Federal Energy Regulatory Commission

Office of
Energy Projects

July 2018

Transcontinental Gas Pipe Line Company, L.L.C. **Docket No. CP18-18-000**

Gateway 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, L.L.C.
Gateway Expansion Project
Docket No. CP18-18-000

TO THE PARTY ADDRESSED:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared an environmental assessment (EA) for the Gateway Expansion Project, proposed by Transcontinental Gas Pipe Line Company, L.L.C. (Transco) in the above-referenced docket. Transco requests authorization to modify certain facilities in Essex and Passaic Counties, New Jersey, including an additional compressor unit at its Compressor Station 303 and modifications to existing meter stations. Transco's project purpose is to increase the firm transportation capacity of Transco's existing pipeline system by 65,000 dekatherms per day and enable Transco to provide customers with an incremental service of natural gas during high demand periods.

The EA assesses the potential environmental effects of the construction and operation of the Gateway Expansion Project in accordance with the requirements of the National Environmental Policy Act (NEPA). 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 proposed Gateway Expansion Project includes the following facilities:

Essex County

- Compressor Station 303 - expansion of the building and installation of a 33,000 horsepower electric-motor driven compression unit and ancillary equipment; and extension of security fencing and access to new equipment.

- Roseland Meter and Regulator - installation of a 36-inch Main Line block valve with automation controls.

- Roseland Electric Substation - installation of an electric transformer unit.

Passaic County

- Paterson Meter and Regulator - replacing the existing 12-inch headers with two new 6-inch ultrasonic meter skids and associated equipment; and installation of ancillary equipment.

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 and other interested individuals and groups; and newspapers and libraries in the project area. In addition, the EA is available for public viewing on the FERC's website (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 EA's disclosure and discussion of 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 5:00pm Eastern Time on **August 16, 2018.**

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 (CP18-18-000) with your submission. The Commission encourages electronic filing of comments and has staff available to assist you at (866) 208-3676 or FercOnlineSupport@ferc.gov.

(1) You can file your comments electronically using the eComment feature located on the Commission's website (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) 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). Only intervenors have the right to seek rehearing or judicial review of the Commission's decision. The Commission may grant 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) using the eLibrary link. Click on the eLibrary link, click on "General Search," and enter the docket number in the "Docket Number" field, excluding the last three digits (i.e., CP18-18). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at 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.

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TECHNICAL ACRONYMS AND ABBREVIATIONS

APE	area of potential effects
AQCR	Air Quality Control Region
BMP	Best Management Practices
Certificate	Certificate of Public Convenience and Necessity
CAA	Clean Air Act of 1970
CFR	Code of Federal Regulations
CKE	Currently known extent
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
Commission	Federal Energy Regulatory Commission
cPAH	carcinogenic polycyclic aromatic hydrocarbons
dB	Decibel
dBA	A-weighted decibel
DOT	U.S. Department of Transportation
EA	environmental assessment
ECD	Erosion Control Devices
EI	Environmental inspector
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
E&SC Plan	Erosion and Sediment Control Plan
FERC	Federal Energy Regulatory Commission
FWS	U.S. Fish and Wildlife Service
GHG	greenhouse gas
GWP	global warming potential
HAP	hazardous air pollutants
IPAC	Information for Planning and Consultation
L_{eq}	equivalent sound level
L_{dn}	day-night sound level
MBTA	Migratory Bird Treaty Act
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
N_2O	nitrous oxide
NOI	*Notice of Intent to Prepare an Environmental Assessment for the Proposed Gateway Expansion Project and Request for Comments on Environmental Issues*
NJDEP	New Jersey Department of Environmental Protection
NJGS	New Jersey Geological Survey
NSA	Noise Sensitive Area

OEP	Office of Energy Projects
PCB	polychlorinated biphenyl
PEM	palustrine emergent
PFO	palustrine forested
Pipeline	natural gas pipeline
Plan	*Upland Erosion Control, Revegetation, and Maintenance Plan*
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
Procedures	*Wetland and Waterbody Construction and Mitigation Procedures*
PSS	palustrine scrub-shrub
RAO	Response Action Outcome
Secretary	Secretary of the Commission
SESCP	Soil Erosion and Sediment Control Plan
SHPO	State Historic Preservation Officer
SO2	sulfur dioxide
Spill Plan	Spill Plan for Oil and Hazardous Materials
TMDL	total maximum daily loads
Transco	Transcontinental Gas Pipe Line Company, L.L.C.
USGS	U.S. Geological Service
VOC	volatile organic compound
WHPA	wellhead protection areas
WRA	Well Restriction Area

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 Pipe Line Company, L.L.C. (Transco) In Essex and Passaic Counties, New Jersey.

We[1] prepared this EA in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA, 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 November 15, 2017, Transco filed an application with the Commission in Docket No. CP18-18-000 for the Gateway Expansion Project (Project) under section 7(c) of the Natural Gas Act and part 157 of the Commission's regulations. Transco seeks to construct and operate certain natural gas facilities in New Jersey. The Project would deliver an additional 65,000 dekatherms per day of firm natural gas transportation service to three delivery points in New Jersey.

2.0 PURPOSE AND NEED

Transco's stated Project purpose is to enable customers to receive an incremental supply of natural gas from the specified delivery points to its receipt points. To accomplish this, Transco proposes to increase the firm transportation capacity on the existing pipeline to allow greater access to natural gas supplies.

Under Section 7(c) of the Natural Gas Act, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate of Public Convenience and Necessity (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

Transco's Project would require modifications at the existing facilities in the following counties of New Jersey:

Essex County

Compressor Station (CS) 303

- expansion of the building and installation of a 33,000 horsepower electric-motor driven compression unit and ancillary equipment; and

- extension of security fencing and access to new equipment.

[1] "We," "us," and "our" refers to environmental staff of the Office of Energy Projects.

Roseland Meter and Regulator (M&R)

- installation of a 36-inch-diameter Main Line block valve with automation controls.

Roseland Electric Substation

- installation of an electric transformer unit.

Passaic County

Paterson Meter and Regulator

- replacing the existing 12-inch-diameter headers with two new 6-inch ultrasonic meter skids and associated equipment; and

- installation of ancillary equipment.

The CS 303 site would include three land parcels: the existing CS 303, the Roseland M&R and Roseland electrical substation, as well as, the Mainline Caldwell B and D right-of-way, that would owned and operated by Transco. A general location map for the Project, is shown in figure 1 below; additional detailed maps are provided in appendix A.

In conjunction with the Project, Transco would re-wheel the existing compressor unit at CS 303.

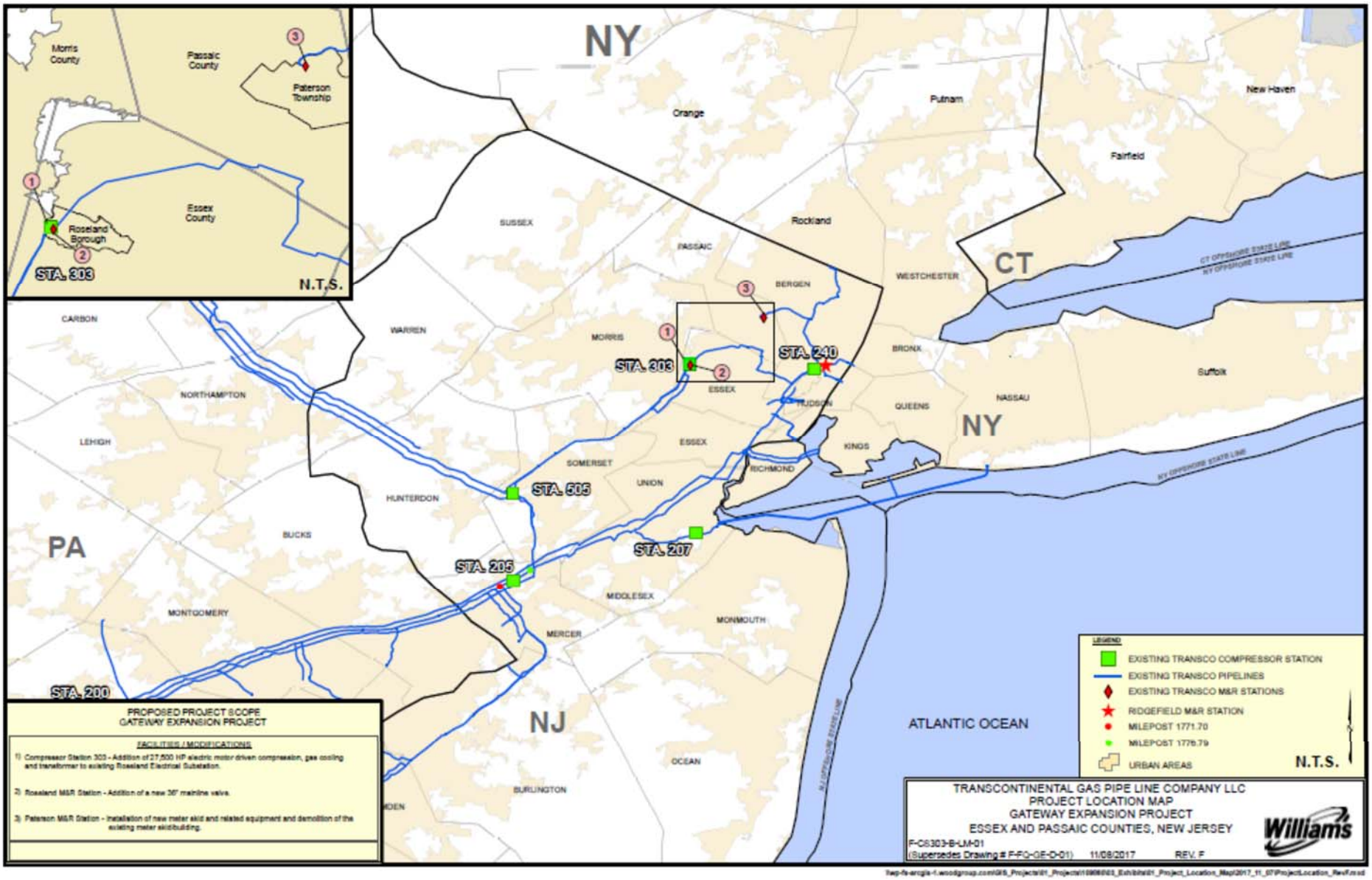

Figure 1
General Location Map

4.0 NON-JURISDICTIONAL FACILITIES

Non-jurisdictional facilities are those facilities that are related to the Project for the purpose of delivering, receiving, or using the proposed natural gas volumes, and include facilities to be built and owned by other companies, that are not subject to the FERC jurisdiction. There are no associated non-jurisdictional facilities identified for the Project.

5.0 PUBLIC REVIEW AND COMMENT

On January 2, 2018, the Commission issued a *Notice of Intent to Prepare an Environmental Assessment for the Proposed Gateway Expansion Project and Request for Comments on Environmental Issues* (NOI). The NOI was mailed to landowners, federal, state, and local government representatives and agencies; elected officials; Native American tribes; environmental and public interest groups; newspapers and libraries in the Project area; and parties to this proceeding. The NOI requested written comments from the public on the scope of the analysis for the EA. Public scoping period closed on February 2, 2018. In response to the NOI, we received several comments, which are addressed throughout the EA. The primary issues raised by the commenters are concerns over health impacts from compressor station emissions; safety concerns including leaks, rupture, and emergency responder training; concerns that the Project would result in contaminant impacts on the nearby wetlands, wildlife, and soils; as well as concerns on cumulative impacts.

6.0 PERMITS, APPROVALS, AND REGULATORY CONSULTATIONS

Transco would obtain all necessary permits, licenses, clearances, and approvals related to construction and operation of the Project. Table 1 displays the major anticipated federal and state permits for the Project.

Table 1 Applicable Major Federal Permits, Licenses, Authorizations, and Clearances for the Gateway Expansion Project		
Permit/Approval Title	**Agency**	**Status**
Federal		
Certificate of Public Convenience and Necessity	Federal Energy Regulatory Commission (FERC)	Submitted November 2017- Pending
Clean Water Act Section 404	New Jersey Department of Environmental Protection (NJDEP) Division of Land Use Regulation	Submitted December 1, 2017- Pending
Endangered Species Act – Section 7 Consultation and Transco Categorical Exemption in place for minor activities at existing facility sites	U.S. Fish and Wildlife Service (FWS) Rare, Threatened and Endangered Species consultation (NJ Field Office)	Pending
Clean Water Act Section 401	NJDEP Division of Land Use Regulation	Submitted December 1, 2017- Pending
State		
Flood Hazard Area Control Act – Individual Permit	NJDEP Division of Land Use Regulation	Permit Received- May 3, 2018
Freshwater Wetlands Protection Act – Individual Permit	NJDEP Division of Land Use Regulation	Submitted December 1, 2017- Pending
New Jersey Pollutant Discharge	New Jersey Pollutant Discharge	To be submitted at least 30 days prior to earth disturbance.

Table 1 Applicable Major Federal Permits, Licenses, Authorizations, and Clearances for the Gateway Expansion Project		
Permit/Approval Title	**Agency**	**Status**
New Jersey SHPO	NJSHPO	Consultation and cultural resources study sent to SHPO October 2, 2017 Received response on November 11, 2017, finding that the CS 303 site would have no adverse effect on the identified historic properties. Received response concurring with updated Unanticipated Discoveries Plan for Cultural Resources on March 12, 2018.
Rare, Threatened and Endangered Species Consultation with NJ Natural Heritage Program	NJDEP, Natural Heritage Program	Consultation requests sent August 2017; recommendations received August 2017.
Dewatering Permit (Water Allocation) – Permit required Depends on dewatering volumes / duration / method either Temporary Dewatering Permit, Short Term Water Use Permit by Rule, Dewatering Permit-by-Rule, or a Water Use Registration	NJDEP, Division of Water Quality	To be submitted 4th quarter 2018
NJPDES - Construction Dewatering - Discharge to Surface Water - General Groundwater Remediation Clean-up Permit (BGR)	NJDEP, Division of Water Quality	To be submitted 4th quarter 2018
NJPDES - Construction Dewatering - Discharge to Surface Water-Short-term De Minimis Discharge Permit (B7)	NJDEP, Division of Water Quality	To be submitted 4th quarter 2018
NJPDES - Construction Dewatering - Discharge to Groundwater	NJDEP, Division of Water Quality	To be submitted 4th quarter 2018

Table 1 **Applicable Major Federal Permits, Licenses, Authorizations, and Clearances for the Gateway Expansion Project**		
Permit/Approval Title	**Agency**	**Status**
NJPDES General Permit – Hydrostatic Test Water Discharge (general permit BG) and Clean Water Assurance Certification Form	NJDEP, Bureau of Nonpoint Pollution Control	To be submitted 4th quarter 2018
Local		
Soil Erosion and Sediment Control Plans (SESCP), CS 303 site	Hudson-Essex-Passaic Soil Conservation District	Submitted December 7, 2017 Certification received January 29, 2018
SESCP, Paterson M&R	Hudson-Essex-Passaic Soil Conservation District	Submitted December 7, 2017 Certification received January 29, 2018

7.0 CONSTRUCTION, OPERATION, AND MAINTENANCE

Transco would construct, operate, and maintain the Project in compliance with all applicable federal and state permit requirements, regulations, and environmental guidelines, including the U.S. Department of Transportation (DOT) under 49 CFR 192 - *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*. During all phases of the Project, Transco would follow the applicable Occupational Safety and Health Administration Requirements. The requirements set forth in the aforementioned acts have been or would be provided to Transco's employees engaged in the planning, construction, maintenance, and operation of the Project and would be provided to Transco's construction contractors and inspectors. These employees and contractors have been or would be instructed to follow these requirements, as applicable, when planning, installing, and operating the facilities. These regulations ensure adequate protection for the public and prevent natural gas facility accidents and failures.

Transco anticipates that construction of the Project would begin in August 2019 with an in-service date of November 1, 2020. Transco adopted the FERCs *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan), and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) with minor modifications. The Plan and Procedures are referred to as Transco's Plan and Procedures throughout this document, along with best management practices (BMPs). Transco would also utilize a Soil Erosion and Sediment Control Plan (SESCP), a Spill Plan for Oil and Hazardous Materials (Spill Plan), a Waste Management and Construction Debris Disposal Plan, and an Unanticipated Discovery of Environmental Contamination Plan to minimize sediment outside of the Project area and ensure proper handling of lubricants, fuel, or other potentially toxic materials and prevent spills, respectively, prior to construction. These plans would be developed and implemented in compliance with the FERC, and the New Jersey Department of Environmental Quality.

During construction, Transco would clear and grade the sites for the aboveground facilities. Erosion control devices (ECD) would be installed as needed to prevent erosion and offsite impacts in accordance with Transco's Plan and Procedures, and applicable state permit requirements.

Transco would use 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 the Plan and Procedures. Transco would conduct environmental training sessions in advance of 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 the Project facilities would temporarily impact 9.43 acres of land during construction, and of this, no new land would be permanently affected by operation of the proposed facilities as all construction activities are being conducted on existing in-use areas. Modifications to the Roseland M&R and electric substation do not require any additional construction areas as all changes would occur within the existing M&R building. Table 2 indicates the amount of impact, in acres, that would occur at each site.

Four off site contractor yards in the vicinity of the CS 303 site are identified for possible use during construction in Essex and Morris Counties, New Jersey. Transco intends to utilize the Eagle Rock Yard and one of the other remaining identified yards described below to support construction activities at the CS 303 site. Three land parcels located directly adjacent to the Paterson M&R have been identified for temporary use to support construction activities at the Paterson M&R site, all located in Passaic County, New Jersey.

Table 2
Land Requirements

Aboveground Facilities			
Facility	**County, State**	**Land Affected by Construction (acres)[a]**	**Land Affected by Operation (acres)**
CS 303	Essex, New Jersey	9.06	0.00
Paterson M&R	Passaic, New Jersey	0.37	0.00
TOTAL		**9.43**	**0.00**
Potential Contractor Yards			
CS 303 site			
Eagle Rock Yard	Essex, New Jersey	0.53	0.00
Whippany Yard	Morris, New Jersey	13.81	0.00
Paradigm Yard	Morris, New Jersey	14.60	0.00
Livingston Mall Yard	Essex, New Jersey	5.28	0.00
TOTAL		TBD[b]	0.00
Paterson M&R			
Paterson Yard 1	Passaic, New Jersey	1.72	0.00
Paterson Yard 2	Passaic, New Jersey	4.07	0.00
Paterson Yard 3	Passaic, New Jersey	1.33	0.00
TOTAL		**7.12**	**0.00**

a. Project upgrades within the CS 303 and Paterson M&R site would be performed within existing operational area.
b. For CS 303 site activities, Eagle Rock Yard and one additional yard would be used.

