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Portland Natural Gas Transmission System

Docket No. CP20-16-000

Westbrook XPress Project

Environmental Assessment

Washington, DC 20426

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TECHNICAL ABBREVIATIONS AND ACRONYMS

AB Project	Atlantic Bridge Project
APE	Area of Potential Effects
AQCR	Air quality control regions
Bcf	billion cubic feet
CAA	Clean Air Act
CFR	Code of Federal Regulations
CH ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalents
Commission	Federal Energy Regulatory Commission
dBA	decibel on the A-weighted scale
DOT	U.S. Department of Transportation
EA	environmental assessment
EI	environmental inspector
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FWS	U.S. Fish and Wildlife Service
GHG	greenhouse gases
GWP	global warming potential
HAP	hazardous air pollutants
HUC	hydrologic unit code
L _{dn}	day-night sound level
L _{eq}	24-hour equivalent sound level
Maritimes	Maritimes & Northeast Pipeline, LLC
MBTA	Migratory Bird Treaty Act
MDEP	Maine Department of Environmental Protection
MDIFW	Maine Department of Inland Fisheries and Wildlife
MNAP	Maine Natural Areas Program
MNOC	M&N Operating Company
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NGA	Natural Gas Act
NNSR	Nonattainment New Source Review
NOI	<i>Notice of Intent to Prepare an Environmental Assessment for the Proposed Westbrook XPress Project, and Request for Comments on Environmental Issues</i>
NO _x	nitrogen oxides

NRHP	National Register of Historic Places
NSA	noise sensitive area
NSPS	New Source Performance Standards
OEP	Office of Energy Projects
Order	Commission Order
PBO	Programmatic Biological Opinion
Plan	FERC's <i>Upland Erosion Control, Revegetation, and Maintenance Plan</i>
PM _{2.5}	particulate matter less than 2.5 microns
PM ₁₀	particulate matter less than microns
PNGTS	Portland Natural Gas Transmission System
ppb	parts per billion
Procedures	FERC's <i>Wetland and Waterbody Construction and Mitigation Procedures</i>
Project	Westbrook XPress Project
PSD	Prevention of Significant Deterioration
PXP Project	Portland Xpress Project Phase III
Secretary	Secretary of the Commission
SHPO	State Historic Preservation Office
SO ₂	sulfur dioxide
SPCC Plan	<i>Spill Prevention, Control, and Countermeasure Plan</i>
tpy	tons per year
USGS	United States Geological Survey

A. PROPOSED ACTION

1.0 Introduction

The staff of the Federal Energy Regulatory Commission (Commission or FERC) prepared this environmental assessment (EA) to assess the environmental impacts of Phase II and III of the proposed Westbrook XPress Project. We¹ prepared this EA in compliance with the requirements of the *National Environmental Policy Act of 1969* (NEPA) (42 U.S.C. §§ 4321 *et seq.* [2018]), the Council on Environmental Quality's regulations for implementing NEPA (Title 40 of the Code of Federal Regulations [CFR], Parts 1500-1508 [40 CFR 1500-1508]) and the Commission's implementing regulations under 18 CFR Part 380.

On November 18, 2019, Portland Natural Gas Transmission System (PNGTS) filed an application with the Commission pursuant to Section 7(c) of the Natural Gas Act (NGA), as amended, under Docket No. CP20-16-000, seeking authorization to install modifications and additions to existing facilities in Cumberland County, Maine (Phase II) and to increase the certificated capacity on PNGTS' wholly-owned Northern Facilities and to increase PNGTS' certificated capacity on the Joint Facilities (Phase III). The Northern and Joint Facilities are described below. There are no environmental impacts associated with Phase III of the Project; therefore, it will not be discussed further in this EA.

The Commission approved Phase I of the Westbrook XPress Project on July 2, 2019 under Docket No. CP19-32-000. Phase I brings an additional 42 million standard cubic feet of natural gas per day (MMcf/d) to PNGTS' Northern Facilities using existing pipeline infrastructure without the need for any construction. Phase I was placed into service on November 1, 2019.

The EA is an important and integral part of the Commission's decision on whether to issue PNGTS an authorization to construct the proposed facilities. Our principal purposes in preparing this EA are to:

- identify and assess potential impacts on the natural and human environment that could result from implementation of the proposed action;
- assess reasonable alternatives to the proposed action that would avoid or minimize adverse effects on the environment; and
- identify and recommend specific mitigation measures, as necessary, to minimize environmental impacts.

