the FERC staff reviews and the Director of OEP approves the cultural resources reports and plans, and notifies Transco in writing that treatment plans/mitigation measures (including archaeological data recovery) may be implemented and/or construction may proceed.

All materials filed with the Commission containing **location, character, and ownership** information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: “**CONTAINS PRIVILEGED INFORMATION - DO NOT RELEASE.**”

13. Transco shall file noise surveys with the Secretary **no later than 60 days after placing the modified Station 205 and new Station 203 in service**. If a full load condition noise survey is not possible, Transco shall provide an interim survey at the maximum possible horsepower load and provide the full load survey within 6 months. If the noise attributable to the operation of all of the equipment at either compressor station, under interim or full horsepower load conditions, exceeds an  $L_{dn}$  of 55 dBA at any nearby NSAs, Transco shall file a report on what changes are needed and shall install the additional noise controls to meet the level within 1 year of the in-service date. Transco shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days after it installs the additional noise controls**.

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Sturn, Keith. October 7 – 8, 2015. Project Manager, New Jersey Natural Gas. Email and telephone communications.

Pariseault, Bryan. October 7, 2015. AECOM. Email communications.

## **G. LIST OF PREPARERS**

Fox-Fernandez, Nancy – **Project Manager: Project Description, Water Resources and Wetlands, Vegetation, Wildlife, Special Status Species, Geology and Soils, Land Use, Alternatives, Cumulative Impacts.**