During construction at the CS 303 site, Transco would use existing driveways to access the site, which are proposed to be extended. The first driveway would utilize 0.09 acre to connect CS 303 with the Roseland M&R and the second would use 0.27 acre to connect CS 303 to the gas cooling units. Areas used as temporary contractor yards would be restored to pre-construction conditions upon Project completion. Temporary contractor yards are further discussed in section B.6., Land Use, Recreation, and Visual Resources.

B. ENVIRONMENTAL ANALYSIS

1.0 GEOLOGY

The Project is located in northern and central New Jersey in the Piedmont Lowlands physiographic province. The Piedmont Lowlands physiographic province is characterized by a low rolling plain divided by a series of higher ridges underlain by predominantly sedimentary and igneous rocks (New Jersey Geological Survey [NJGS], 2003). The Project is within the Newark Basin, an aborted rift basin containing sedimentary conglomerates, sandstones, and mudrocks (U.S. Geological Survey [USGS], 2017). Local relief in the vicinity of the Project ranges from 50 to 440 feet above mean seal level (ft. amsl). CS 303 and the Eagle Rock Yard are at an elevation of approximately 170 ft. amsl, the Paterson M&R and adjacent contractor yards are at an elevation of approximately 50 ft. amsl, the Whippany Yard is at an elevation of approximately 180 ft. amsl, the Paradigm Yard is at an elevation of approximately 200 ft. amsl, and the Livingston Mall Yard is at an elevation of approximately 190 ft amsl.

1.1 Mineral and Paleontological Resources

Information regarding the presence of oil and gas fields and mining activities in the Project vicinity was obtained from the USGS Mineral Resources Online Spatial Data and/or the New Jersey Department of Environmental Protection (NJDEP). Based on this review, no oil and gas exploration or active or inactive mines were located within 0.25 mile of the Project area (NJDEP, 2017 and 2018; USGS 2016). Because construction activities would take place entirely on previously disturbed land and given limited depths of excavation, as well as the distance from mining and active oil and gas extraction facilities, we conclude that the Project would not affect paleontological resources or mineral resource extraction activities.

1.2 Geologic Hazards

Geologic hazards are natural, physical conditions that can result in damage to land and structures or injury to people. Such hazards typically are seismic-related, including earthquakes, surface faulting, and soil liquefaction; landslides, flood, and karst terrain; or ground subsidence hazards.

Seismicity

The shaking during an earthquake can be expressed in terms of the acceleration as a percent of gravity (g), and seismic risk can be quantified by the motions experienced at the ground surface or by structures during a given earthquake expressed in terms of g. The USGS Seismic Hazard Probability Mapping shows that for the Project area, within a 50-year period, there is a 2 percent probability of an earthquake with an effective peak ground acceleration (PGA) of 14 to 20 percent g; and a 10 percent probability of an earthquake with an effective PGA of 4 to 5 percent g being exceeded (USGS, 2014). For reference, PGA of 10 percent g (0.1g) is generally considered the minimum threshold for damage to older structures or structures that are not constructed to resist earthquakes. A 14 to 20 percent PGA is characterized as strong to very strong perceived ground shaking and light to moderate potential for damage to structures, and a 4 to 5 percent PGA is associated with moderate perceived ground shaking and minimal potential damage to structures (USGS, 1989).

Earthquake magnitude and intensity measure different characteristics of earthquakes. Magnitude measures the energy released at the source of the earthquake and is determined from measurements on seismographs. Intensity measures the strength of shaking produced by the earthquake at a certain location and is determined from effects on people, human structures, and the natural environment (USGS, 1989). Earthquakes in New Jersey are infrequent and typically minor. The highest magnitude earthquake on record to occur in New Jersey (since 1737) had a Richter magnitude of 5.3 (Modified Mercalli Intensity [MMI] of VI – VII), with an epicenter west of New York City (State of New Jersey, 2014). Within the last 45 years, the largest mapped earthquake in New Jersey was a Richter magnitude 3.8 (MMI II-III) earthquake that occurred in 1973 approximately 95 miles south of CS 303 (USGS, 2018). Several lower magnitude earthquakes have also been recorded in the Project vicinity. However, the closest of these earthquakes to Project areas were a 2.0 magnitude (MMI I) earthquake that occurred in June 2007 approximately 4 miles southeast of the Paterson M&R, and a 1.2 magnitude (MMI I) earthquake that occurred approximately 3.4 miles north of the Whippany Yard.

Large earthquakes can cause surface displacement along bedrock fault lines, but it is very rare for earthquakes to cause surface displacements generally east of the Rocky Mountains. Geologic mapping identified ancient faults in bedrock within two miles of the Project, including a fault located directly beneath Whippany Yard (NJDEP, 1990). However, the USGS Quaternary Fault and Fold Database does not identify these faults, or any other faults in the vicinity, as being active within the Quaternary Period, which encompasses the last 1.6 million years (USGS, 2006). The USGS considers a fault to be active if displacements have occurred along the fault in the last 10,000 years (USGS, 2008). Based on the magnitude and intensity of recent and historic seismic activity in the region and because Project areas do not overlie active faults, we conclude the Project is not likely to be adversely impacted by future seismic incidents.

Soil liquefaction is a phenomena associated with seismic activity in which saturated, non-cohesive soils temporarily lose their strength and liquefy (i.e., behave like a viscous liquid) when subjected to forces such as intense and prolonged ground shaking. All three of these conditions (non-cohesive soils, near surface saturation, and seismicity) are necessary for soil liquefaction to occur. Earthquake Loss Estimation Studies prepared for the New Jersey State Police Office of Emergency Management by the NJGS classify the CS 303 Project area as “very low” soil liquefaction hazard. The Paterson M&R is in an area of “moderate” soil liquefaction hazard; however, facilities at the Paterson M&R would be minor improvements within the limits of an existing facility.

Given these conditions, we conclude that there is a low potential for damage due to prolonged ground shaking, ground rupture, or soil liquefaction to occur within Project areas.

Landslides and Slope Stability

Project areas are relatively flat and limits of disturbance have been previously graded; therefore, hazard posed to the Project by landslides or unstable slopes is negligible.

Karst Terrain

Ground subsidence, involving the localized or regional lowering of the ground surface, may be caused by karst formation due to limestone or gypsum bedrock dissolution and/or

sediment compaction due to groundwater pumping and/or oil and gas extraction, and underground mining. Oil and gas extraction and subsurface mines are not present in the Project and areas do not overlie unconsolidated aquifers susceptible to subsidence from excessive pumping. No karst terrain is present and the lithology that could lead to bedrock dissolution and karst development do not generally occur within the Project. As such, the potential for ground subsidence to occur is negligible.

Flood and Severe Weather

Several commenters expressed concern regarding the potential for the Project to impact or be impacted by flooding or severe weather events. Project areas could be impacted by flash flooding due to proximity to waterbodies and because portions of Project areas would be within the 100-year floodplain (AE Zone) and the 500-year floodplain (X Zone, shaded) as determined by the Federal Emergency Management Agency. AE Zones are subject to inundation by the 1 percent chance of an annual flood event. Specifically, the majority of the Paterson M&R is within the 500-year floodplain and portions of CS 303 are within the 100-year floodplain. The area of impervious surfaces associated with installation of aboveground facilities in floodplains is relatively minor when compared to the floodplain as a whole. Further, Transco would obtain all necessary permits and/or approvals from federal, state, and local authorities for construction within the floodplain.

Portions of the Eagle Rock Yard, Paterson Contractor Yards, and Livingston Mall Yard would cross the 100-year and/or 500-year floodplain; however, permanent structures would not be constructed at contractor yards and these areas would be restored to pre-existing conditions and contours following construction. Therefore, the Project is not anticipated to adversely impact the function of the floodplain.

To protect the integrity of facilities during flood events, the Project would be designed, constructed, tested, operated, and maintained to conform with applicable federal, state, and local requirements, including U.S. Department of Transportation regulations at 49 CFR Part 192, and FERC regulations at 18 CFR 380.15. The pipeline system would include design and equipment features, in addition to routine inspection and maintenance programs, to increase the overall safety of the system and protect the public from any system failure due to natural catastrophes, such as severe flooding. Therefore, we do not anticipate that severe weather or flooding would adversely impact the Project facilities.

We conclude that construction and operation of the Project would not result in any significant impact on geologic resources in the Project area.

2.0 SOILS

Soil characteristics in the area were identified and assessed using the Natural Resources Conservation Service (NRCS) Soil Survey geographic database (NRCS, 2017). Soils for each Project area are described below.

Introduction of Stones to Surface Soil

The introduction of stones or rocks to surface soil layers may reduce soil moisture-holding capacity, resulting in a reduction of soil productivity. Paradigm Yard and Livingston Mall Yard overlay soils classified as stony/rocky; however, ground disturbance is not proposed or anticipated in these areas. Furthermore, to minimize the introduction of stones or rocks to surface soil layers, Transco's Plan requires that the size, density, and distribution of rock on the construction work area be similar to adjacent areas and Transco does not anticipate the need for blasting during construction activities. Through adherence to these measures, no significant increase to the rock content of the topsoil is anticipated.

Soil Erosion

Soil erosion is the wearing-away of physical soil properties by wind and water, and could result in a loss of soil structure, organic matter, and nutrients, all of which, when present, contribute to healthy plant growth and ecosystem stability. Clearing, grading, and equipment movement can accelerate the erosion process and, without adequate protection, result in discharge of sediment to waterbodies and wetlands.

To minimize or avoid potential impacts due to soil erosion, Transco would utilize controls that would be implemented in accordance with Transco's Plan and Procedures and Project-specific SESCPs. Temporary erosion controls, such as interceptor diversions and sediment filter devices (including, but not limited to hay/straw bales and silt fences), would be installed immediately following the establishment of workspace boundaries or ground disturbing activities. These devices would be inspected on a regular basis and after each rainfall event of 0.5 inch or greater to ensure proper function. Transco would additionally utilize dust-control measures (detailed within their Fugitive Dust Plan), including routine wetting of the construction workspace as necessary where soils are exposed. Temporary ECD would be maintained until the Project area is successfully stabilized/revegetated.

Given Transco's proposed mitigation measures and that disturbed areas would be returned to pre-construction conditions, stabilized with gravel or asphalt cover, or revegetated, significant or permanent impacts due to soil erosion are not anticipated.

Soil Contamination

Comments were received regarding contamination of the surrounding soil from the Project. Soil contamination from spills or leaks of fuels, lubricants, and coolant from construction equipment would be minimized by implementation of Transco's Spill Plan, which specifies preventive measures to reduce the likelihood of a spill, as well as cleanup procedures in the event of soil contamination from spills or leaks of fuels, lubricants, coolants, or other hazardous materials. Transco would follow their Spill Plan to contain accidental spills and to ensure spills would be cleaned up and disposed of in an appropriate manner. Multiple

construction areas have existing soil and groundwater contamination issues, which are further discussed below in section 3.1, Groundwater. With Transco's implementation of their Spill Plan, potential impacts on soils from spills or leaks during construction would be adequately minimized.

Hydric Soils

Hydric soils are formed when conditions of saturation, flooding, or ponding occur long enough during the growing season to develop anaerobic conditions in the upper portion of the soil profile. Generally, hydric soils are those that are poorly drained or very poorly drained. Soil structure and compaction can inhibit a particular soil type's ability to hold water and the ability for vegetation to root.

The majority of soils within the Project areas are hydric and/or have moderate to high compaction potential. Compaction and rutting would be minimized by avoiding construction during periods of heavy rainfall, snowmelt, or unusual soil saturation. Equipment mats and/or gravel would be used to minimize rutting and compaction in saturated soils. Therefore, we conclude that potential impacts from soil rutting and compaction would be minimized or avoided.

CS 303 and the Eagle Rock Yard, Essex County

Soils underlying CS 303 and associated access roads are mapped as Parsippany silt loam (0 to 3 percent slopes), Pompton sandy loam (0 to 3 percent slopes), and Pompton-Urban Land/Pompton substratum complex (0 to 8 percent slopes) (7.13 acres). Soils underlying the Eagle Rock Yard are mapped as Pompton sandy loam (0 to 3 percent slopes). These soils are all classified as prime farmland. Soils underlying CS 303 and the Eagle Rock Yard are generally non-hydric, somewhat poorly drained to poorly drained, have moderate to high compaction potential, moderate revegetation potential, are moderately water erodible, highly wind erodible, have a depth to bedrock of greater than 60 inches and are not stony/rocky.

Paterson M&R, Passaic County

Soils underlying the Paterson M&R are mapped as Urban land-Riverhead complex (3 to 8 percent slopes). Urban land-Riverhead complex soils are classified as prime farmland. This soil unit is not hydric, is well drained, has low compaction potential, low water erodibility, moderate wind erodibility, high revegetation potential, a depth to bedrock of greater than 60 inches, and is not stony/rocky.

Contractor Yards

Soils underlying the Paterson Contractor Yards 1, 2, and 3 are mapped as Urban land-Riverhead complex (3 to 8 percent slopes). Each of these parcels is paved and located in an industrial setting. No site improvements would be required for use of these areas and the Paterson Contractor Yards would remain paved. Therefore impacts to soils are not anticipated.

Soils underlying the Livingston Mall Yard are mapped as Boonton-Urban land, Boonton substratum complex (0 to 8 percent slopes); Haledon-Urban land, Haledon substratum complex (0 to 8 percent slopes); Urban land, Boonton substratum (0 to 8 percent slopes); and Urban land,

Pompton substratum (0 to 8 percent slopes). This yard is almost entirely paved and would not require improvements; therefore impacts to soils are not anticipated.

Soils underlying the Whippany Yard are mapped as Catden muck, frequently flooded (0 to 2 percent slopes), Udorthents, refuse substratum (0 to 8 percent slopes), and Preakness sandy loam, frequently flooded (0 to 3 percent slopes). With the exception of Preakness sandy loam (which is not rated), these soils are classified as prime or unique farmland. Udorthents, refuse substratum is classified as non-hydric and well drained with low compaction potential, low wind and water erosion potential and high revegetation potential. However, the remainder of Whippany Yard soils are classified as hydric, poorly to very poorly drained, with high compaction potential, moderate to high potential for wind erosion, and moderate revegetation potential. Catden muck and Preakness sandy loam are not rated for water erodibility.

Soils underlying the Paradigm Yard are mapped as Booton moderately well drained gravelly loam (3 to 8 percent slopes); Parsippany silt loam, sandy loam substratum, frequently flooded (0 to 3 percent slopes); and Whippany silt loam, sandy loam substratum (0 to 8 percent slopes). This parcel has a paved area that is currently used for parking as well as an area with a building, open paved areas, and undeveloped land. The Project would occur on the existing paved areas and would use existing access roads. This yard would require minimal improvements, which would consist only of removal of existing debris. Therefore impacts to soils are not anticipated.

2.1 Soil Impacts and Mitigation

Typical soil impacts that may occur during construction include mixing of topsoil and subsoil layers, compaction, rutting, erosion, and alteration of drainage characteristics. Construction activities such as clearing, grading, trench excavation, backfilling, heavy equipment traffic, and restoration within construction workspaces have the potential to adversely affect natural soil characteristics such as water infiltration, storage and routing, and soil nutrient levels, thus reducing soil productivity. Clearing removes protective vegetative cover and exposes soil to the effects of wind and water which potentially increases soil erosion and the transport of sediment to sensitive resource areas. If construction activities, particularly the operation of heavy equipment, occur when soils are at or near saturation, soil compaction and rutting may occur.

Prime and Unique Farmland

The United States Department of Agriculture defines prime farmland as land that has the best combination of physical and chemical characteristics for the production of food, feed, fiber, and oilseed crops. Unique farmland areas are identified as soils that support specific high-valued foods, but require proper management. Approximately 31.67 acres of prime and unique farmland would be disturbed by the Project. However, areas are previously disturbed from current or historic commercial/industrial land use. The area is not currently in agricultural use. To avoid or minimize impacts to soils, Transco would adhere to its Plan and Project-specific SESCP that would be reviewed and approved by applicable county conservation districts prior to construction. Temporary workspaces would be returned to pre-existing conditions following construction. Therefore, new and permanent impacts to prime farmland would be limited to the

expansion of the CS 303 fence line at the CS 303 site. However, this area is currently maintained lawn on land owned by Transco.

Based on the above analysis, we conclude that permanent impacts to prime and unique farmland would not be significant. Based on Transco's planned mitigation measures, and because temporary workspaces would be returned to pre-existing conditions following construction and no Project areas are currently in agricultural use, we conclude that other impacts would be temporary and not significant.

3.0 WATER RESOURCES

3.1 Groundwater

The Project is located within the Newark Basin, one of three major basins within the Piedmont Early Mesozoic basin aquifers. The Newark Basin contains three principal stratigraphic units: the Stockton Formation, the Lockatong Formation, and the Brunswick Group. The Project overlies the Brunswick Group. The Brunswick aquifer is comprised of sandstone, siltstone, and shale (NJGS, 1998). Shallow groundwater is anticipated to be present at a depth of approximately 2 to 20 feet below the ground surface. Soil and groundwater is known to be contaminated in the Project area, as discussed further below.

Surveys were conducted for the Project and no public or private drinking water supply wells occur within 150 feet of the Project workspace. Similarly, no springs or seeps occur within 150 feet of the Project workspace. Transco is in the process of consulting with municipalities to locate other potential nearby supply wells and has committed to provide relevant information to the FERC if additional public or private wells are identified. Currently, no municipal or community water supply wells have been identified within a 400-foot radius of the Project.

A review of the NJDEP inventory identified that two community wellhead protection areas (WHPA) overlap the Paterson M&R and contractor yards, as well as two community WHPAs and one non-community WHPA that overlap CS 303 and Eagle Rock Yard. One community WHPA overlaps the Livingston Mall Yard, but no WHPAs were identified overlapping Whippany Yard or Paradigm Yard. Transco has stated that consultations with county and township planning departments to identify designated groundwater protection areas in the vicinity of the Project area are ongoing.

Groundwater Impacts and Mitigation

Clearing and grading of the construction work areas could result in changes to overland water flow and subsequent recharge of shallow aquifers. Construction would involve shallow, temporary, and localized excavation. Given the shallow depth to groundwater in the Project area, groundwater may be encountered during construction. The water would be pumped from the excavation to a location down-gradient of the excavation. However, if the soil and groundwater is known to be contaminated, as is a portion of the CS 303 site and the Paterson M&R, the water would be containerized and disposed of at an approved facility. Water removed from trenches/excavations in areas of known contamination would be tested to ensure compliance with applicable water quality parameters.