¹ "We," "us," and "our" refers to environmental staff of the Commission's Office of Energy Projects.

2.0 Project Purpose and Need

PNGTS states the purpose of Phase II and Phase III of the Westbrook XPress Project (Project) is to increase the certificated capacity on PNGTS's wholly-owned Northern Facilities by about 81MMcf/d and increase PNGTS's certificated capacity on the system it jointly owns with Maritimes & Northeast Pipeline, LLC (Maritimes) by about 50 MMcf/d. According to PNGTS, its Project would provide access to, and allow for the transportation of, natural gas supplies from North American supply basins, such as the Marcellus, Utica, and other basins, via TransCanada PipeLines Limited's Canadian Mainline and Trans-Quebec & Maritimes Pipeline. Additionally, shippers moving natural gas further south into New England would have the ability to transport on PNGTS to existing interconnects with Tennessee Gas Pipeline at Dracut, Massachusetts.

Under Section 7 of the NGA, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on both economic issues, including need, and environmental impacts.

3.0 Public Review and Comment

On December 12, 2019, we issued a *Notice of Intent to Prepare an Environmental Assessment for the Proposed Westbrook XPress Project, and Request for Comments on Environmental Issues* (NOI). The NOI was published in the *Federal Register*² and issued for a 40-day comment period. We received two comments in response to the NOI from the U.S. Environmental Protection Agency (EPA) and Maine Natural Areas Program (MNAP).

The EPA requested a hard copy of the EA. FERC transmits all of its environmental documents electronically in accordance with our agency policies and the GSA Bulletin on Mail Management which explicitly directs agencies to reduce hard-copy agency-to-agency mailings. The FERC Chairman announced in August 2018 that the Commission would begin electronically issuing and distributing all environmental documents for FERC's natural gas and hydropower programs. As a result, FERC staff no longer prints hard copies or produces CDs of its EAs or EISs. As noted in the Project's *Notice of Intent*, the electronic document is accessible from the FERC's website (www.ferc.gov).

The MNAP stated that the Project abuts globally rare Pitch Pine Woodland at Lorenzon Hill; however, there would be no issues provided all work occurs on currently cleared land within property boundary. The Project would not impact Pitch Pine. See

² 84 Fed. Reg. 69735 (Dec. 19, 2019)

section B.3 for further information on special status species. No additional comments were received on this Project.

4.0 Proposed Facilities

The Project would consist of the following facilities:

- installation of one new 15,900 horsepower natural gas fired turbine compressor unit and appurtenant facilities in a greenfield expansion area approximately 1,500 feet southwest of the currently developed Westbrook Compressor Station;
- approximately 1,500 feet of 30-inch-diameter suction and discharge lines to connect the new compressor unit to the existing station; and
- modifications at the existing Westbrook Metering and Regulating Station 30006, including replacement of existing pipeline, filter separator, and appurtenant facilities.

The Project is in Cumberland County, Maine. Figure 1 shows the Westbrook XPress Project location, which includes the existing compressor station and expansion area. Figure 2 shows the Project workspace and land use requirements; the existing compressor station is marked as industrial land use.

Portland Natural Gas Transmission System

PNGTS' existing pipeline system is divided into two parts: the Northern Facilities and the Joint Facilities. The Northern Facilities are wholly-owned and operated by PNGTS and consist of 142 miles of mainline from an interconnection with Trans-Québec at the U.S./Canada border to Westbrook, Maine, and two laterals.

Maritimes and PNGTS share ownership in the 30-inch-diameter Joint Facilities mainline pipeline extending from Westbrook, Maine, to Dracut, Massachusetts. All of the Joint Facilities are operated by M&N Operating Company (MNOC) on behalf of both owners. The Joint Facilities consist of approximately 101 miles of mainline, as well as three laterals.

M&N Operating Company (MNOC)

MNOC is a subsidiary of Enbridge Inc. and is the entity responsible for operating and maintaining the Joint Facilities owned by Maritimes and PNGTS, as well as the portion of Maritimes & Northeast Pipeline that is solely owned by Maritimes, which consists of approximately 245 miles of mainline extending from Westbrook, Maine, to the U.S./Canada border near Baileyville, Maine. MNOC would construct, operate, and maintain the new Project facilities.