M.S., Natural Resources: Wildlife, 2006, Humboldt State University

B.A., Psychology, 1993, Skidmore College

Suter, Magdalene – **Air Quality and Noise, Reliability and Safety**

B.S., Environmental Systems Engineering, 2004, The Pennsylvania State University

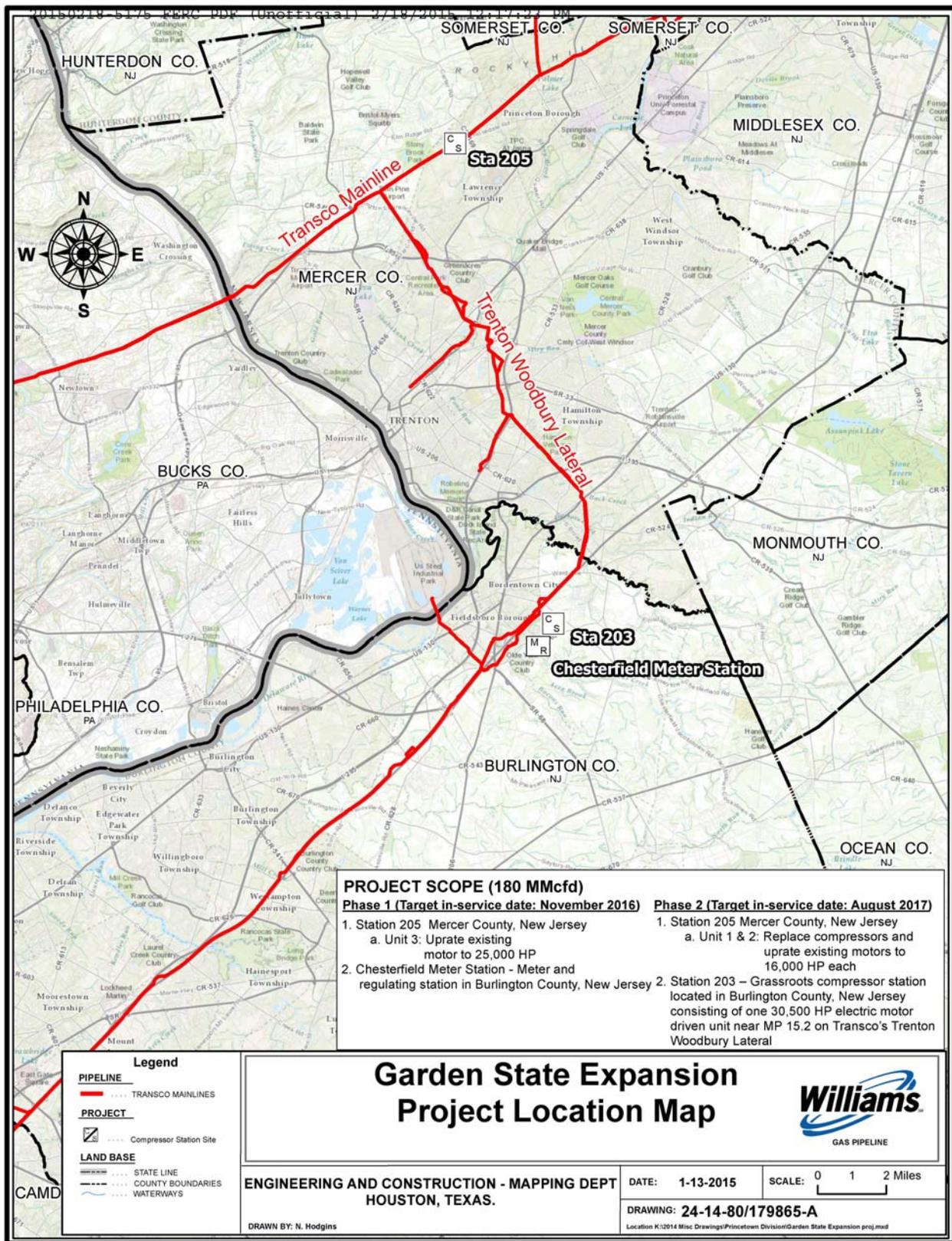
Howard, Eric – **Cultural Resources**