Known contaminated areas were identified within 0.25-mile of the Project facilities and proposed contractor yards. However, given the distance from areas of identified contamination and/or because of the absence of or shallow nature of proposed ground disturbance, it is not anticipated that contaminated soil and groundwater originating from off-site sources would be encountered during Project construction. Existing contamination and mitigation measures are discussed further below.

Inadvertent surface spills of hazardous materials used during construction could contaminate shallow groundwater. To minimize the potential impacts associated with inadvertent spills, Transco would implement its SESCPs and Spill Plan, which include measures to prevent, contain, and clean up any inadvertent releases of fuels or hazardous materials during construction.

As noted above, WHPAs were identified that overlap Project workspaces. Although implementation of Transco's Plan and Procedures and Transco's Spill Plan would be mitigating factors for protecting WHPAs and we would not expect impacts on WHPAs, because the Project is in an area generally known to have shallow groundwater, **we recommend that:**

> **Prior to construction, Transco should complete consultations with water suppliers for the community and non-community Wellhead Protection Areas that overlap the Paterson M&R and contractor yards, CS 303, Eagle Rock Yard, and Livingston Mall Yard and file with the Secretary of the Commission (Secretary), for review and written approval by the Director of the Office of Energy Projects (OEP), any water supplier-recommended mitigation that Transco would implement during construction. For any recommended mitigation Transco does not plan to implement, Transco should provide justification why the mitigation is not needed.**

Existing Contamination Impacts and Mitigation

CS 303

CS 303 is in the area of the former Illinois Tool Works ITW facility/parcel which was historically a large quantity generator of spent solvents and ignitable waste. The former ITW portion of CS 303 is identified in various regulatory databases with active and closed case statuses associated with contamination of soil and groundwater. Soils at the former ITW portion of CS 303 contain historic fill contaminated with carcinogenic polycyclic aromatic hydrocarbons (cPAH) and inorganics (metals). Furthermore, a Classification Exception Area (CEA) and existing Well Restriction Area (WRA) have been established by the NJDEP for the former ITW portion of CS 303, as groundwater is known to be contaminated with various volatile organic compounds (VOC), including trichloroethylene, tetrachloroethene, vinyl chloride, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethene, and 1,1,1-trichloroethane. Groundwater treatment has been performed by Transco at this location and groundwater monitoring is ongoing. Any groundwater monitoring wells located outside the main areas of construction would be protected using bollards and/or orange safety fencing prior to the commencement of construction activities. For those groundwater monitoring wells directly impacted by construction activities, the wells would be removed prior to construction using NJDEP-licensed drillers and replaced following construction using NJDEP-licensed drillers.

A future Response Action Outcome (RAO) with a deed restriction is anticipated to be completed for CS 303 site and would be divided into two reports, one for soil and another for groundwater. The soil RAO is anticipated to be completed in fall 2018 and will address cPAH contamination of historic fill at CS 303 with a "limited restricted use" determination. The deed restriction would specify that (1) soils can be disturbed provided excavated soils are segregated and returned to the area where they were removed; (2) excavated soils are managed in a manner to prevent the spread of contamination outside the former ITW portion of CS 303; (3) certified clean fill or aggregate would need to be placed as a cover (i.e. "soil cap") following the replacement of the historical fill; and (4) any excavated historical fill that cannot be reused will be disposed as non-hazardous waste at an appropriately licensed disposal facility. RAO reports and NJDEP concurrences are pending for CS 303.

The timing of the groundwater RAO is unknown given the currently undefined extent of groundwater contamination at the former ITW portion of CS 303. Furthermore, remediation of polychlorinated biphenyl (PCB) and mercury-contaminated soils around the Roseland meter station was performed in 2006, remediation of PCB-impacted soils at the Roseland Electrical Substation was completed in 2012, and remediation of PCB-impacted soils was completed at the Paterson M&R station in December 2017. Transco anticipates completing an RAO report that would cover the 2006, 2012, and 2017 remediation activities in the spring of 2018 with an unrestricted use determination.

Fourteen sites were identified within a 0.25-mile radius of CS 303 associated with no further action/regulatory closure status or on non-contamination databases. Two sites were identified within 0.25 mile of the Project with known contamination groundwater contamination. Specifically, both facilities are located more than 750 feet southeast of the Project and are associated with leaking underground storage tanks and delineated petroleum-constituent groundwater plumes (CEA areas). Based on distance from the Project to delineated groundwater plumes, neither of these facilities are expected to present a concern for planned construction activities.

To prevent or minimize impacts from disturbance of contaminated soils, excavated soils from the former ITW portion of CS 303 would either be disposed according to the U.S. Environmental Protection Agency (EPA) Resource Conservation and Recovery Act regulations or stockpiled and returned to the approximate area they were excavated from to prevent the spread of contamination.

Any temporary stockpile of excavated material determined to be contaminated or of concern would be covered and remain covered with anchored 6-mil poly sheeting or tarps while stockpiling activities are not being performed. All stockpiles of contaminated soils would be surrounded by soil erosion control measures (e.g. haybales overlain by 6-mil poly sheeting, silt sock or silt fence as indicated) and the stockpile area(s) would be secured with orange safety fence at the end of each day. Should water runoff from the stockpile accumulate on the poly sheeting, it would be pumped to a portable container. Should wind cause erosion of the stockpile (e.g., visible dust), water would be used to spray the stockpile to control dust emissions or the stockpile would be covered. Transco's Contractor would maintain and inspect all stockpile areas daily. No ECD would be constructed of compacted soils.

Excavated contaminated soils from the former ITW portion of CS 303 or at the Paterson M&R may be placed directly from the excavator bucket into lined "roll-off" containers to prevent the spread of contamination. These roll-off containers would be tarped when not being filled. Should excessive wind result in visible dust from the containers while filling, Transco would immediately cease excavating and tarp the roll-off container.

Shallow groundwater is anticipated to be present at a depth of approximately 2 to 20 feet below ground, and therefore contaminated groundwater is likely to be encountered during construction activities. Groundwater in the former ITW portion of CS 303 would be containerized, hauled off site, and disposed of at an approved facility. Based on extensive data from quarterly groundwater monitoring, historical testing of removed groundwater during the original CS 303 construction, and purge water waste characterization sampling, Transco anticipates that any groundwater removed from trenches/excavations from the former ITW portion of CS 303 would not require management as hazardous waste.

Transco has stated that contaminated groundwater at the former ITW portion of CS 303 has been vertically delineated but is not horizontally delineated, and that the groundwater plume has migrated to the west onto neighboring property not owned by Transco and not towards the Project. Transco provided groundwater elevation contour maps showing a consistent groundwater flow direction towards the west, but, Transco did not file supporting documentation that the groundwater plume has been delineated to the east. With implementation of appropriate containment and disposal procedures, we conclude that potential impacts to groundwater resources would be adequately minimized.

Paterson M&R

Contaminated soils are known to be present at the Paterson M&R. Specifically, soils underlying the Paterson M&R are known to be contaminated with VOCs, cPAHs, and/or inorganics. Areas of PCB-impacted soil are also known to exist at the Paterson M&R, although concentrations are below 50 parts per million. The extent of soil contamination has vertically and horizontally delineated. Due to a deed notice executed by Public Service Enterprise Group (PSEG) with NJDEP, any excavated material at the Paterson M&R would be disposed of as non-hazardous waste and replaced with certified clean fill. To further comply with the deed notice, Transco would either obtain NJDEP's consent, or submit a written report to NJDEP describing the disturbance and the nature, dates and duration of the disturbance, and other information, as required. PSEG, as the owner of the site, would submit a Soil Remedial Action Permit Application to NJDEP to modify the existing Remedial Action Work Plan. Transco would work through a detailed design of the modification and coordinate with PSEG to submit the plan to NJDEP. Additionally at the Paterson M&R, any disturbance of the existing "engineering control" (i.e., soil cap) would be repaired in accordance with all requirements of the deed notice for the site.

Contaminated groundwater is also known to be present at the Paterson M&R. Specifically, a Remedial Action Permit (RAP) has been issued for the Paterson M&R and a CEA and WRA have been established for a groundwater plume impacted with VOCs, the cPAH benzo(a)anthracene, and inorganic contaminants. Groundwater monitoring is ongoing. Any groundwater monitoring wells located outside the main areas of construction would be protected using bollards and/or orange safety fencing prior to the commencement of construction activities.

For those groundwater monitoring wells directly impacted by construction activities, the wells would be removed prior to construction using NJDEP-licensed drillers and replaced following construction using NJDEP-licensed drillers.

Thirteen sites were identified within a 0.25-mile radius of the Paterson M&R Project area with known contamination. The nearest known extent of contamination is a benzene, toluene, ethylbenzene, and xylene groundwater plume delineated 231 feet northwest of the Paterson M&R station. None of these sites are expected to present a concern for planned construction activities based on their distance from the Project, media impacted (i.e., soil only), known groundwater plume extent, and/or topographical position from the Project (i.e., down-gradient or cross-gradient). Furthermore, Transco would implement special handling measures for groundwater encountered at the Paterson M&R. Groundwater withdrawn from Paterson M&R would be disposed of according to applicable regulations as the areas are known to contain VOCs, carcinogenic polycyclic aromatic hydrocarbons, and/or inorganic contaminants. The Paterson M&R property is owned by PSEG, which has recently confirmed that the groundwater in the vicinity of Transco's meter station is nonhazardous and offered to treat any groundwater Transco removes from Project excavations at PSEG's on-site groundwater treatment facility. Accordingly, any removed groundwater can be handled by site personnel without training to handle hazardous wastes.

Paterson Contractor Yards 1, 2, and 3

Paterson Contractor Yards 1, 2, and 3 are within the same CEA and WRA as the Paterson M&R station and are subject to the same deed restrictions. Paterson Contractor Yards 1, 2, and 3 are entirely paved and would not require improvements during construction (the engineering controls would not be disturbed). Therefore, use of these yards is not anticipated to require soil disturbance or encounter groundwater and impacts from existing contamination are not anticipated.

Eagle Rock Yard

The Eagle Rock Yard is listed as a closed state hazardous waste site for a residential-use former heating oil underground storage tank. Based on information obtained from the NJDEP, this case was closed with a no further action (unrestricted use) determination on March 10, 2014. Given that this facility has reached case closure with an unrestricted use determination, and the limited ground disturbance necessary to modify and restore the area for use as a contractor yard, use of this yard is not anticipated to encounter contaminated soil or groundwater.

Livingston Mall Yard

The Livingston Mall Yard does not intersect known hazardous or contaminated sites, but a portion of the site is mapped as historic fill. The Livingston Mall Yard is almost entirely paved and would not require improvements during construction. Therefore, use of this yard is not anticipated to require soil disturbance or encounter groundwater.

Whippany Yard

The Whippany Yard overlies the Northwest-South Fill area of the Sharkey Landfill Superfund Site. The Sharkey Landfill operated from 1945 to 1972 and accepted at least 25,700

tons of non-chemical wastes and at least 1,160 tons of liquid and/or chemical wastes (including hazardous wastes) (EPA, 2014). The EPA approved the final Design Report for the Sharkey Landfill in May 2000. Because the Northwest-South Fill area is relatively low-lying, with much of the underlying waste below the groundwater table or under somewhat saturated conditions, it was determined that capping this area would not have effectively reduced the degree of contact between the waste material and groundwater (EPA, 2014). Therefore, this area was covered with additional soil and appropriately vegetated to prevent erosion and exposure of the waste material. Because proposed use of the Whippany Yard would require surficial disturbance that would be disruptive of the vegetative cover and surface soils, **we recommend that**:

> **Prior to any use or modification of the Whippany Yard, Transco should consult with the EPA (as the lead agency for the Sharkey Landfill remediation), and file the results of this consultation, along with any proposed mitigation measures, with the Secretary, for review and written approval by the Director of the OEP.**

The Sharkey Landfill Remedial Action Certification Report was approved by the EPA on September 29, 2005, but groundwater monitoring is ongoing. At least four groundwater monitoring wells are located within the Northwest-South Fill area and provisions for a groundwater extraction system were made at each area of the landfill to provide hydraulic control containment and prevent migration of contaminants when operating at design capacity (EPA, 2014). Low level detections of VOCs and inorganics have been reported at the Northwest-South Fill area based on the results of the groundwater monitoring program. However, concentrations have been well below the agreed upon groundwater trigger levels which would require groundwater extraction (EPA, 2014). Given the limited ground disturbance necessary to modify and restore the area for use as a contractor yard, Project use of this yard is not anticipated to encounter contaminated groundwater. However, because groundwater monitor wells remain within the Northwest-South Fill area, **we recommend that:**

> **Prior to any use or modification of the Whippany Yard, Transco should file with the Secretary, for review and written approval by the Director of the OEP, verification of the locations of existing groundwater monitoring wells at the Whippany Yard, and measures Transco would use to protect these wells from damage or destruction during construction activities.**

Paradigm Yard

The Paradigm Yard is identified as a known contaminated site by the NJDEP under the facility name AM International Varity Per Div. This entity is associated with four remediation cases, two of which impacted soil and/or groundwater but are reported to be closed (no further action) as of May 1989 and March 1994. Two active remediation cases are also listed, one of which is associated with a "known source or release with groundwater contamination." Based on information obtained from the NJDEP, the Paradigm Yard overlies a geographically defined area within which the local groundwater resources are known to be compromised because the water quality exceeds drinking water and groundwater quality standards for specific contaminants (mixed volatile organic compounds). This area is specified as the Currently Known Extent (CKE) of groundwater pollution, and is used by NJDEP staff, water purveyors, and local officials to make decisions concerning appropriate treatment and/or replacement of contaminated drinking water supplies. CKE areas are intended to provide information to the

public about contaminated ground water areas in the state. However, given the limited ground disturbance necessary to modify and restore the area for use as a contractor yard, the use of this Yard is not anticipated to impact or be impacted by existing groundwater contamination.

Modifications to the Paradigm Yard to enable use would involve removal of existing debris. Aerial imagery of the Paradigm Yard depicts several "existing stockpiles" at this location. Transco has provided Waste Management and Construction Debris Disposal Plans which detail waste handling procedures, and include a plan for Unanticipated Discovery of Environmental Contamination. We have reviewed these plans and find them to be acceptable. Therefore, the use of the Paradigm Yard is not anticipated to impact or be impacted by contamination (if present) of existing debris.

In the event that contaminated media is discovered during construction, Transco would adhere to its Waste Management and Construction Debris Disposal Plans and its Unanticipated Discovery of Contamination Plan, which outlines the steps to be followed in the event that contaminated sediment or soils (identified by discoloration, odor, sheen, and other indicators) are encountered during construction.

We find that implementation of the above construction procedures, mitigation measures, and our recommendations would adequately protect groundwater resources and water wells. Construction disturbances would be temporary, and natural ground contours would be restored following construction. In conclusion, the Project would not result in any significant long-term or permanent impacts on groundwater.

3.2 Surface Water and Wetlands

The Project is located in the Hackensack-Passaic watershed. Field surveys conducted in July 2017 identified three minor waterbodies within the CS 303 site boundaries: one ephemeral, one intermittent, and one perennial. All three waterbodies are unnamed tributaries of the Passaic River. Only the one intermittent waterbody (ES-S002) would be directly impacted by the Project. No waterbodies were identified at the Paterson M&R Station or the Eagle Rock Yard. For potential contractor yards, desktop reviews using USGS mapping, aerial imagery, and New Jersey state data identified the presence of waterbodies just outside of the temporary workspace limits at the Whippany Yard and Paradigm Yard and none at the Livingston Mall Yard. Modifications and upgrades at the Roseland M&R and Electric Substation would take place within the existing facilities and no waterbodies would be impacted. Additionally, no waterbodies that support fisheries would be directly impacted by the Project.

In accordance with Section 303(d) of the Clean Water Act, states are required to identify waters that do not attain their designated use(s) or meet the state water quality standards. Additionally, the EPA's Water Quality Planning and Management Regulations (40 CFR 130) require states to develop total maximum daily loads (TMDLs) for those waters. TMDLs represent the maximum amount of a given pollutant that a waterbody may contain while still attaining its designated use. All three waterbodies identified within the CS 303 site are unnamed tributaries to the Passaic River, which is a Section 303(d) impaired water for aquatic life, fish consumption, industrial water supply, and public water supply (EPA 2017c). The Passaic River and its tributaries in the vicinity of the CS 303 site have been designated a TMDL for mercury

impairments based on concentration in fish tissue caused mainly by air deposition (NJDEP 2009).

The EPA identifies surface water-public drinking water systems by the Hydrologic Unit Code (HUC) 12 watershed. No surface water public water systems were identified for the Paterson M&R, CS 303 site, Whippany Yard, Paradigm Yard, or Livingston Mall Yard.

Project construction may result in potential impacts on waterbodies, including increased sedimentation, increased turbidity, release of chemical and nutrient pollutants from sediments, and the introduction of hazardous materials due to spills and leaks. Project construction could disturb and suspend existing sediments in surface waterbodies, temporarily degrading water quality and redistributing contaminants downstream. To minimize contaminant suspension, Transco would implement its SESCP, which was developed in accordance with the FERC Plan and Procedures and the New Jersey Soil Erosion and Sediment Control Act Rules, and reviewed and Certified by the Hudson-Essex-Passaic Soil Conservation District. These plans include the installation of ECDs, such as silt fence and compost filter socks, to prevent sediment from entering nearby streams. ES-S002 would be crossed using temporary mats during construction and a permanent prefabricated bridge during operation, thereby minimizing impacts on the waterbody. Transco has prepared and would implement its Spill Plan, which describes measures that would be implemented to prevent, control, and clean-up inadvertent spills of hazardous materials, such as fuels, lubricants, and coolants; and would implement the measures outlined in the Plan and Procedures. Further, Transco would obtain all applicable federal and state permits prior to construction and would comply with conditions of such permits. For these reasons we conclude that the Project would not significantly impact surface waters.

Hydrostatic Testing

In accordance with DOT regulations, Transco would perform hydrostatic testing of the new above-ground facilities prior to placing them into service. An estimated total of 86,600 gallons of water is anticipated to be used for hydrostatic testing of the Project facilities. Water for hydrostatic testing would be obtained from the Borough of Roseland Hydrant in the CS 303 site. Following hydrostatic testing, test water would first pass through an energy-dissipation device before being discharged into a well vegetated, upland area in accordance with the Procedures, or would be hauled off and properly disposed of at an approved location. Transco would comply with the requirements of the NJDEP Bureau of Water Allocation and all other applicable federal, state, and local regulations. Therefore, we conclude that hydrostatic testing would not result in significant impacts to the environment.