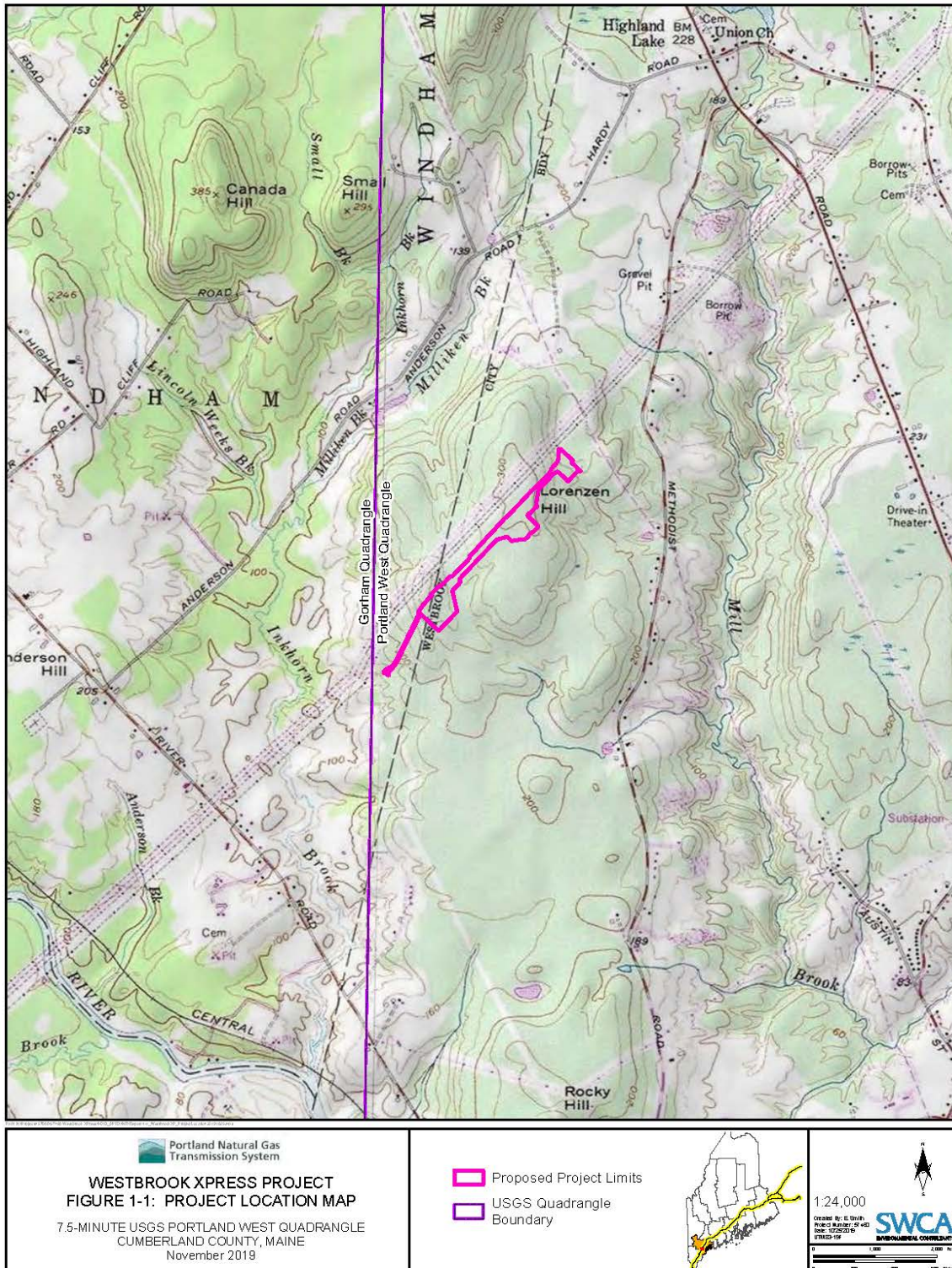


Figure 1: Project Location Map

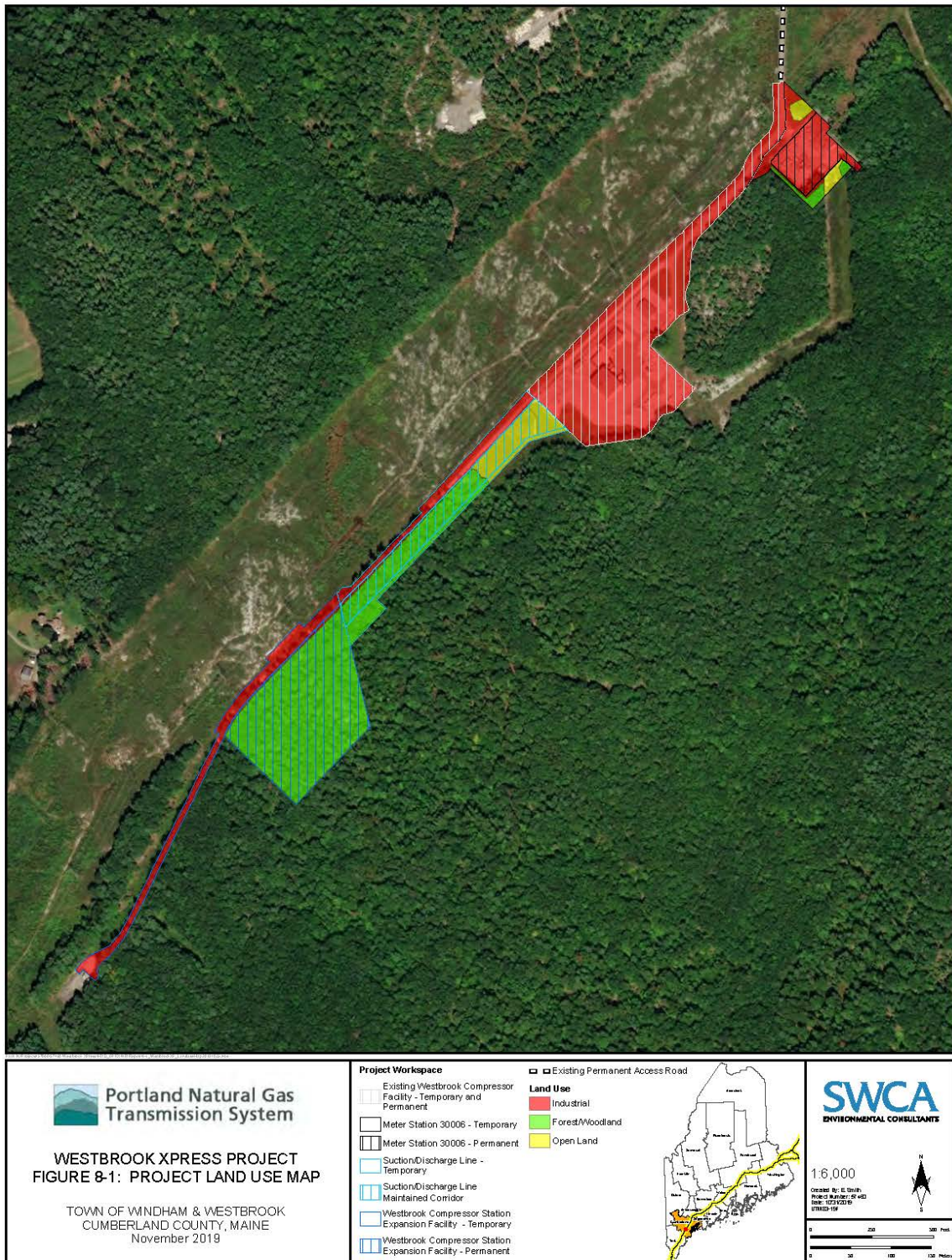


Figure 2: Project Land Use Map

5.0 Non-jurisdictional Facilities

Under section 7 of the NGA, and as part of its decision regarding whether or not to approve the facilities under its jurisdiction, the Commission is required to consider all factors bearing on the public convenience and necessity. Occasionally, proposed projects have associated facilities that do not come under the jurisdiction of the FERC. These “non-jurisdictional” facilities may be integral to a project (for instance, a natural gas-fueled power plant at the end of a jurisdictional pipeline), or they may be minor, non-integral components of the jurisdictional facilities that would be constructed and operated because of a project.

There are certain non-jurisdictional electric facilities associated with the Project which would be constructed by others. Central Maine Power provides power to the existing station and would provide the additional power for the new compressor unit in the greenfield expansion area. The power would come from the existing connection point at the end of Small Hardy Road and would be extended to the connection point at the existing station. Central Maine Power would use the existing underground conduit to run the additional power to the connection point in the existing station. From the connection point at the existing station, the powerline would be installed underground along the existing access road to the new greenfield expansion area, all within property owned or controlled by PNGTS. No new landowners would be involved; no clearing would be required; and no additional wetland or waterbody resources would be impacted from non-jurisdictional facilities. It is not anticipated that any federal or state permits would be required. It is unknown if local permits are needed; however, the connection is a routine service conducted by the main power service provider in the area.