M.A., Anthropology, 1997, University of Tennessee

B.A., Anthropology, 1992, University of Tennessee

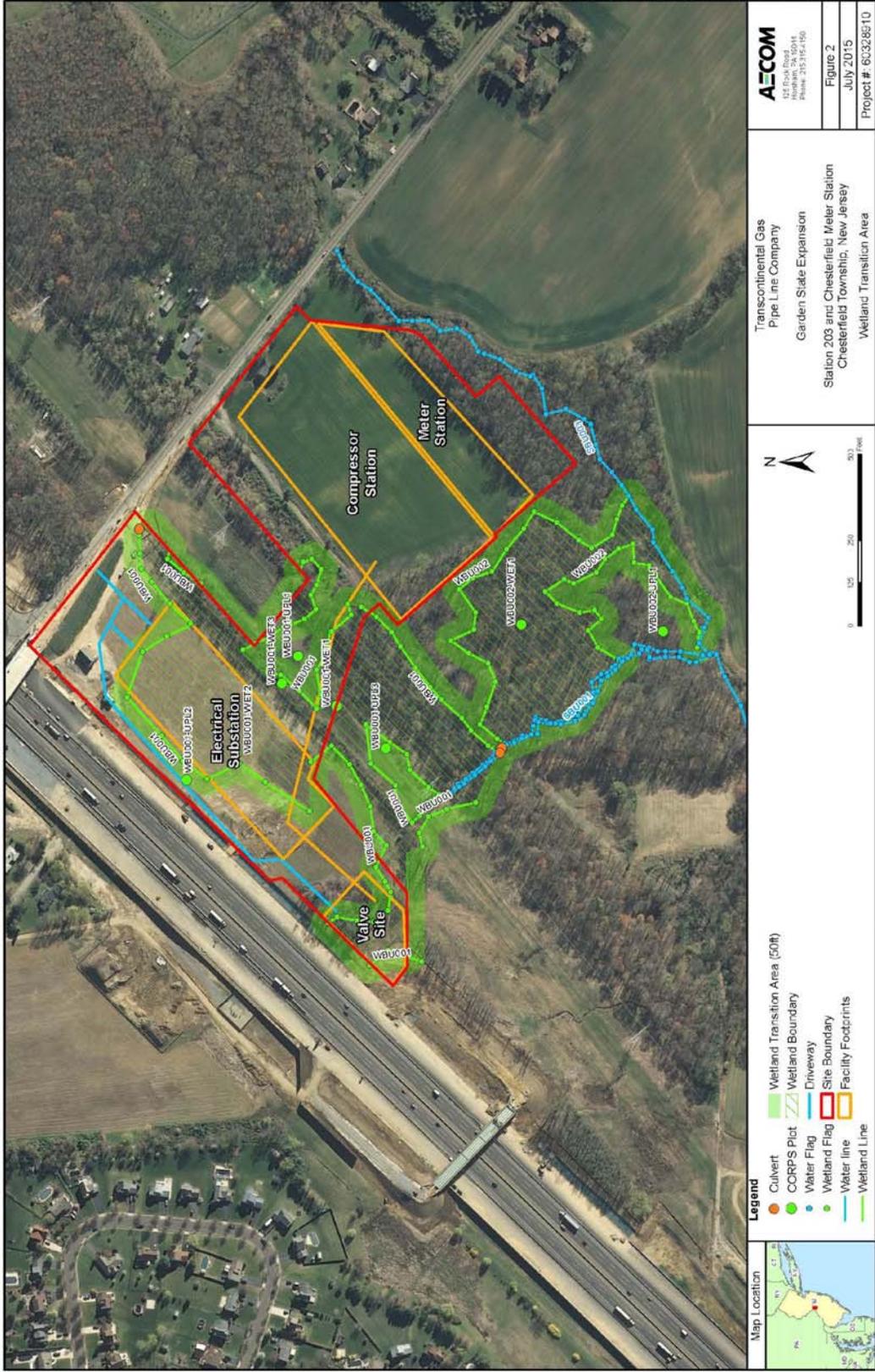
Appendix

Figures



**Figure 1**  
**Garden State Expansion Project General Location Map**

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**Figure 2**  
**Station 203 and Chesterfield Meter Station**