Wetlands

In July 2017, Transco conducted field wetland delineations for the CS 303 site, Eagle Rock Yard, and Paterson M&R in accordance with the *1989 USACE Wetland Delineation Manual* and the *2012 Regional Supplemental to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0.* For potential contractor yards not yet surveyed, a desktop analysis using USGS topographic maps, National Wetlands Inventory maps,

aerial photographs, and New Jersey state wetland mapping was conducted to identify wetlands within the Project area.

Vegetative species present within a wetland determine its classification. Palustrine forested (PFO) wetlands are characterized by woody vegetation greater than 20-feet in height with more than 30 percent canopy cover. Palustrine scrub-shrub (PSS) wetlands are similar to PFO wetlands in that they are characterized by greater than 30 percent canopy cover of woody vegetation; however, dominant vegetation in a PSS wetland is less than 20 feet in height. Finally, palustrine emergent (PEM) wetlands are characterized by dominance of rooted herbaceous (non-woody) wetland plants (Cowardin et al., 1979). A total of seven wetlands were identified at the CS 303 site: three PFO wetlands, three PEM wetlands, and one PEM/PFO wetland is part of a wetland complex with both PEM and PFO cover types. Additionally, one PFO wetland was identified at the Eagle Rock Yard. Lastly, Transco identified two PEM wetlands at the Whippany Yard. No wetlands were observed at the Paradigm Yard or the Livingston Mall Yard.

At the CS 303 site, the Project would not directly impact wetlands (no fill or loss); however, there would be both temporary and permanent impacts to New Jersey state regulated wetland transition areas (WTA). Temporary impacts include use of the existing facility's paved and gravel areas during construction within developed WTA, and matting and/or graveling of WTA within undeveloped maintained lawn areas. Permanent impacts to WTA include placement of a permanent bridge and its abutments, a change in ground cover from maintained lawn to gravel driveway, and placement of a chain link security fence with post footings.

The majority of the temporary WTA impacts would occur in developed areas that are currently located within the operational area of the existing facility and consists of pavement and gravel ground cover, or existing facility structures such as buildings, aboveground piping and other related natural gas appurtenances. Impacted undeveloped WTA are those areas within the existing operational facility that are maintained as vegetative ground cover. WTA's beyond the existing operational area off-site would not be impacted. At the Eagle Rock Yard, the temporary placement of gravel and/or mats would temporarily impact 0.47 acres of WTA. The ground would be restored to existing conditions once construction is complete. Transco has applied to the NJDEP for a permit for these impacts to WTAs at both the CS 303 site and the Eagle Rock Yard, and Transco would adhere to all permit conditions and mitigation measures. As stated above, the Project's adherence to the SESCP, Spill Plan, and Transco's Plan and Procedures would minimize impacts to wetlands.

Transco designed the Project's limits of disturbance to be outside of wetlands to avoid direct impacts on wetlands. Based on NJDEP wetland data, the Whippany Yard has the potential to impact 0.52 acres of PEM wetlands. However, if wetlands are found at the site once surveyed, the workspace would be modified to avoid any direct impacts. In its letter dated February 14, 2018, the NJDEP stated that the Project is subject to the Freshwater Wetland Protection Act Rules and the Flood Hazard Area Control Act Rules and that applications for the Project are currently being reviewed by the Division of Land Use Regulation. Transco would obtain all applicable state permits prior to construction. Additionally, Transco would install state-approved

ECDs, such as silt fence and compost filter socks, to prevent sediment from entering nearby wetlands in accordance with its SESCP. Transco would implement its Spill Plan, which describes measures that would be implemented to prevent, control, and clean-up inadvertent spills of hazardous materials, such as fuels, lubricants, and coolants. Further, Transco would minimize impacts on wetlands by implementing the measures outlined in the Plan and Procedures. Given Transco's proposed measures and avoidance of direct impacts on wetlands, we conclude that the Project would not significantly impact wetlands.

Modifications to the Procedures

Transco has requested modifications to the FERC Procedures for parking, refueling, and storing potentially hazardous materials within 100 feet of a wetland and/or waterbody and the in-stream work time window. Table 3 lists each proposed modification along with justifications and equal compliance measures to minimize impacts. We find the justifications and equal compliance measures for these modifications acceptable.

Table 3 Site-Specific Modifications to the FERC Procedures			
Requirement	**Location**	**Justification / Description**	**Compliance Measures**
Section IV.A.1.d: All equipment is parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the EI determines there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate measures (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill.	CS 303 site	Due to the workspace constraints on the CS 303 site (proximate wetlands and waterbodies, and limited workspace), maintaining these distances is would not be practicable.	Whenever practicable, heavy equipment would not be parked or refueled less than 100 feet from surface waterbodies or wetlands. These activities would only occur within 100 feet of wetlands and waterbodies if the EI determines there is no reasonable alternative, and Transco and its contractors have taken appropriate measures (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill. If required, Transco would implement its Spill Plan for Oil and Hazardous Materials and Waste Management Plan.
Section IV.A.1.e: Hazardous materials, including chemicals, fuels, and lubricating oils, are not stored within 100 feet of a wetland, waterbody, or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas	CS 303 site	Due to the workspace constraints on the CS 303 site (proximate wetlands and waterbodies, and limited workspace), maintaining these distances is would not be practicable.	Whenever practicable, hazardous materials, including chemicals, fuels, and lubricating oils would not be stored less than 100 feet from surface waterbodies or wetlands. These activities would only occur within 100 feet of wetlands and waterbodies if the EI determines there is no reasonable alternative, and Transco and its contractors have taken appropriate measures (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill. If required, Transco would implement its Spill Plan for Oil and Hazardous Materials and Waste Management Plan.
Section V.B.1.b: Time Windows for Construction: Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site- specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows: coldwater fisheries - June 1 through September 30; and coolwater and warmwater fisheries - June 1 through November 30.	Station 303 site	Stream ES-S002 is a warmwater fishery that is intermittent in nature. Based on field visits in July 2017 and October 2017, at the location of the crossing, the stream does not support fishery habitats. Therefore, the construction window specified in the Procedures that aims to protect fisheries should not apply.	Transco intends to comply with the waterbody crossing restrictions established in its state permits conditions. If the NJDEP does not require a specific timing restriction, Transco requests a deviation from the timing restriction specified in the FERC Procedures due to the intermittent nature of the ES-0002 and the lack of fishery habitat. Additionally, the only waterbody crossing would involve the installation and removal of an equipment bridge and installation of a permanent bridge, which are exempt from these time window restrictions.

4.0 VEGETATION, WILDLIFE, AND THREATENED AND ENDANGERED SPECIES

4.1 Vegetation and Wildlife

The Project is located entirely within the Northern Piedmont Level III ecoregion (EPA 2017). Land uses in the area are in four categories: industrial/commercial, forest, wetland, and open land. Vegetative cover and therefore, wildlife habitat, is typically limited within Industrial/Commercial land. Open Land is comprised of non-forested habitat that is not otherwise classified as agricultural, and includes existing utility rights-of-way and meadows. Surveys conducted in July 2017 for the CS 303 site, the Eagle Rock Yard, and the Paterson M&R, and desktop reviews for the potential contractor yards sites, identified vegetation types within these land use categories, which are presented in table 4.

Table 4
Common Vegetation and Wildlife in the Project Area

Land use	Vegetation	Wildlife
Industrial/ Commercial	Limited vegetation, dominated by maintained landscapes and impervious surfaces such as foundations, pavement, fine gravel, or bare, compacted soils	Rodents, fox, raccoons, squirrels, snakes, and a variety of birds including the long-tailed shrew, and mourning dove
Forest	Black gum, red maple, red oak, white pine, sweetgum, and American hornbeam. Shrub species observed include multiflora rose, sweet pepper bush, highbush blueberry, and wineberry, as well as the vine poison ivy. Herbaceous species include Japanese stiltgrass and bladder sedge.	White-tailed deer, skunk, raccoon, squirrels, eastern chipmunk, rodents, snakes, and various bird species
Open Land	Ryegrass, Kentucky bluegrass, field clover, perennial ryegrass, mugwort, yellow foxtail, grass-leaved goldenrod, dogbane, switchgrass, multiflora rose, Canadian goldenrod, dandelion, common violet, broomsedge bluestem, and common cinquefoil.	Rodents, woodchuck, skunks, common garter snake, milksnake, North American racer, eastern whip-poor-will, and various ground nesting birds as well as foraging habitat for raptors such as the red-tailed hawk.
Wetlands	Vegetation types for PFO are same as Forest above. Vegetation within PEM wetlands include common reed and cat-tail.	Reptiles and amphibians such as American toads, salamanders, and spotted turtles; rodents, various bird species and raptors, fox

Three of the four potential contractor yards (Whippany Yard, Paradigm Yard, and the Livingston Mall Yard) and the CS 303 site are primarily classified as Industrial/Commercial. Forest vegetation is found at the CS 303 site, but the forest component is outside of the workspace and is fragmented and surrounded by Industrial/Commercial land use types. The Eagle Rock Yard and the Caldwell B&D right-of-way temporary workspaces are characterized as Open Land. While the CS 303 site and Whippany Yard are primarily characterized as

Industrial/Commercial, each of these also has some characteristics of Open Land. Wetlands were observed at the CS 303 site and Eagle Rock Yard during field surveys and surrounding the Whippany Yard. Table 5 describes the Project's impacts on each vegetation type. No protected or sensitive areas would be crossed or otherwise impacted by the Project.

Construction would temporarily impact areas covered in gravel and pavement (7.39 acres, excluding potential yards) and maintained lawn (1.79 acres). Permanent vegetation impacts (about 0.37 acres) would occur where the new aboveground facility upgrades and associated access roads are constructed; although, these are within industrial areas that are currently maintained lawn which is routinely disturbed by mowing. Tree cutting or tree limbing may occur when necessary to provide safe access and maneuvering of equipment. To minimize the spread of exotic and invasive plant species, Transco would implement management and control measures in accordance with Transco's Plan. Specific measures include the following: minimizing soil movement and the associated movement of non-native seeds; using techniques during restoration and revegetation that minimize the time that bare soil is exposed and susceptible to establishing exotic species; and monitoring restoration to ensure revegetation is successful. Given Transco's proposed measures and that all temporary workspaces would be revegetated, we conclude that the Project would not significantly impact vegetation.

Table 5
Vegetation Types Affected by Construction and Operation of the Project

Facilities	Upland Forest		PFO/PSS		Meadow		Maintained		PEM		Gravel/Pavement		Total	
	Const.[a]	Oper.[b]	Const.[a]	Oper.[b]	Const.[a]	Oper.[b]	Const.[a]	Oper.[b]	Const.[a]	Oper. b	Const.[a]	Oper.[b]	Const. a	Oper.[b]
Paterson M&R Station														
Aboveground Facilities	0	0	0	0	0	0	0	0	0	0	0.37	0	0.37	0.37
Subtotal	0	0	0	0	0	0	0	0	0	0	0.37	0	0.37	0.37
CS 303 Facility Site														
Aboveground Facilities	0	0	0	0	0	0	0	0.27	0	0	7.39	0	7.39	0.27
Access Roads	0	0	0	0	0	0	0	0.10	0	0	0	0	0	0.10
Temporary Workspace	0	0	0	0	0	0	1.79	0	0	0	0	0	1.79	0
Subtotal	0	0	0	0	0	0	1.79	0.37	0	0	7.39	0	9.18	0.37
Potential Contractor Yards														
Eagle Rock Yard	0	0	0	0	0	0	0.53	0	0	0	0	0	0.53	0
Whippany Yard	0	0	0	0	0	0	11.84	0	0.52	0	1.44	0	13.80	0
Paradigm Yard	0	0	0	0	0	0	0	0	0	0	14.60	0	14.60	0
Livingston Mall Yard	0.04	0	0	0	0	0	0	0	0	0	5.24	0	5.28	0
Paterson Yard #1	0	0	0	0	0	0	0	0	0	0	1.72	0	1.72	0
Paterson Yard #2	0	0	0	0	0	0	0	0	0	0	4.07	0	4.07	0
Paterson Yard #3	0	0	0	0	0	0	0	0	0	0	1.33	0	1.33	0

PEM = Palustrine Emergent
PSS = Palustrine Scrub/Shrub
PFO = Palustrine Forested
Contractor Yards have not been totaled as not all of the areas will be used.
Notes: For sites not yet surveyed aerial photography was used to determine cover type. Facility upgrades will occur within the existing operation area.
a: Includes temporary construction workspace within the existing operational areas and off-site areas. b: includes permanent cover type change (e.g. mowed lawn to gravel/pavement)

Potential short-term impacts on wildlife include the temporary displacement of individuals from construction areas and adjacent habitats and the direct mortality of small, less-mobile mammals, reptiles, and amphibians that are unable to leave the construction area. Construction of the Project could also impact nearby wildlife due to the increase in noise from construction equipment and increased human activity. There is an abundance of similar habitat for displaced wildlife to utilize during construction of the proposed facilities. Following construction all temporary workspaces would be revegetated. Therefore, we conclude that the Project would not have a significant impact on wildlife.

Migratory Birds

Migratory birds are species that nest in the U.S. 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. Migratory birds are protected under the Migratory Bird Treaty Act ([MBTA] – 16 U.S. Code 703-711), and Bald and Golden Eagles are additionally protected under the Bald and Golden Eagle Protection Act (16 U.S Code 668-668d). The MBTA, as amended, prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. Executive Order (EO) 13186 was enacted in 2001 to, among other things, ensure that environmental analyses of federal actions evaluate the impacts of actions on migratory birds. EO 13186 directs federal agencies to identify where unintentional take is likely to have a measurable negative effect on migratory bird populations and avoid, minimize, or mitigate adverse impacts on migratory birds through enhanced collaboration with the U.S. Fish and Wildlife Service (FWS), and emphasizes species of concern, priority habitats, and key risk factors, with particular focus given to population-level impacts.

The FWS and FERC entered into a Memorandum of Understanding between the Commission and the FWS regarding implementation of EO 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds" that focuses on migratory birds and strengthening migratory bird conservation through enhanced collaboration between the two agencies. This memorandum does not waive legal requirements under the MBTA, Bald and Golden Eagle Protection Act, the Endangered Species Act (ESA), or any other statutes, and does not authorize the take of migratory birds.

The FWS established the Birds of Conservation Concern which lists migratory nongame birds that, without additional conservation actions, were likely to become candidates for listing under the ESA (FWS 2008). The Project would cross Bird Conservation Region 29 (Piedmont Region).

Some indirect impacts caused by construction activity and noise could occur during the construction period. Some birds may leave the area as construction activities commence and relocate to available habitat nearby. The general nesting season for migratory birds is April 15-August 1. Transco anticipates mobilization and construction of the Project to begin in August 2019, outside of the general nesting season for migratory birds. No tree clearing is proposed. Only minor tree cutting or tree limbing may occur when necessary to provide safe access and maneuvering of equipment, as most of the Project would occur in gravel-covered areas or previously disturbed areas that are routinely maintained. If tree clearing becomes necessary, Transco would only cut trees outside of the active season for Indiana and northern long-eared bats

(April 1- September 30) which is also outside of the general migratory bird nesting season. Because abundant similar habitats exist adjacent to the Project and throughout the vicinity, displaced species can relocate to these adjacent habitats. No major alterations to migratory bird use and occurrence patterns, or to ecosystems or biodiversity, would occur from the Project.

Foraging habitat for the bald eagle is mapped by the New Jersey Landscape Project within and in the immediate vicinity the CS 303 site and nesting and foraging habitat within each potential contractor yard. While the bald eagle may be associated with the Passaic River, approximately 500 feet from the Project, the CS 303 site and each potential yard site is currently industrial/commercial land, and it is unlikely that bald eagle would use the site for foraging and the adjacent forest for nesting. Additionally, according to the 2017 New Jersey Bald Eagle Project, no bald eagle nests were documented in the vicinity of the CS 303 site or each potential yard site (NJDEP 2017). Modifications at the Paterson M&R and use of associated yard sites would be conducted on land that is paved and located in an industrial setting.

For the reasons given above, we conclude that the Project would not result in significant impacts on migratory birds or bald eagles.

4.2 Threatened and Endangered Species

Section 7 of the ESA requires each federal agency to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of federally listed threatened or endangered species or result in the destruction or adverse modification of the designated critical habitat for any federally listed species. FERC, as the lead agency, is required to consult with the FWS to determine whether federally listed species, species proposed for listing, or their designated critical habitat may occur in the Project area and determine the Project's potential effects on these species and critical habitats.

A Memorandum of Agreement between New Jersey, the FWS, and the EPA establishes the agencies' permitting process for review of potential impacts on federally and state-listed species (FWS 1993). The MOA establishes that the review process begins with the submission of permit applications to the NJDEP. The NJDEP-Endangered and Nongame Species Program will review the Project and Transco's proposed avoidance and minimization measures. The NJDEP would then provide the Project application to the FWS for review and comment in regards to potential impacts on federally-listed species or designated critical habitat. The permit review process with the NJDEP is ongoing.

Transco utilized the FWS online database, Information for Planning and Consultation (IPAC), to identify the federally listed species potentially present in the Project area. The Indiana bat, northern long-eared bat, and bog turtle were identified as potentially present within the Project workspaces.

Indiana Bat and Northern Long-eared Bat

According to IPAC, the Indiana bat and northern long-eared bat were identified as potentially present at the CS 303 site (including the Eagle Rock Yard), the Paterson M&R, and at all of the potential contractor yards. However, the New Jersey Landscape Project data only identified the northern long-eared bat at or within a 0.25-mile of CS 303 site, Whippany Yard, and

Paradigm Yard. The New Jersey Landscape Project data identified the Indiana bat within a 0.25-mile of the Livingston Mall Yard. Potential summer habitat for Indiana bats features at least 16 suitable roost trees per acre. Tree characteristics such as loose or shaggy bark, crevices, and hollows are more important than tree species. The northern long-eared bat is comparable to the Indiana bat in terms of summer roost selection, but appears to be more opportunistic. Municipalities where the Project areas are located do not contain documented roost trees and are not within 0.25-mile from known hibernacula for the northern long-eared bat (FWS 2017). While bats may be present in the adjacent forested areas. The Project would occur in gravel-covered industrial areas or previously disturbed areas that are routinely maintained. No tree clearing is proposed; only minor tree cutting or tree limbing may occur when necessary to provide safe access and maneuvering of equipment. If tree clearing becomes necessary, Transco would only cut trees outside of the active season (April 1- September 30). Therefore, we conclude that the Project *may affect but is not likely to adversely affect* the Indiana bat and the northern long-eared bat.

While we have determined that the Project may affect the northern long-eared bat, incidental take of northern long-eared bats as a result of Project tree clearing is not prohibited under Section 9 of ESA because the Project design meets the conservation requirements of the final rule under Section 4(d) of ESA for the species (81 FR 1900). Specifically, the Project is not within 150 feet of any known, occupied maternity roosts or within 0.25-mile of any known, occupied hibernacula. The streamlined consultation form for the northern long-eared bat is included as appendix C.

Bog Turtle

According to IPAC, the bog turtle was identified as potentially present at the CS 303 site (including the Eagle Rock Yard) and at all of the potential contractor yards. Bog turtles generally occupy wetlands with open-canopy, herbaceous sedge meadows and fens bordered by wooded areas. Wetlands include dry pockets, saturated areas, and areas that are periodically flooded. The NJDEP Natural Heritage Database and Landscape Project does not identify Essex County as containing bog turtles, nor does it identify bog turtles as being present at any of the Project sites. Also, field investigations did not identify potential habitat on or adjacent to the CS 303 site.

No wetlands would be directly impacted by the proposed activities, and activities would primarily take place within graveled industrial areas. Therefore, we conclude that the Project would have *no effect* on the bog turtle.

Given that environmental surveys have not been completed for the potential contractor yards and we require concurrence with our determination of effect for the Indiana bat to complete ESA consultation, **we recommend that:**

Transco should not begin construction of the Project until:

a. all necessary surveys have been completed;

b. the staff receives comments from the FWS regarding the proposed action;

c. the FERC staff completes any necessary ESA Section 7 consultation with the FWS; and

d. Transco has received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin.

State-listed Species

Transco used the NJDEP's Landscape Project to evaluate the presence of imperiled and special concern species habitat in the area. A number of state-listed species were identified as being potentially present within the Project area.

In a letter dated February 14, 2018, the NJDEP's Division of Land Use Regulation stated that no adverse impacts on threatened and endangered species are anticipated at the Paterson M&R station. At the Roseland M&R station, documented and suitable habitat for the blue spotted salamander is located within 1 mile downstream; therefore, a 150-foot riparian zone buffer, within which no Project construction activities would occur, shall apply and no adverse impacts on this species are anticipated. Additionally, preliminary review indicates that wetlands at the Roseland M&R are not suitable habitat for threatened and endangered species. However, exceptional wetlands for the barred owl are within 150 feet of the property, and Transco has agreed to extend a 150-foot buffer from the property line onto the site, within which no Project construction activities would occur. Therefore, no adverse impacts on threatened and endangered species are anticipated at the Roseland M&R station. The NJDEP further stated that any forthcoming Land Use freshwater wetland permits are also contingent upon FWS reviews.

Field surveys did not identify habitat for state-listed species within the proposed workspace of the CS 303 site. Given the existing industrial site conditions, it is unlikely that habitat for any state-listed species would be found during field surveys at the proposed contractor yards. However, should state-listed species habitat be identified during field surveys at the proposed contractor yards, Transco would consult with the NJDEP to develop avoidance and/or mitigation measures. Any additional protective measures would be incorporated as conditions of applicable state permits. Therefore, we conclude that the Project would not adversely affect state-listed species.

5.0 CULTURAL RESOURCES

Transco had assessed all proposed workspaces and contractor yards outside of their existing facilities for cultural resources. The areas reviewed were the Whippany Yard, Paradigm Yard, and Livingston Mall Yard or adjacent to CS 303 (Eagle Rock Yard), Roseland M&R, Roseland Electric Substation, and Paterson M&R (Patterson Contractor Yard 1, 2, and 3). The area of potential effects (APE) consists of the 9.3 acres to be directly impacted and the area that may be indirectly affected by the Project is 1/8 mile buffer adjacent to the Project areas.

The Pennsylvania-New Jersey Interconnection Bushkill to Roseland Transmission Line, Roseland Witching Station, and the PSEG Company Northern Inner Ring Transmission Line are industrial resources that are within the direct APE. Furthermore, historic resources consisting of the C. Degrado Silk Dyeing Company, Erie Railroad Main Line Historic District, and Paterson Viaduct Historic District are within the indirect APE. Precontact archaeological resources identified within the APE were the Abraham Steppel (28MR0001) and Benjamin Steppel (28MR0053) sites. Transco recommended avoidance of 28MR0001 and 28MR0053, and that no historic properties would be affected by the Project.

In a letter dated October 2, 2017, Transco provided a cultural resources survey report to the New Jersey State Historic Preservation Officer (SHPO). In a letter dated November 14, 2017, the New Jersey SHPO stated there would be no adverse effects to the Pennsylvania-New Jersey Interconnection Bushkill to Roseland Transmission Line, Roseland Witching Station, PSEG Company Northern Inner Ring Transmission Line, C. Degrado Silk Dyeing Company, Erie Railroad Main Line Historic District, and Paterson Viaduct Historic District. We agree. However, the New Jersey SHPO required that Transco provide a detailed avoidance plan for workspace adjacent to the Abraham Steppel (28MR0001) and Benjamin Steppel site (28MR0053) sites prior to providing comments regarding archaeological resources. Transco has not filed additional comments by the New Jersey SHPO or avoidance plans.

In letters dated September 11 and 12, 2017, Transco contacted the following federally-recognized tribes (Tribes): Delaware Nation, Delaware Tribe, and Stockbridge-Munsee Band of Mohicans. The Delaware Nation responded on November 7, 2017, agreeing with the proposed Project plan, and provided their concerns with preservation of known resources, reintroduction of indigenous plants, and being notified of an unanticipated discovery. The Stockbridge-Munsee Band of Mohicans responded on November 30, 2017, agreeing with the avoidance of 28MR0001 and 28MR0053 and to be notified if an unanticipated discovery of human remains is encountered. No additional responses from Tribes have been filed.

In a filing dated February 14, 2018, Transco submitted a revised Unanticipated Discovery Plan. The New Jersey SHPO responded on March 12, 2018, agreeing with the plan, and we find the plan acceptable.

Compliance with Section 106 of the NHPA has not been completed for the Project. To ensure that the FERC's responsibilities under the NHPA and its implementing regulations are met, **we recommend that:**

Transco should <u>not begin</u> construction of facilities and/or use of all staging, storage, or temporary work areas and new or to-be improved access roads <u>until</u>:

a. Transco files with the Secretary:

i. reports, studies, or plans of additional cultural resources surveys;

ii. site-specific avoidance and/or treatment plan(s), as required; and

iii. comments on reports and plans from the New Jersey SHPO;

b. the ACHP 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 avoidance and/ or treatment measures, as required, 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: "CUI//PRIV – DO NOT RELEASE". Additionally, a letter must be filed public that states that these items have been filed PRIV.

6.0 LAND USE, RECREATION, AND VISUAL RESOURCES

Construction of the Project, excluding proposed contractor yards, would disturb about 9.43 acres of land during construction. All work would be completed within existing operational boundaries. Construction at the existing CS 303, Roseland M&R, and Roseland Electric Substation would be contained within the existing operational area of the CS 303 site and a portion of the Caldwell B&D right of way. Work at the Paterson M&R would occur within the facility itself. There are no residences within 50 feet of the Project.

6.1 Land Use

The proposed upgrades would occur within existing operational facilities. The predominant land uses characterized within the Project include Industrial/Commercial; other land uses identified include Open Land, Forest, and Wetland. Due to the nature of the modifications, once the Project is complete, there would be no change in the Industrial/Commercial land use that currently exists. Open land would be disturbed during construction for temporary workspace and would be restored to pre-construction conditions according to the Projects SESCP and Transco's Plan and Procedures. If impacted, forested areas would be restored. Wetlands would not be directly impacted by the Project; to minimize indirect wetland impacts as a result of construction, Transco would implement its Plan and Procedures and the SESCP. Land use impacts would be limited to construction impacts, including 9.43 acres of industrial/commercial use for the facilities. The proposed contractor yards, if selected, would impact 0.04 acres of forest, 0.53 and 11.84 acre of open land, 1.33 and 14.60 acres of industrial/commercial land, and/or 0.52 acre of wetland. Once the final contractor yards are selected, Transco has stated it would adjust the Project's limits of disturbance to avoid direct impacts on wetlands.

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Construction of the facilities could result in short-term impacts on adjacent Industrial/Commercial and Residential land uses, including increased construction-related traffic, dust, and noise generated during construction. Transco would minimize these impacts through implementation of mitigation measures which include:

- Construction activities would occur during daytime hours, which FERC defines as 7:00 AM to 7:00 PM;

- If applicable, safety fencing would be installed around the edge of the construction area;

- As many trees as possible would be left on the property. Branches may be trimmed to allow for safe operation and passage of construction equipment. Any vegetation cleared from the property would be disposed of as negotiated by the landowner and Transco;

- Lawns and landscaping would be restored to pre-construction conditions, as would any walls or other structures that were damaged or removed during construction, as negotiated by the landowner and Transco;

- Transco would take all measures necessary to ensure that utilities are not disrupted during construction. If the need to disrupt utilities arises, Transco would provide as much notice as possible to the landowner prior to the disruption;

- Clean-up and backfill would occur immediately following installation;

- Re-vegetation would occur at the first seasonal opportunity;

- Affected landowners and adjacent landowners would be notified no later than two weeks prior to the start of construction;

- Traffic flow and emergency vehicle access would be maintained on residential roadways and traffic detail personnel and/or detour signs would be used where appropriate;

- Any section of the excavation left open at the end of the workday would be fenced off or covered with a steel plate; and

- Road surfaces near residences would be periodically inspected and, if necessary, cleaned of any soil and other debris.

6.2 Recreation

The Project would not cross nor would be located within 0.25 mile of any National Park System Unit, which includes national parks, monuments, preserves, historic sites, historical parks, memorials, battlefields, military parks, cemeteries, recreation areas, seashores, lakeshores, rivers, parkways, trails, and other designations. The Project would not cross nor would be located within

0.25 mile of any Native American reservations, National Wildlife Refuges, National Wilderness Areas, or registered National Landmarks. No National Wild and Scenic Rivers Systems occur within the Project. The Project would not cross nor would located within 0.25 mile of any roads designated as National Scenic Byways, any national or state scenic trails, state Wildlife Management Areas, or local recreational areas.

Two potential contractor yards were identified that may impact land protected through the Green Acres Program; the Eagle Rock Yard, and the Caldwell B&D right-of-way workspace. Green Acres regulations prohibit use of preserved open space properties for other than recreation and conservation purposes. Transco may use the Eagle Rock Yard as a contractor yard and staging area. Under Green Acres regulations, the use of this property for temporary workspace is not considered a diversion from use. The Eagle Rock Yard was donated by Transco to Essex County in 2011, with rights reserved to use the property in connection with projects, so administrative approval is not needed for this contractor yard. Transco would use temporary workspace along its existing easement on the Caldwell B&D right-of-way which would require administrative approval from the NJDEP Commissioner as it is part of the West Essex Park Conservancy. The park is located along 6 miles of the Passaic River and is primarily a wetlands preserve and recreational area, featuring a driving range, miniature golf, fishing areas, trails and birdwatching. Of the remaining contractor yards, the Whippany Yard is located within the New Jersey Highlands Planning Area, but not within the preservation area.

The Whippany Yard is adjacent and near the Troy Meadows National Natural Landmark. If the Project selects either of these locations for the contractor yard, precautions would be taken to utilize only upland areas and limit the site's use to designated areas. An approved SESCP would be implemented as well. The Paradigm Yard is adjacent to the Hanover Park High School ball fields. If selected for use by the Project, an approved SESCP would be implemented, and activities would be limited to the yard site and would not impact the ballfield.

There are no outdoor recreation areas adjacent to or near the Livingston Mall Yard. This yard is adjacent to the Livingston Mall, and the Project would take precautions to not impact the activities at the mall if this location is selected for use.

Contractor yard ownership and access negotiations for possible selection and construction are underway. The Eagle Rock Yard is owned by Essex County; previously owned by Transco. Transco reserved a non-exclusive easement in the deed for use of the property in connection with project work. The Whippany site is owned by CDMG Realty, who has signed an Option to Lease and granted access to Transco. The Livingston Mall site is owned by Simon Companies, who has also granted access. Proposed terms of lease have been sent to the owner of this parcel. Paradigm site is owned by Paradigm East Hanover, LLC and 77 Charters, Inc. No access has been granted to this site. Proposed terms of survey entry agreement have been sent to the owner. All selected contractor yards would be restored to pre-construction condition once construction activities are concluded. No impacts are expected from the temporary use. Because of the location and limited scope of the construction and operation of facilities, no impacts are expected on recreation in the Project area.

6.3 Visual Resources

Temporary visual impacts would occur from construction equipment and activity in the viewshed. Proposed activities at the facilities would have negligible to no impact on visual resources as any ground-disturbing would be limited to within existing fence lines of existing facilities and would not include the removal of trees or shrubs. All modified and new aboveground facilities would be constructed within or immediately adjacent to existing Transco facilities. All modifications are within the existing site and upon completion of construction, the landscape would be contoured and revegetated to pre-construction conditions.

The Project would not be located within a Coastal Zone Management Area. Additionally, the Project would not be located within any federal, state, or locally designated scenic areas. The expansion of Transco's existing CS 303 site facilities would have minor impacts on visual resources as new aboveground structures would be added.

Based on the land use surrounding the proposed Project area and the limited number of viewpoints, we believe that the proposed Project would have a minimal impact on visual resources.

7.0 AIR QUALITY AND NOISE

7.1 Air Quality

Air quality would be affected by construction and operation of the Project. During construction, short-term emissions would be generated by operation of equipment, land disturbance, and increased traffic from worker and delivery vehicles for all locations. Operation of modified CS 303 would result in minimal long-term air emissions, as presented below. Other operational emissions for the proposed facility components would be negligible.

Ambient air quality is protected by federal and state regulations. Under the Clean Air Act (CAA) and its amendments, the EPA has established National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO,) ozone, particulate matter less than 10 microns (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), and sulfur dioxide (SO_2). The NJDEP has the authority to implement permit programs under the CAA for the proposed Project facilities.

These standards incorporate short-term (hourly or daily) levels and long-term (annual) levels to address acute and chronic exposures to the pollutants, as appropriate. The NAAQS include primary standards, which are designed to protect human health, including the health of sensitive subpopulations such as children and those with chronic respiratory problems. The NAAQS also include secondary standards designed to protect public welfare, including economic interests, visibility, vegetation, animal species, and other concerns not related to human health. New Jersey has adopted all of the NAAQS along with additional state regulated standards. All counties in the Project area are in nonattainment for Ozone and in maintenance for $PM_{2.5.}$ In addition, Essex and Passaic Counties are in maintenance for CO. For all other pollutants, the project area counties are in attainment or unclassified.

Air quality control regions (AQCRs) are areas established by the 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. Essex, Passaic, and Morris Counties, New Jersey are part of the New Jersey-New York-Connecticut Interstate AQCR.

In addition, New Jersey is included in the Ozone Transport Region. This region, established under the CAA, includes 11 northeastern states in which ozone transports from one or more states and contributes to a violation of the ozone 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 ozone NAAQS.

Greenhouse Gases

Greenhouse gases occur in the atmosphere both naturally and as a result of human activities, such as the burning of fossil fuels. GHGs are gases that absorb infrared radiation in the atmosphere, and an increase in emissions of these gasses has been determined by the EPA to endanger public health and welfare by contributing to human-induced global climate change. The most common GHGs emitted during fossil fuel combustion and natural gas transportation are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Emissions of GHGs are typically expressed in terms of CO_2 equivalents (CO_2e), where the potential of each gas to increase heating in the atmosphere is expressed as a multiple of the heating potential of CO_2 over a specific timeframe, or its global warming potential (GWP). The 100-year GWP of CO_2 is 1, CH_4 is 25, and N_2O is 298. During construction and operation of the Project, these GHGs would be emitted from non-electrical construction and operational equipment, as well as from fugitive CH_4 leaks from the pipeline and aboveground facilities. Construction and operational emissions of GHGs are shown in tables 6 and 7.

On November 8, 2010, the EPA signed a rule that finalizes reporting requirements for the petroleum and natural gas industry under 40 CFR 98. Subpart W of 40 CFR 98 requires petroleum and natural gas facilities that emit 25,000 metric tons or more of CO_2e per year to report annual emissions of specified GHGs from various processes within the facility. Construction emissions are not covered under the GHG Reporting Rule, but those related to the proposed Project are expected to be well below the 25,000 metric tons reporting threshold. Operational emissions from the proposed facilities are likewise not expected to exceed this threshold and be reported to the EPA. The EPA has expanded its regulations to include the emission of GHGs from major stationary sources under the Prevention of Significant Deterioration (PSD) program. The EPA's current rules require that a stationary source that is major for a non-GHG-regulated New Source Review pollutant must also obtain a PSD permit prior to beginning construction of a new or modified major source with mass-based GHG emissions equal to or greater than 100,000 tons per

year (tpy) and significant net emission increases in units of CO_2e equal to or greater than 75,000 tpy. There are no NAAQS or other significance thresholds for GHGs.

7.1.1 Permitting/Regulatory Requirements

New Source Performance Standards

The EPA promulgates New Source Performance Standards 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. Subpart OOOOa (Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After September 18, 2015) would apply to pneumatic controllers, reciprocating compressors, and the collection of fugitive emissions components at compressor sites. Transco would be required to develop a fugitive emissions monitoring plan and performance of emissions monitoring surveys of fugitive emissions components at CS 303.

General Conformity

The EPA promulgated the General Conformity Rule to implement the conformity provision of Title I, Section 176(c)(1) of CAA. Section 176(c)(1) requires that the federal government not engage, support, or provide financial assistance for licensing or permitting, or approve any activity not conforming to, an approved CAA implementation plan.

The General Conformity Rule is codified in Title 40 CFR Part 51, Subpart W and Part 93, Subpart B, Determining Conformity of General Federal Actions to State or Federal Implementation Plans. A conformity determination must be conducted by the lead federal agency if a federal action's construction and operational activities is likely to result in generating direct and indirect emissions that would exceed the conformity threshold (*de minimis*) levels of the pollutant(s) for which an air basin is in nonattainment or maintenance. According to the conformity regulations, emissions from sources that are subject to any NNSR or PSD permitting/licensing (major or minor) are exempt and are deemed to have conformed.