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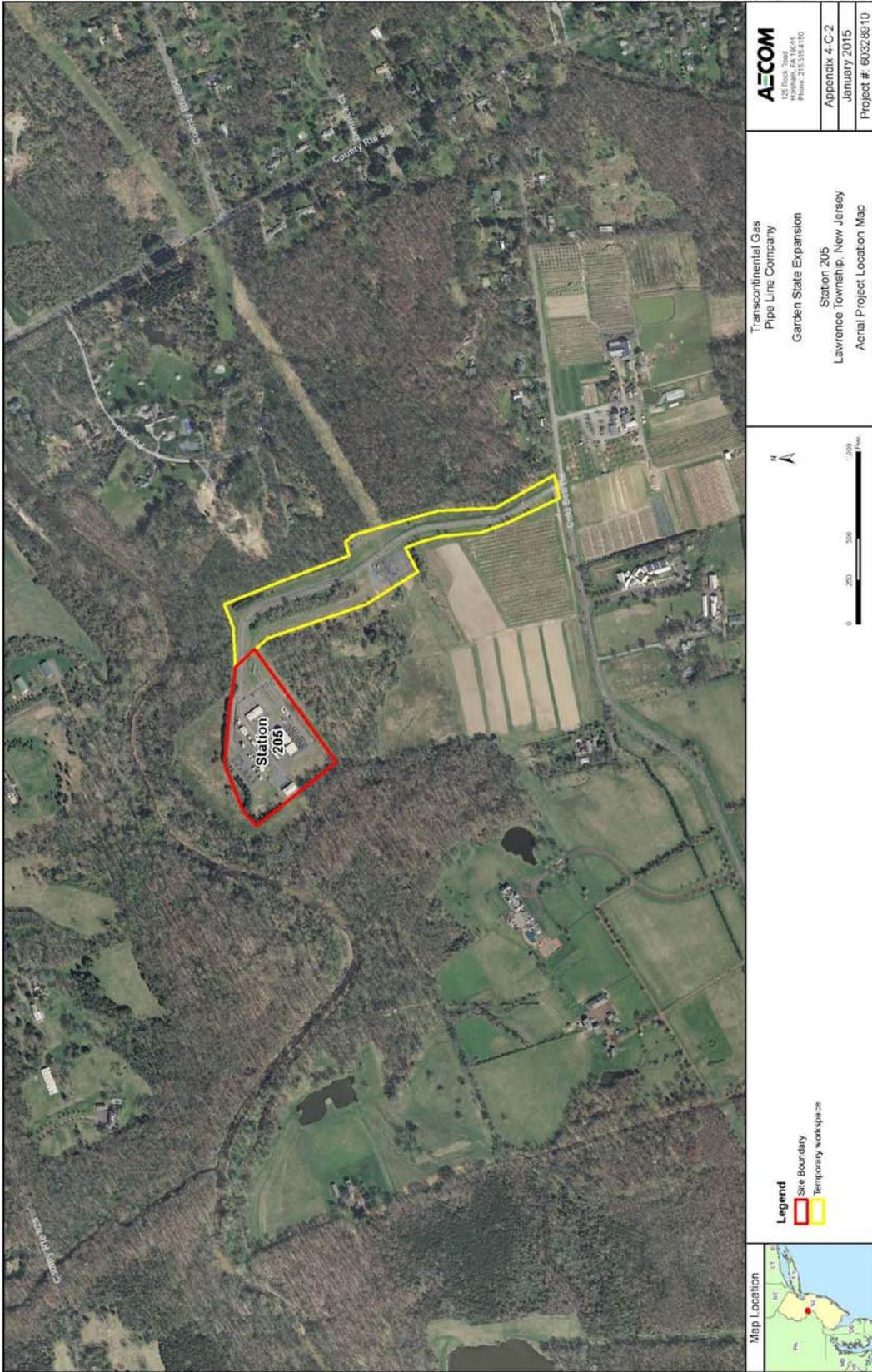
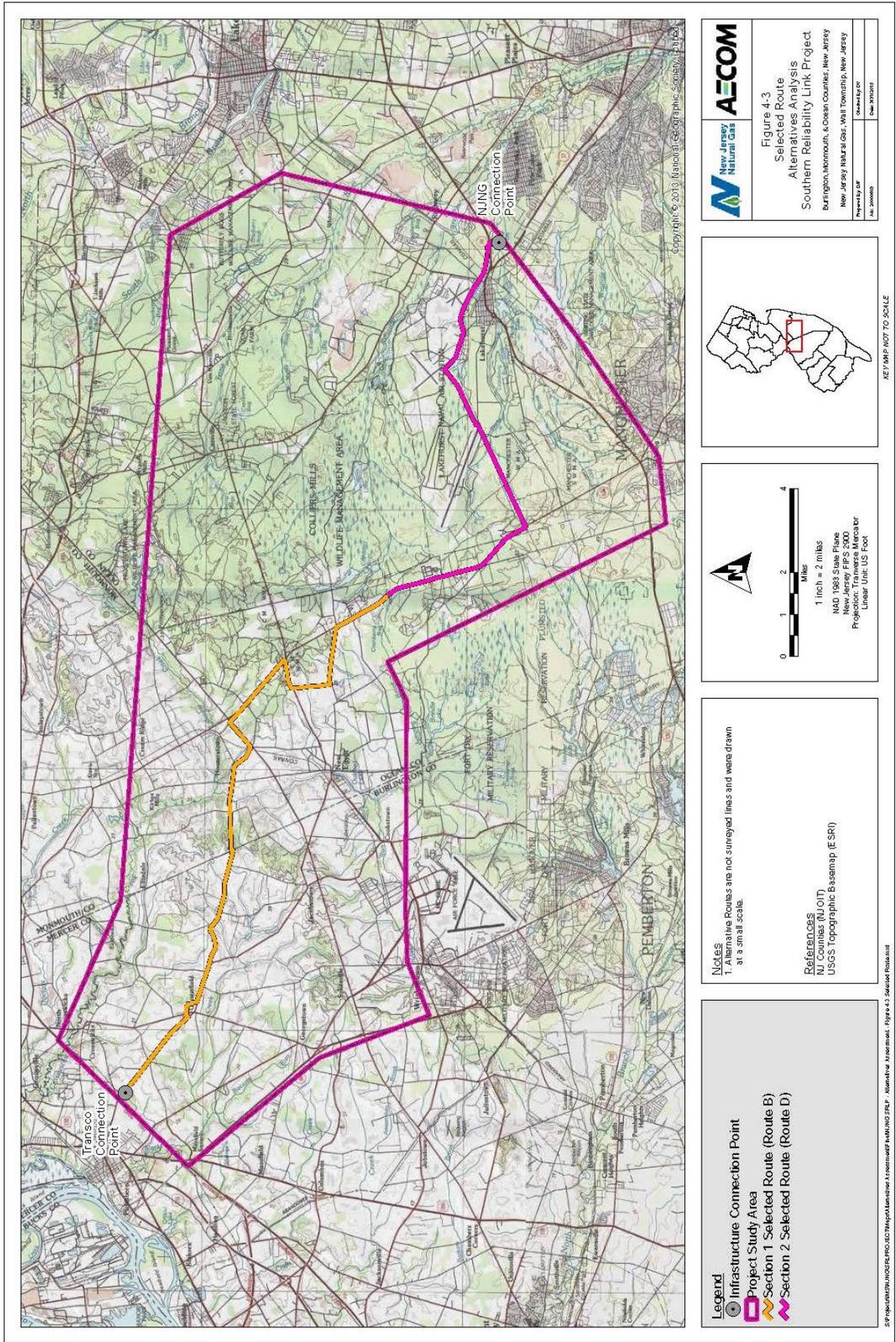


Figure 3  
Station 205



**Figure 4**  
**Southern Reliability Link Project**