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. Section 176(c)(1) states that a federal agency cannot approve or support any activity that does not conform to an approved State Implementation Plan. 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 in a nonattainment and maintenance area. These counties are designated as moderate nonattainment for ozone, as well as being in the Ozone Transport Region, need to be evaluated for VOC and NO_x precursors. These areas are also designated as maintenance areas for CO and $PM_{2.5}$, and thus need to be evaluated for CO, $PM_{2.5}$, NO_x, and SO_2. The associated General Conformity Applicability thresholds are 50 tons per year (tpy) for VOC and NO_x and 100 tpy for CO, $PM_{2.5}$, NO_x, and SO_2. As shown in tables 7 and 8 below, the construction and operational emissions would be below the general conformity applicability thresholds in non-attainment or maintenance area for the Project. Therefore, a General Conformity Determination is not required.

7.1.2 Construction Impacts and Mitigation

Construction of the Project would result in short-term increases in emissions of some pollutants from the use of fossil fuel-fired equipment and the generation of fugitive dust due to earthmoving activities. 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, could also occur. Large earth-moving equipment and other mobile equipment are sources of combustion-related emissions, including criteria pollutants (i.e., NO_x, CO, VOC, SO_2, and PM_{10}).

Transco would mitigate exhaust emissions from construction equipment by requiring contractors to meet all air quality regulations and emission standards associated with each piece of equipment, use low-sulfur diesel fuel in non-road construction equipment, and limit idling of diesel and gasoline powered on-road vehicles and non-road construction equipment operating at, or visiting, the construction site to less than three consecutive minutes. Transco would post idling limit signs within the Project area. Construction emissions for the Project are presented in table 6. These emissions present the combined emissions for each facility of construction equipment combustion, on-road vehicle travel, off-road vehicle travel, and earthmoving fugitives.

Table 6 Estimated Construction Emissions (tons per year)								
Facilities	**NO_x**	**CO**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**Total HAPs**	**GHG[a] (CO_{2e})**
2019								
CS 303	5.51	11.96	0.79	3.90	1.34	0.01	<0.01	1,760.75
Roseland M&R	-	-	-	-	-	-	-	-
Paterson M&R	-	-	-	-	-	-	-	-
2019 Total	**5.51**	**11.96**	**0.79**	**3.90**	**1.34**	**0.01**	**<0.01**	**1,760.75**
2020								
CS 303	11.01	23.91	1.58	7.91	2.67	0.02	<0.01	3,521.54
Roseland M&R	3.55	8.41	0.53	2.42	0.86	0.01	<0.01	1,287.58
Paterson M&R	6.46	17.75	1.00	4.67	1.61	0.01	<0.01	2,349.34
2020 Total	**21.02**	**50.07**	**3.11**	**15.0**	**5.14**	**0.04**	**<0.01**	**7,158.46**
Project Total	**26.53**	**62.03**	**3.90**	**18.9**	**6.48**	**0.05**	**<0.01**	**8,919.21**
General Conformity Thresholds	**50**	**100**	**50**	**100**	**100**	**100**	**-**	**-**

[a] All construction emissions are expected to occur between August 2019 and October 2020

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 for each area of the Project. 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 NONROAD2008a and MOVES2014 emission modeling software.

Construction would occur between August 2019 and October 2020. The air quality impacts of Project construction are considered short-term and would be further minimized by Transco's implementation of fugitive dust control measures outlined in the Fugitive Dust Plan such as watering exposed soil surfaces, applying temporary mulch, and expediting restoration and revegetation activities. Following construction, air quality would revert back to previous conditions.

Given the temporary nature of construction, and the intermittent nature of construction emissions, we find that emissions from construction-related activities for the Project are not expected to cause or significantly contribute to a violation of any applicable ambient air quality standard, or significantly affect local or regional air quality.

7.1.3 Operational Impacts and Mitigation

Emission generating modifications at CS 303 include a new 33,000hp electric driven compression unit and gas cooling equipment. There would be no fuel combustion operational emissions at CS 303 associated with the Project. Operational emissions associated with the Roseland M&R modifications would include fugitive and blowdown emissions from the additional block valve. Operational emissions associated with the modifications at the Paterson M&R would include fugitive, blowdown, and condensate storage tank emissions. Operational emission estimates are presented in table 7.

Table 7 Estimated Operational Impacts (tons per year)								
Facility	**County**	**NO_x**	**CO**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**Total HAPs**	**GHG**
CS 303	Essex, NJ	0.00	0.00	1.18	0.00	0.00	0.02	3,542.37
Roseland M&R	Essex, NJ	0.00	0.00	0.03	0.00	0.00	<0.01	423.13
Paterson M&R	Passaic, NJ	0.00	0.00	3.42	0.00	0.00	0.09	439.75
Total		**0.00**	**0.00**	**3.45**	**0.00**	**0.00**	**0.10**	**862.88**

Considering the minimal operational emissions associated with the Project, it would not have a significant impact on air quality.

7.2 NOISE

Construction and operation of the Project would affect the local noise environment in the Project area. The ambient sound level of a region, which is defined by the total noise generated within the specific environment, is usually comprised of sounds emanating from both natural and artificial sources. At any location, both the magnitude and frequency of environmental noise may vary considerably over the course of the day and throughout the week, in part due to changing weather conditions and the impacts of seasonal vegetative cover.

Two measurements used by some federal agencies to relate the time-varying quality of environmental noise to its known effects on people are the equivalent sound level (L_{eq}) and the day-night sound level (L_{dn}). The L_{eq} is an A-weighted sound level containing the same sound energy as the instantaneous sound levels measured over a specific time period. 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, in the calculation of the L_{dn}, late night to early morning (10:00 p.m. to 7:00 a.m.) noise exposures are penalized +10 decibels (dB), to account for people's greater sensitivity to sound during the nighttime hours. The A-weighted scale (dBA) is used because human hearing is less sensitive to low and high frequencies than mid-range frequencies. 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. 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. Because noise levels are perceived differently, depending on length of exposure and time of day, the day-night sound level (L_{dn}) takes into account the duration and time the noise is encountered. Specifically, the L_{dn} adds 10 dBA 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. 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. 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 the loud.

New Jersey also has noise regulations that are applicable to the Project, which states that continuous airborne sound at the receiving residential property line is not to exceed an A-weighted sound level of 65 dBA during daytime hours (7:00 AM to 10:00 PM) and 50 dBA during night time hours (10:00 PM to 7:00 AM). Continuous airborne sound at an industrial or commercial property line shall not exceed 65 dBA during any time of the day or night. The regulation also sets maximum permissible unweighted octave-band sound pressure levels that should not be exceeded. No applicable county or local noise regulations have been identified for the Project.

7.2.1 Construction Noise Impacts and Mitigation

Construction of the facilities would involve operation of general construction equipment and noise would be generated during the installation of the Project components. 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.

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. Noise from construction activities may be noticeable at nearby NSAs. However, construction equipment would be operated on an as-needed basis during the short-term construction period. Further, Transco would limit construction activities to occur during daytime hours, and FERC staff considers daytime hours to be 7:00AM to 7:00 PM.

Because of the varied locations of activities, and that construction of the Project would be limited to daytime hours and intermittent, we conclude construction noise would not have a significant impact on the environment.

7.2.2 Operational Noise Impacts and Mitigation

The modified CS 303 and associated equipment would generate operational noise. Hoover and Keith, Inc. (H&K) completed a pre-construction sound survey and noise analysis on September 6, 2017 for the CS 303, Roseland M&R and Paterson M&R using baseline sound surveys, sound level data for the specific equipment planned for the facility, and calculations for the noise attenuation over distance and proposed noise control measures. The existing noise sound levels, estimated sound levels from the proposed sources, total noise sound levels, and noise increases were calculated.

Compressor CS 303

H&K identified 4 NSAs within 0.5 mile from the facility that include residences, the outdoor recreation area and Welcome Center of the Essex County Environmental Center, and the Roseland Ambulatory Surgery Building. As shown in table 8, the estimated noise from the modifications at the compressor station is below the FERC's noise criterion of 55 dBA. The modified facility would utilize a muffler system to control normal unit blowdown noise.

Table 8 Noise Quality Analysis – CS 303					
NSA	**Distance/ Direction**	**Existing facilities + ambient Ldn (dBA)**	**Estimated noise from new facilities Ldn (dBA)**	**Total L_{dn} (dBA)**	**Potential Noise Increase (dBA)**
1	1,100 feet/(SW)	48.8	43.2	49.9	1.1
2	900 feet/(WNW)	42.8	45.3	47.2	4.4
3	500 feet/(NW)	50.1	51.1	53.6	3.5
4	840 feet/(E)	48.6	46.0	50.5	1.9

With these measurements, to ensure that the noise at the CS 303 does not become significant, **we recommend that:**

> **Transco should file noise surveys with the Secretary no later than 60 days after placing the modified CS 303 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 the modified CS 303, 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.**

Roseland M&R

H&K identified 4 NSAs within 0.5 mile from the facility that include residences, the outdoor recreation area and Welcome Center of the Essex County Environmental Center, and the Roseland Ambulatory Surgery Building. Of the 4 NSAs identified for this site, measurements show existing noise levels to be above 55 dBA at NSA 3 for the Roseland M&R, with traffic being the dominant noise source in the area. The estimated contribution from the Roseland M&R modifications are imperceptible. There are no other noise sources associated with the Project. The results of the noise analysis for the Roseland M&R are summarized in table 9 for the impacts at the nearest NSAs.

Table 9 Noise Quality Analysis – Roseland M&R					
NSA	**Distance/ Direction**	**Existing facilities + ambient Ldn (dBA)**	**Estimated noise from new facilities Ldn (dBA)**	**Total L_{dn} (dBA)**	**Potential Noise Increase (dBA)**
1	1,000 feet/ (W)	48.1	35.4	48.3	0.2
2	1,560 feet/ (NW)	51.5	28.1	51.5	0.0
3	1,200 feet/ (NNW)	58.6	31.2	58.6	0.0
4	750 feet/ (E)	54.0	38.6	54.1	0.1

Paterson M&R

There were 2 identified NSAs associated with this location, both residences. Measurements show existing noise levels to be above 55 dBA at NSA 1 for the Paterson M&R, with traffic being the dominant noise source in the area and the M&R modifications contribution being imperceptible. There are no other noise sources associated with the Project. The results of the noise analysis for the Paterson M&R are summarized in table 10 for the impacts at the nearest NSAs.

Table 10
Noise Quality Analysis – Paterson M&R

NSA	Distance/ Direction	Existing facilities + ambient Ldn (dBA)	Estimated noise from new facilities Ldn (dBA)	Total L_{dn} (dBA)	Potential Noise Increase (dBA)
1	500 feet/ (E)	58.7	45.9	58.9	0.2
2	800 feet/ (W)	52.4	39.2	52.6	0.2

We received comments that the modifications at the proposed Project would create a noise increase. Based on the noise analysis and with the implementation of FERC's recommendations presented in the noise section above, the noise generated from the modifications would not cause a substantial increase to the existing noise. 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 or aboveground interconnect site 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 the Project facilities 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's Pipeline and Hazardous Materials Safety Administration ensures that people and the environment are protected from the risk of pipeline incidents. This work is shared with state agency partners and others at the federal, state, and local level.

The DOT provides for a state agency to assume all aspects of the safety program for intrastate facilities by adopting and enforcing the federal standards. 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. The class

location unit is an area that extends 220 yards on either side of the centerline of any continuous 1-mile length of pipeline. 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. The existing CS 303 Site is located in a Class 2 location and the Paterson M&R in a Class 3 location. Modifications to existing facilities, as well as proposed new facilities would be designed to meet existing Class requirements.

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.

High Consequence Areas

Under 49 CFR 192.903, operators must develop integrity management programs for natural gas transmission pipelines located in High Consequence Areas (HCAs). Definitions and identification of HCAs as defined in 49 CFR 192.903 are as follows:

"High consequence area" means an area may be defined in one of two ways. In the first method an HCS includes:

- A Class 3 location under §192.5; or
- A Class 4 location under §192.5; or
- Any area in a Class 1 or Class 2 location where the potential impact radius is greater than 660 feet (200 meters), and the area within a potential impact circle contains 20 or more buildings intended for human occupancy; or
- Any area in a Class 1 or Class 2 location where the potential impact circle contains an identified site.

In the second method, and HCS includes any area within a potential impact circle which contains:

- 20 or more buildings intended for human occupancy, unless the exception in paragraph (4) applies; or

- An identified site.

Where a potential impact circle is calculated under either method to establish a high consequence area, the length of the high consequence area extends axially along the length of the pipeline from the outermost edge of the first potential impact circle that contains either an identified site or 20 or more buildings intended for human occupancy to the outermost edge of the last contiguous potential impact circle that contains either an identified site or 20 or more buildings intended for human occupancy.

Identified site means each of the following areas:

- An outside area or open structure that is occupied by 20 or more persons on at least 50 days in any 12-month period (days need not be consecutive). Examples include but are not limited to, beaches, playgrounds, recreational facilities, camping grounds, outdoor theaters, stadiums, recreational areas near a body of water, or areas outside a rural building such as a religious facility; or

- A building that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period (days and weeks need not be consecutive). Examples include but are not limited to, religious facilities, office buildings, community centers, general stores, 4-H facilities, or roller skating rinks; or

- A facility occupied by persons who are confined, are of impaired mobility, or would be difficult to evacuate. Examples include but are not limited to hospitals, prisons, schools, daycare facilities, retirement facilities, or assisted-living facilities.

HCAs are located along the Project at the following locations:

• CS 303 Site – This location falls within the limits of an HCA

• Paterson M&R – This location falls within the limits of an HCA

8.1 Terrorism

A comment was submitted concerning how Transco would protect the site against terrorist activity. Safety and security concerns have changed the way pipeline operators as well as regulators must consider terrorism, both in approving new projects and in operating existing facilities. The U.S. Department of Homeland Security, Office of Homeland Security is tasked with the mission of coordinating the efforts of all executive departments and agencies to detect, prepare for, prevent, protect against, respond to, and recover from terrorist attacks within the United States. Among its responsibilities, the Office of Homeland Security oversees the Homeland Infrastructure Threat and Risk Analysis Center, which analyzes and implements the National Critical Infrastructure Prioritization Program that identifies and lists Tier 1 and Tier 2 assets. The Tier 1 and Tier 2 lists are key components of infrastructure protection programs and are used to prioritize infrastructure protection, response, and recovery activities.

The Commission, in cooperation with other federal agencies, industry trade groups, and interstate natural gas companies, is working to improve pipeline security practices, strengthen communications within the industry, and extend public outreach in an ongoing effort to secure pipeline infrastructure. Unfortunately, we are unable to provide more details in this analysis. The Commission is faced with the dilemma of how much information can be offered to the public while still providing a significant level of protection for facilities and pipelines. Consequently, energy facility design plans and location information have been removed from its website to ensure that sensitive information filed under Critical Energy Infrastructure Information is not readily available (RM02-4-000 and PL02-1-000, issued February 20, 2003).

The likelihood of future acts of terrorism or sabotage occurring at the proposed facilities, or at any of the myriad of natural gas pipeline or energy facilities throughout the United States, is unpredictable given the disparate motives and abilities of terrorist groups. The continuing need to construct facilities to support the future natural gas pipeline infrastructure is not diminished from the threat of any such future acts.

We received comments concerning safety issues on the pipeline capacity utilization and over pressurization. Transco states that while utilization of CS 303 horsepower is relatively low on an annual basis, the station is essential for meeting customer demand during times of high system capacity utilization, such as periods of prevailing cold, and that pipeline pressures are not being increased as part of this Project.

We received comments concerning Transco' plans for blowdown announcements and education for public and first responders for emergency situations. Transco would notify Transco Gas Control, PSEG Gas Control, NJDEP, Borough of Roseland Mayor's office), Borough of Roseland Police and Fire, East Hanover Township, East Hanover Police and Fire, Essex County Office of Emergency Management and Morris County of Emergency Management of planned maintenance blowdowns. Transco would utilize a permanent charcoal filter system to reduce odor and a muffler system to minimize noise during maintenance and controlled blowdown activities within the station. Additionally, Transco's regional operations division utilizes two blowdown trailers that include a charcoal filter to eliminate odor and a muffler to minimize noise along the pipeline right-of-way. The natural gas that is released during planned maintenance blowdowns would be run through the equipment on the trailer before being vented. Transco would either use a deodorizer or portable charcoal filter and muffler for small local blowdowns of minimal volumes. Concerning public outreach and education, Transco would implement damage prevention and public programs that include annual mass mailings to first responders and public officials. Public Awareness mailers containing pipeline safety information are sent to affected public, schools, farmers, emergency, biennially, as well as emergency responders, public officials and excavators, annually. In addition to these measures, Transco participates in the local district annual Liaison program that has a meeting with all county offices of emergency management and local municipal police departments where Transco has assets. Transco also participated in the annual Paradigm program which focuses on damage prevention and awareness. Transco sponsors this event and provides an information table available.

We received inquiries on how Transco would clean up the site in the event of abandonment. Transco indicated that they would submit the appropriate application seeking abandonment authorization under the Commission's regulations, including an environmental

report. Transco would comply with all of the FERC conditions and applicable environmental regulations at time of abandonment.

We received several comments on proximity of the Project to the existing PSEG station, citing concerns over risks of fires, explosions, risk of injuries from gas leaks and ruptures, and various health impacts. As discussed throughout the document, facilities must be designed to existing federal and state regulations that are designed to minimize the risks of such impacts.

Facilities associated with the Project must be designed, constructed, operated, and maintained in accordance with Transco's standards, including the provisions for written emergency plans and emergency shutdowns. Transco would provide the appropriate training to local emergency service personnel before the facilities are placed into service. The construction and operation of the modified facilities 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.

9.0 CUMULATIVE IMPACTS

In accordance with NEPA and FERC policy, we evaluated the cumulative impacts of the Project and other projects in the area. Cumulative impacts represent the incremental effects of a proposed action when added to impacts associated with past, present, and reasonably foreseeable future projects, regardless of what agency or person undertakes such other actions. Although the individual impact of each separate project may be minor, the additive or synergistic effects of multiple projects could be significant.

The purpose of this analysis is to identify and describe cumulative impacts that would potentially result from implementation of the Project. This cumulative impacts analysis uses an approach consistent with the methodology set forth in relevant guidance (Council on Environmental Quality (CEQ), 1997b; CEQ, 2005). The first step in our analysis is to identify the relevant resource areas to assess for cumulative impacts; then establish a geographic scope for possible cumulative effects; and then to identify other projects that may impact the same resources within the same geographic and temporal scope as the proposed Project.

As described in section B of this EA, constructing and operating the Project would temporarily and permanently impact the environment. However, the majority of ground-disturbing activities would be within existing facilities. Based on this, along with the proposed minimization and mitigation measures described in Transco's construction procedures and its adherence to our recommendations, we have concluded that most of the Project impacts would be largely limited to workspaces and adjacent areas.

For example, erosion control measures included in Transco's Plan and Procedures would keep disturbed soils within the work areas. For other resources, the contribution of regional cumulative impacts is lessened by the expected recovery of ecosystem function. For example, vegetation communities would be cleared, but restoration would proceed immediately following construction. Transco would avoid direct impacts on wetlands, and one waterbody would be bridged, with no further impact. Land use impacts are negligible as a majority of the impacts would occur on paved, industrial, or maintained grass areas and within existing Transco owned facilities. There are no natural gas-fired compressors proposed as part of the Project. Therefore, operational air emissions would be limited to natural gas fugitive and venting emissions, which would be minimal and would be minimized to the extent possible by complying with local, state, and federal air regulations, and is not expected to have any cumulative impacts on air quality. Additionally, we determined that there would be no significant noise impacts during operation of the Project as the increase in operational noise levels would be minor and imperceptible. No cultural resources were identified. Because the Project would have no or only minimal, localized, and/or temporary impacts impact on these resources, cumulative impacts have not been assessed for geology and soils, wetlands, surface water, vegetation, wildlife, cultural resources, land use, visual impacts, operational air emissions, and operational noise for the Project.

Based on the impacts of the Project as identified and described in this EA and consistent with CEQ guidance, we have determined that the resource-specific geographic scope described below are appropriate to assess cumulative impacts.

- Because of the potential for impacts on groundwater water resources to extend outside of the Project's workspaces, we evaluated projects and actions within the HUC 12 subwatershed.

- Impacts on air quality, including fugitive dust, and noise would be largely limited to areas immediately around active construction. We searched for other projects and actions that overlap in time and are located within 0.25 mile of construction activities.

The actions considered in our cumulative impact analysis may vary from the Project in nature, magnitude, and duration. These actions are included based on the likelihood of their impacts coinciding with the Project, meaning the other actions have current or ongoing impacts or are "reasonably foreseeable." The actions we considered are those that could affect similar resources during the same timeframe as the Project. Seven projects were identified as possible contributors to cumulative impacts in the area: four roadway rehabilitation projects, an electrical corridor upgrade, an oil pipeline project by Pilgrim Pipeline, and development of a waterfront park. Location maps are shown in appendix B. The anticipated cumulative impacts of the Project and these other actions are discussed below, as well as any pertinent mitigation actions.

Comments were received regarding cumulative impacts of the Rivervale South to Market Project and the Northeast Supply Enhancement Project. Based on the geographic scope for cumulative impacts, neither Rivervale South to Market, nor the Northeast Supply Enhancement projects are within any of the areas of impact.

9.1 Water Resources

Groundwater

Groundwater resources may be affected during various stages of construction, including clearing and grading, excavation and dewatering, and hydrostatic testing. Shallow (perched) aquifers could sustain negligible effects from temporary changes in overland water flow and recharge caused by clearing and grading of the temporary workspaces. In forested areas, water infiltration, which is normally enhanced by vegetation, could be reduced until vegetation is reestablished, but impacts from all projects would be negligible.

No public or private water supply wells or springs within 150 feet of workspaces have been identified to date. No municipal or community water supply wells have been identified within a 400-foot radius of the Project. Transco would obtain and adhere to applicable permit conditions from the NJDEP that cover groundwater withdrawal (from dewatering during construction).

Groundwater withdrawn from Paterson M&R would be stored and disposed of according to applicable regulations. Likewise, any withdrawn groundwater from the former ITW portion of the CS 303 site would be disposed of according to applicable regulations and permit conditions. The Project, including the use of offsite, adjacent contractor yards, are not expected to adversely impact groundwater quality and/or supply. Transco proposes to implement construction practices designed to reduce and/or mitigate potential impacts on groundwater during construction, as detailed within Transco's SESCP and the FERC's Plan.

Other projects identified as overlapping for groundwater may use small amounts of groundwater from a public or private well or spring or perform construction activities in their vicinity; however, their specific impacts are unknown. Like the Project, the identified activities would require construction and environmental permits and BMP's to be implemented in the event that contaminated groundwater is encountered during construction, as well as the implementation of a Spill Plan to minimize the potential for contamination from equipment refueling or storage of hazardous substances. The Project is not expected to cause a significant measurable cumulative impact on groundwater resources when considered in addition to other present and reasonably foreseeable actions. In conclusion, no cumulative impacts to groundwater are expected, when considered with the other projects.

9.2 Air Quality and Noise

Two projects were identified within the vicinity of the Project that could contribute to cumulative impacts during construction: the Pilgrim Pipeline and the PSEG Transmission Zone-Roseland-Branchburg-Pleasant Valley Corridor. Construction of these projects would involve the use of heavy equipment that would generate emissions of air pollutants, fugitive dust, and construction noise. Fugitive dust emissions would settle quickly and dust suppression measures would be implemented at the Project site as necessary to ensure the Project-related effects from fugitive dust are intermittent and temporary and would occur within or very near the construction area. Construction noise would cause temporary increases in ambient noise levels at varying times in the immediate vicinity of the construction sites. Neither project indicates construction concurrent with Project construction. Due to the timing of construction, minimization of fugitive dust as a result of the dust suppression measures, and the highly localized nature of construction emissions and noise, there would be no significant cumulative impacts on air quality and noise.

9.3 Climate Change

Comments were received concerning operational emissions and cumulative impacts of methane and carbon dioxide emissions on climate change impacts including temperature increase, sea level rise and property loss. Climate change is the change in climate over time and cannot be represented by single annual events or individual anomalies. For example, a single large flood 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.

Climate change has resulted in a wide range of impacts across every region of the country. Impacts extend beyond atmospheric climate change alone and include changes to water resources, transportation, agriculture, ecosystems, and human health. These changes are driven by accumulation of GHG in the atmosphere through combustion of fossil fuels (coal, petroleum, and natural gas), combined with agriculture and clearing of forests. These impacts have accelerated throughout the end 20th and into the 21st century. Although climate change is a global concern, for this analysis, we focus on the potential cumulative impacts in the Project area. The FERC staff has presented the GHG emissions associated with construction and operation of the Project in section B.7.1 of this EA.

The State of New Jersey issued its Energy Master Plan in 2011, which outlines its goals: reduce its carbon footprint; increase the state's reliance on renewable and "clean" energy sources, including hydroelectric generation, natural gas, and nuclear energy; and reach 70 percent of state

electricity generation through renewable and clean energy sources by 2050 (New Jersey, 2011). The Energy Master Plan also calls for the safe expansion of the natural gas pipeline system in New Jersey for electricity generation and to lower wholesale power costs while lessening the state's dependence on oil.

The U.S. national energy-related CO_2 emissions were 5,187.09 million metric tons in 2015, which is the most recently available data from the U.S. Energy Information Administration (EIA, 2017). For a more localized analysis, the 2015 state-level GHG emissions for New Jersey is 111.9 million metric tons of CO2e (EIA, 2017). The GHG emissions from other nearby projects are unknown. Emissions of GHGs from the proposed Project would not have any direct impacts on the environment in the 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.

Conclusion

The cumulative impacts review as part of the NEPA process evaluates the incremental effects of a proposed project and multiple similar projects in the same region at the same time, or in a similar timeframe, to determine whether the additive effect of those projects would result in significant deleterious impacts to the regional environment. As discussed previously, the Project and other projects in the area would have or have had minimal cumulative impacts because the other projects are predominately outside the cumulative impact area and those projects in the area are likely to occur in areas that are already developed. As a result, no significant cumulative impacts are anticipated when combining the Project with other identified projects.

We identified planned activities in the Project area that met the criteria for inclusion in the cumulative impact analysis. Implementation of BMPs and proposed mitigation plans would minimize environmental impacts and when the impacts of the Project are added to the impacts from the other identified projects, the cumulative impacts would be minimal. We conclude that impacts would be temporary in nature and no significant cumulative impacts would be incurred from the Project.

C. ALTERNATIVES

1.0 INTRODUCTION

In accordance with NEPA and Commission policy, we considered and evaluated alternatives to the proposed action, including the no-action alternative, system alternatives, and aboveground facility alternatives. These alternatives were evaluated using a specific set of criteria. The evaluation criteria applied to each alternative include a determination whether the alternative:

- meets the objective of the proposed Project;
- is technically and economically feasible and practical; and
- offers a significant environmental advantage over the proposed Project.

Through environmental comparison and application of our professional judgment, each alternative is considered to a point where it becomes clear if the alternative could or could not meet the three evaluation criteria. To ensure a consistent environmental comparison and to normalize the comparison factors, we generally use desktop sources of information (e.g., publicly available data, geographic information system data, aerial imagery) and assume the same general workspace requirements. Where appropriate, we also use site-specific information (e.g., field surveys or detailed designs). Our environmental analysis and this evaluation consider quantitative data (e.g., acreage) and uses common comparative factors such as total length, amount of collocation, and land requirements.

The alternatives were reviewed against the evaluation criteria in the sequence presented above. The first consideration for including an alternative in our analysis is whether or not it could satisfy the stated purpose of the project. An alternative that cannot achieve the purpose for the project cannot be considered as an acceptable replacement for the project. Many alternatives are technically and economically feasible. Technically practical alternatives, with exceptions, would generally require the use of common construction methods. An alternative that would require the use of a new, unique or experimental construction method may not be technically practical because the required technology is not available or is unproven. Economically practical alternatives would result in an action that generally maintains the price competitive nature of the proposed action. Generally, we do not consider the cost of an alternative as a critical factor unless the added cost to design, permit, and construct the alternative would render the project economically impractical.

Alternatives that would not meet the Project's objective or were not feasible were not brought forward to the next level of review (i.e., the third evaluation criterion). Determining if an alternative provides a significant environmental advantage requires a comparison of the impacts on each resource as well as an analysis of impacts on resources that are not common to the alternatives being considered. The determination must then balance the overall impacts and all other relevant considerations. In comparing the impact between resources, we also considered the degree of impact anticipated on each resource. Ultimately, an alternative that results in equal or minor advantages in terms of environmental impact would not compel us to shift the impacts from the current set of landowners to a new set of landowners.

One of the goals of an alternatives analysis is to identify alternatives that avoid significant impacts. In section B, we evaluated each environmental resource potentially affected by the Project and concluded that constructing and operating the Project would not significantly impact

these resources. Consistent with our conclusions, the value gained by further reducing the (not significant) impacts of the Project when considered against the cost of relocating the facilities to a new set of landowners was also factored into our evaluation.

2.0 NO ACTION ALTERNATIVE

The no-action alternative would consist of not constructing the Project and continuing with the facilities as-is. If the proposed facilities are not constructed, the impacts identified would be avoided. The no action alternative does not meet the purpose and need of the Project to increase the firm transportation capacity of the existing Transco pipeline system by 65,000 dekatherms per day. If the purpose and need of the Project is not met under the no-action alternative, other projects and activities would be needed to meet the market energy needs and these projects could result in their own environmental impacts that would be equal to or greater than the proposed action and might not meet the Project's objectives. Therefore, the no-action alternative is not recommended.

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 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. However, a viable system alternative must be technically and economically feasible and practicable, and must satisfy interconnect requirements and the anticipated in-service date to fulfill commitments made to the Project customers.

3.1 Existing Systems

Transco could not identify any other existing pipeline system that would be able to provide the incremental firm transportation that is to be provided under the Project.

3.2 Modified Systems

System modifications such as added looping or a new aboveground facility would require more land disturbance and use, increasing overall impacts. An alternative comparing addition of new pipeline capacity rather than adding the electric motor driven compression unit was completed as well. The analysis showed that a 42-inch-diameter pipeline loop extending 5.8 miles would be required to facilitate the Project purpose and need. This alternative is not environmentally preferable as it yields many additional environmental impacts that do not exist with the proposed upgrades to the existing facilities.

3.3 Aboveground Facility Alternatives

Alternative sites were not analyzed for the CS 303 Site or Paterson M&R as these sites were chosen based on their ability to achieve the Project purpose and need with minimal upgrades to existing facilities and within existing operational areas. Other sites would require new construction.

A comment was received regarding exploring renewable energy such as wind as an alternative source. The purpose of the Project is to transport natural gas to fulfill customer's needs, and as wind is not an alternative for natural gas transportation, it is not viable for the Project.

In summary, we have determined that Tranco's proposed Project, as modified by our recommended mitigation measures, is the preferred alternative than can meet the Project objectives.

D. CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis in this EA, we have determined that if Transco constructs and operates the proposed facilities in accordance with their applications and supplements and the staff's recommended mitigation measures, approval of this 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, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of environmental resources during construction and operation of the project. This authority shall allow:

    a. the modification of conditions of the Order;

    b. stop-work authority; and

    c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from project construction and operation.

3. **Prior to any construction**, Transco shall each file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, EIs, and

contractor personnel would be informed of the EI's authority and have been or would 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.

   Transco's exercise of eminent domain authority granted under the Natural Gas Act 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 the Natural Gas Act 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 FERC's 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. **At least 60 days before construction begins**, Transco shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP. Transco must file revisions to their plan as schedules change. The plan shall identify:

   a. how Transco 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 Transco 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:

      i. the completion of all required surveys and reports;

      ii. the environmental compliance training of onsite personnel;

      iii. the start of construction; and

      iv. the start and completion of restoration.

7. Transco shall employ at least one EI for the Project. The EI shall be:

   a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;

   b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;

c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;

d. a full-time position, separate from all other activity inspectors;

e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and

f. responsible for maintaining status reports.

8. 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 Transco's 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 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;

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.

9. Transco must receive written authorization from the Director of **OEP before commencing construction of any Project facilities**. To obtain such authorization, Transco must file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

10. Transco must receive written authorization from the Director of OEP **before placing the modified Project facilities 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.

11. **Within 30 days of placing the authorized facilities in service**, Transco shall file an affirmative statement with the Secretary, certified by a senior company official that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or identifying which of the conditions in the Order 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.

12. **Prior to construction** Transco shall complete consultations with water suppliers for the community and non-community Wellhead Protection Areas that overlap the Paterson M&R and contractor yards, CS 303, Eagle Rock Yard, and Livingston Mall Yard and file with the Secretary, for review and written approval by the Director of the OEP, any water supplier-recommended mitigation that Transco will implement during construction. For any recommended mitigation Transco does not plan to implement, Transco shall provide justification why the mitigation is not needed.

13. **Prior to any use or modification of the Whippany Yard,** Transco shall consult with the EPA (as the lead agency for the Sharkey Landfill remediation), and file the results of this consultation, along with any proposed mitigation measures, with the Secretary, for review and written approval by the Director of the OEP.

14. **Prior to any use or modification of the Whippany Yard,** Transco shall file with the Secretary, for review and written approval by the Director of the OEP, verification of the locations of existing groundwater monitoring wells at the Whippany Yard, and measures Transco will use to protect these wells from damage or destruction during construction activities.

15. Transco shall **not begin construction** of the Project **until**:

    a. all necessary surveys have been completed;
    b. the staff receives comments from the FWS regarding the proposed actions;
    c. the FERC staff completes any necessary ESA Section 7 consultation with the FWS; and
    d. Transco has received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin.

16. Transco shall **not begin** construction of facilities and/or use of all staging, storage, or temporary work areas and new or to-be improved access roads **until:**

    a. Transco files with the Secretary:

        i. reports, studies, or plans of additional cultural resources surveys;

        ii. site-specific avoidance and/or treatment plan(s), as required; and

        iii. comments on reports and plans from the New Jersey SHPO;

b. the ACHP 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 avoidance and/ or treatment measures , as required, 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: "**CUI//PRIV – DO NOT RELEASE".** Additionally, a letter must be filed public that states that these items have been filed PRIV.

17. Transco shall file noise surveys with the Secretary **no later than 60 days** after placing the modified CS 303 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 the modified CS 303, 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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Appendix A

Figures

Figure 2
CS 303/Roseland M&R Site Map

Figure 3
Paterson M&R Site Map

Figure 4
Eagle Rock Yard Site Map

Figure 5
Whippany Contractor Yard Site Map

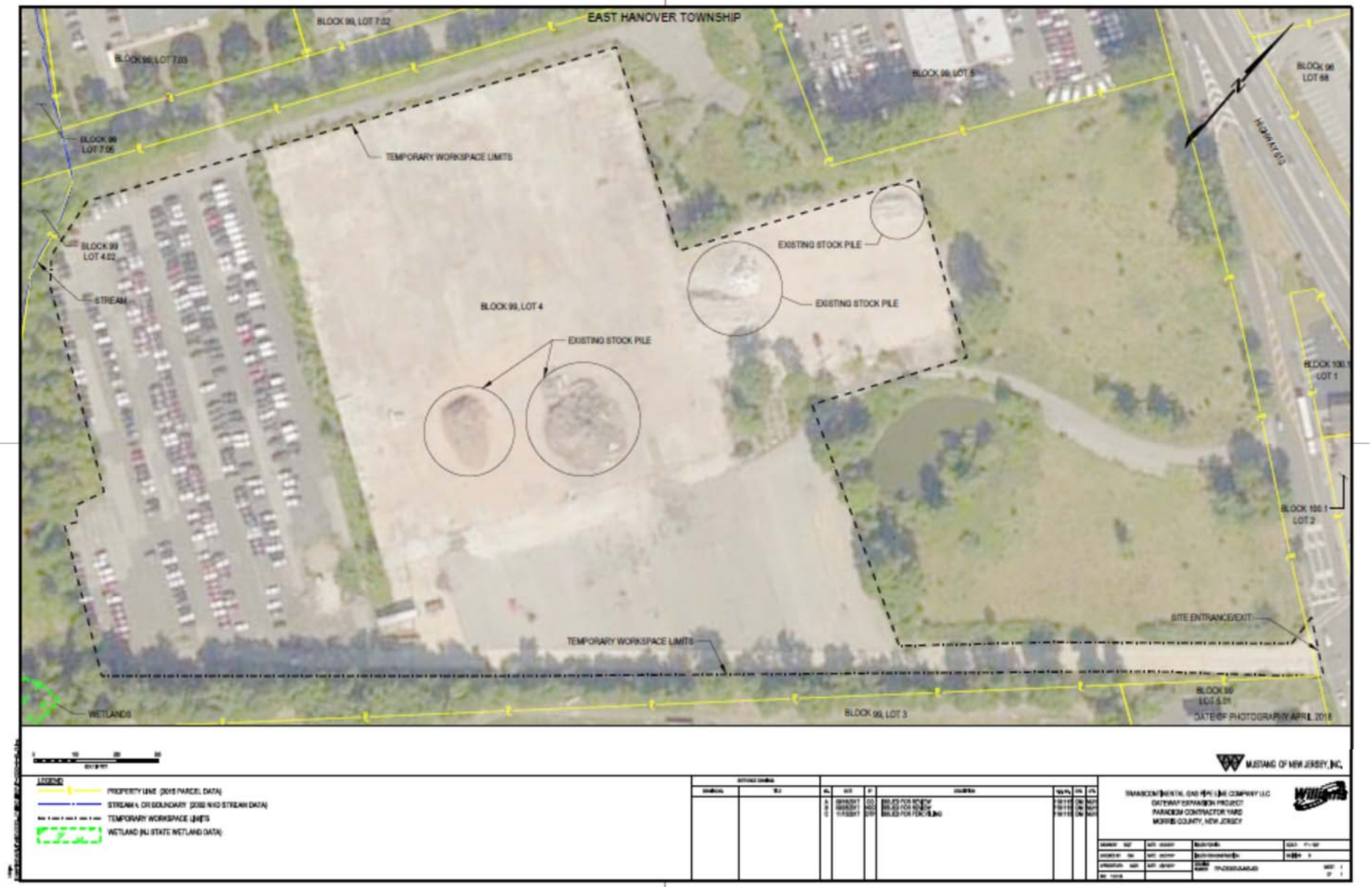

Figure 6
Paradigm Contractor Yard Site Map

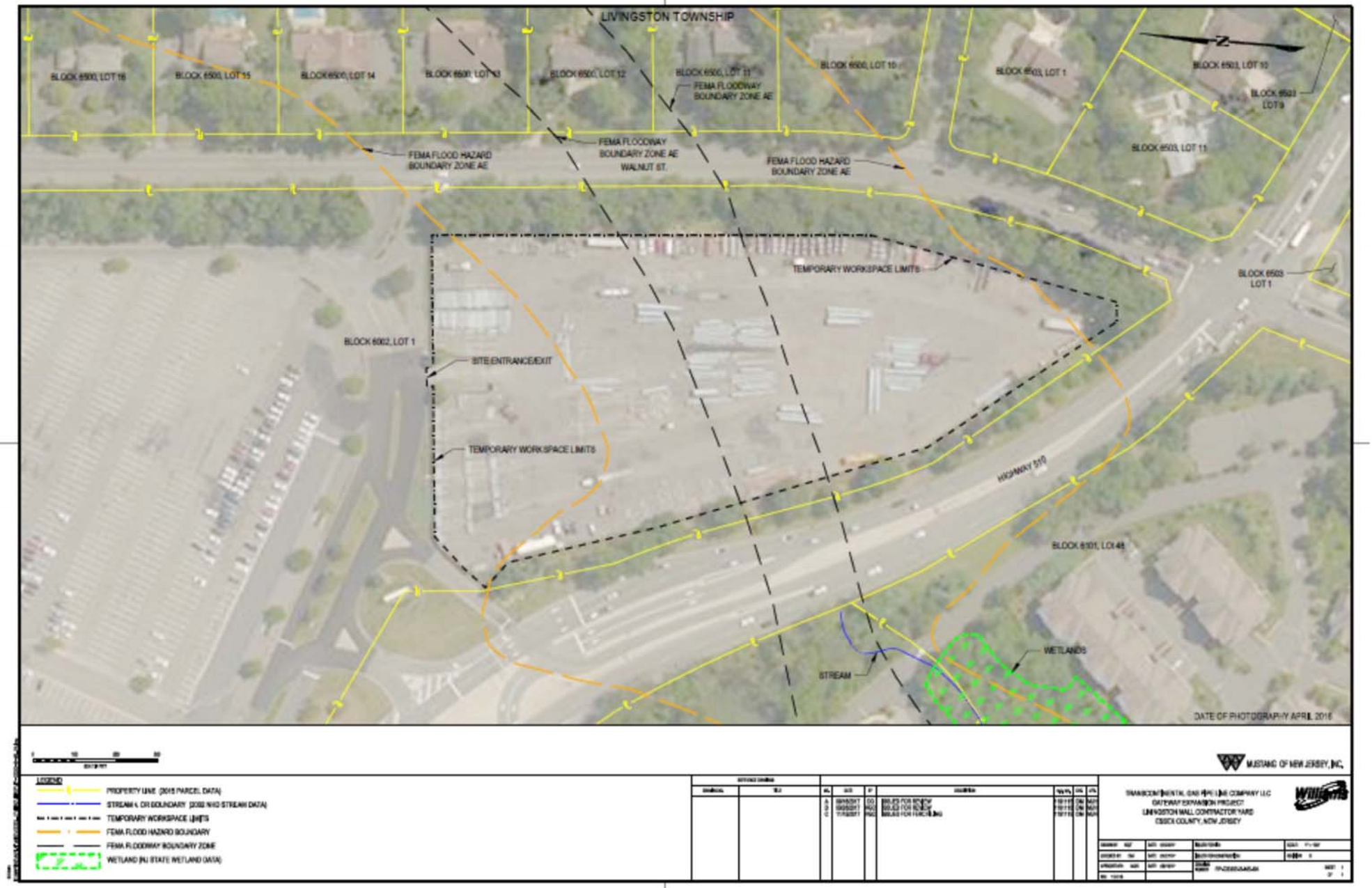

Figure 7
Livingston Mall Contractor Yard Site Map

Appendix B

Projects with Potential Cumulative Impacts

Table 11 Projects with Potential Cumulative Impacts					
Project	**Description**	**Distance from Nearest Project Facility**	**Environmental Permits Needed**	**Status**	**Potentially Affected Resource Areas**
Pilgrim Pipeline	Two new collocated 169.89 mile pipelines proposed for crude oil and refined product transport	0.21 mile S/SW of CS 303	Occupancy Permit, New York State Thruway Authority (NYSTA) New York State Dept. of Environmental Conservation (NYSDEC) Permits, State Environmental Quality Review, coastal zone consistency, permits from both, New York and New Jersey, for impacts to wetlands, waterbodies, state owned lands underwater, and clearance for T&E species and cultural resources	NYSDEC and NYSTA issued positive declaration, EIS required September 2016.	Surface water, groundwater, wetlands, vegetation, wildlife, cultural resources, land use, visual resources, soils, geology, noise, air quality, socioeconomics
PSEG Transmission Zone	Replace existing corridor with new structure; the 230 KV line travels from Roseland south to Pleasant Valley; the existing equipment has reached end of life and needs replacement	0.20 mile S of CS 303 site.	Unknown	Project in Engineering phase, Projected in-service June 2022	Surface water, wetlands, vegetation, wildlife, cultural resources, visual resources, noise, air quality, socioeconomics
New Jersey Depart. of Transportation (NJDOT) Pulaski Skyway	Replacing 3.5 mile Pulaski Skyway deck, rehabilitation of ramps, steel superstructure and substructure, seismic retrofit, drainage and lighting improvements, repainting	12.4 miles S/SE of CS 303 site	Unknown	Under construction; expected completion in 2020	Surface water, wetlands, vegetation, wildlife, cultural resources, noise, air quality, socioeconomics

NJDOT Route 23, Route 80, and Route 46 Interchange	New construction and improvements providing direct connection from Route 23 and Route 46 to I-80	4.0 miles SW of Paterson M&R	Unknown	Funding indicates construction beginning fiscal year 2019	Surface water, wetlands, vegetation, wildlife, cultural resources, noise, air quality, socioeconomics
NJDOT Route 3, Route 46, Valley Road and Notch/Rifle Camp Road	Reconstruct the Route 3, Route 46, Valley Road and Notch/Rifle Camp Road Interchanges to correct existing operational and safety problems	4.0 miles S/SW of Paterson M&R	Unknown	Under construction; estimated completion, 2022	Surface water, wetlands, vegetation, wildlife, cultural resources, noise, air quality, socioeconomics
NJDOT Route 20, Paterson Safety Drainage and Resurfacing	Addressing safety and drainage issues and pavement resurfacing issues	1.01 mile E of Paterson M&R	Unknown	Fiscal year 2018	Surface water, wetlands, vegetation, wildlife, cultural resources, noise, air quality, socioeconomics
Joseph G. Minish Passaic River Waterfront Park and Historic Area	Project proposed to reduce riverbank erosion and lay foundation for waterfront park development to Central Business District in Newark, NJ	10.1 miles S/SE of CS 303 site	FONSI by USACE December 15, 2016. Consultation with National Marine Fisheries and US Fish and Wildlife Service, Wetlands Permit from NJDEP	Construction award anticipated summer 2018	wetlands

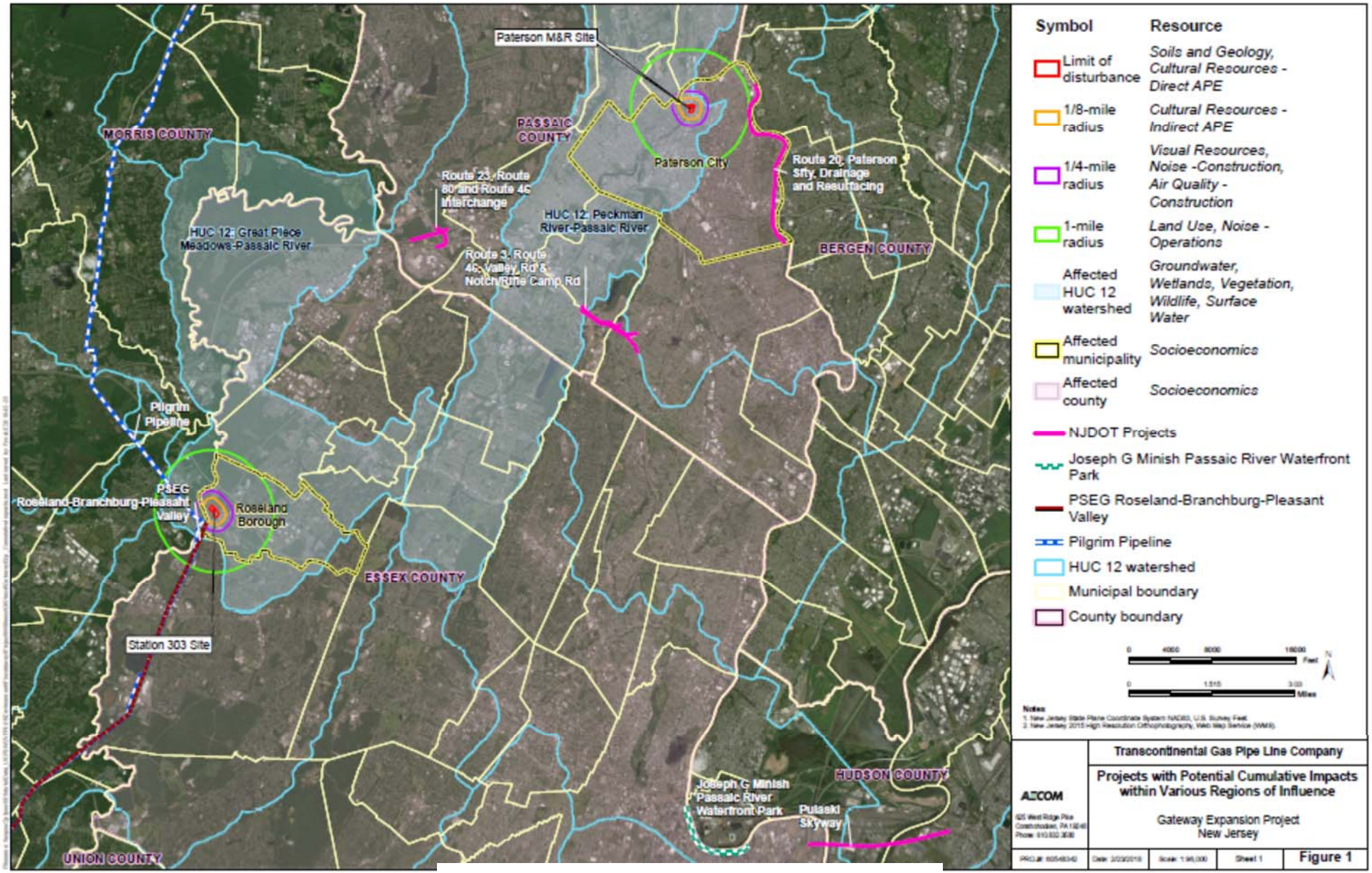

Figure 8
Projects with Potential Cumulative Impacts

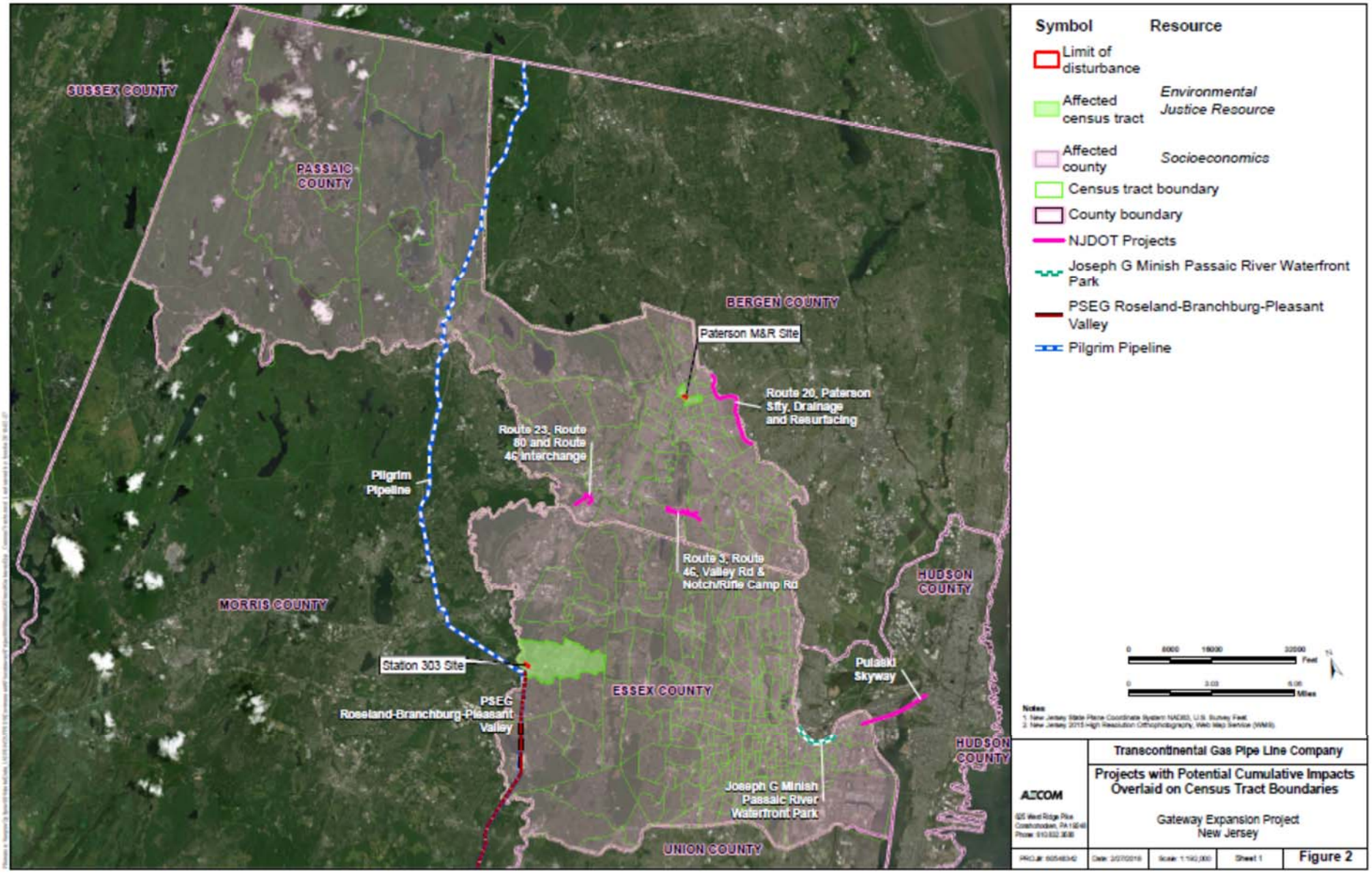

Figure 9
Projects with Potential Cumulative Impacts

Appendix C

Streamlined Consultation Form

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:	**YES**	**NO**
1. Does the project occur wholly outside of the WNS Zone[1]?	☐	☒
2. Have you contacted the appropriate agency[2] to determine if your project is near known hibernacula or maternity roost trees?	☒	☐
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	☐	☒
4. Could the project alter the entrance or interior environment of a known hibernaculum?	☐	☒
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	☐	☒
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	☐	☒

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant[3] (Name, Email, Phone No.):
Federal Energy Regulatory Commission: Christine Mallory, Christine.mallory@ferc.gov, (202)502-6748
Transcontinental Pipe Line Company, LLC:Devyn Richardson, Devyn.richardson@williams.com, (713)215-2871

Project Name: Gateway Expansion Project

Project Location (include coordinates if known): Essex, Morris, and Passaic Counties, NJ

Basic Project Description (provide narrative below or attach additional information):

The Project includes upgrades to four existing facilities: Compressor Station 303, the Roseland M&R station, the Roseland Electrical Substation, and the Paterson M&R. Transco would use the Eagle Rock Yard, Roseland Borough, Essex County, NJ and one of three potential contractor yards:
• Whippany Yard, Parsippany-Troy Hills Township, Morris County, NJ;
• Paradigm Yard, East Hanover Township, Morris County, NJ; and

[1] http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf
[2] See http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html
[3] If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

• Livingston Mall Yard, Livingston Township, Essex County, NJ.
No tree clearing is proposed, only tree trimming may be necessary to safely accommodate construction equipment. If tree clearing is proposed, it would be conducted outside of the active bat season (April 1 - September 30). See attached EA for more information.

General Project Information	**YES**	**NO**
Does the project occur within 0.25 miles of a known hibernaculum?	☐	☒
Does the project occur within 150 feet of a known maternity roost tree?	☐	☒
Does the project include forest conversion[4]? (if yes, report acreage below)	☐	☒
Estimated total acres of forest conversion		
If known, estimated acres[5] of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31[6]		
Does the project include timber harvest? (if yes, report acreage below)	☐	☒
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	☐	☒
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	☐	☒
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: Christine Mallory Date Submitted: 7/17/2018

[4] Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).
[5] If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.
[6] If the activity includes tree clearing in June and July, also include those acreage in April to October.