The communication service is provided by Sprint. A new connection point is not needed for the proposed Project. The existing communication line that terminates at the existing compressor station would be extended within the proposed Project workspace along the existing access road and additional permits are not anticipated to complete this task.

The power and communication lines would be within the proposed Project footprint. Therefore, there would be no land disturbance beyond what is proposed for the Project, which are discussed throughout this EA. Therefore, the non-jurisdictional facilities are not addressed further in this EA.

6.0 Construction Procedures

The Project would be constructed in compliance with applicable federal regulations and guidelines and requirements of the necessary regulatory permits. Key federal regulations and guidelines include the following:

- 18 CFR Part 380 – FERC’s Regulations Implementing the NEPA (including section 380.15 – Siting and Maintenance Requirements);
- 49 CFR Part 192 – Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards;
- FERC’s *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan); and
- FERC’s *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures).

PNGTS has proposed one alternative measure from our Procedures, which is addressed further in section B.2. PNGTS would employ a *Spill Prevention, Control, and Countermeasure Plan* (SPCC Plan) to address the handling of construction fuel and other materials. The SPCC Plan provides a set of minimum requirements to be used by the contractor in developing the Project-specific SPCC Plan.

Surveying

Prior to construction, civil survey crews would stake the outside limits of the construction work areas to ensure construction activities stay within the approved workspace. PNGTS³ would locate and flag underground utilities (e.g., cables, conduits, and pipelines) and maintain the flagging as necessary throughout construction to reduce the potential for construction activities to extend beyond certificated construction limits.

Clearing and Grading

The first activity to take place at the Project site would be clearing of existing vegetation. For the Project, an existing permanent access road leads to the expansion area and is large enough for the vehicles and equipment needed for proposed construction activities at the site. Only those areas required to install the new structures and piping, including designated workspaces, would be cleared. No clearing is required at existing maintained facilities, with the exception of a small area adjacent to the existing Westbrook Meter Station 30006, that would be used as temporary workspace. Stumps would be removed and either disposed of appropriately on-site or hauled to an approved off-site disposal location.

The cleared portions of the expansion area would then be graded to provide level surfaces for the building foundations and work areas. Blasting may be required as part of site grading and preparation. Due to the shallow bedrock in the expansion area for the

³ We recognize that MNOC would construct and operate the Project facilities; however, throughout this EA, we refer to PNGTS, as it is the entity seeking Certificate authority for the Project.

new compressor turbine unit and ancillary facilities, fill may also be brought into the site to create a level surface and reduce the need for blasting.

PNGTS would also clear and grade along the suction/discharge line corridor to prepare for the installation. PNGTS would use the existing permanent gravel access road adjacent to the suction/discharge line corridor to assist in the clearing and grading process.

Minimal site preparation work is needed for the proposed modifications to the existing compressor station and Meter Station 30006. These facilities were originally constructed as part of the Maritimes' Phase IV Project and the original construction of the Joint Facilities. PNGTS would conduct some minor grading of temporary workspace outside of the existing facilities for equipment and material storage.

Rock Removal and Blasting

Rock removal would likely be required for the greenfield facilities to complete grading and installing the pipe. Blasting requirements may be reduced by hauling in fill material to create a level area and for foundation construction and piping cover. Rock removal is also anticipated for installation of the suction/discharge lines connecting the new turbine to the existing Westbrook Compressor Station.

No blasting is anticipated to be required for modifications to the existing facilities; however, some rock removal using construction equipment may be required.

PNGTS would remove rock encountered during trenching using one of the following techniques. The technique selected is dependent on relative hardness, fracture susceptibility, and expected volume of the material. Techniques include:

- conventional excavation with a backhoe;
- ripping with a dozer followed by backhoe excavation;
- hammering with a pointed backhoe attachment followed by backhoe excavation; or
- blasting surface rock prior to excavation.

PNGTS would conduct blasting in accordance with the its Blasting Plan. All blasting activity would be performed by licensed professionals according to strict guidelines designed to control energy release. Proper safeguards would be taken to protect personnel and property in the area. PNGTS would keep blasting charges to the minimum required to break the rock. Where appropriate, mats made of heavy steel mesh or other comparable material or trench spoil would be utilized to prevent the scattering of rock and debris. These activities would adhere to all state and federal guidelines that apply to controlled blasting and limiting blast vibration near structures and underground

utilities. Blasting in the vicinity of nearby utilities would be coordinated with the owner, as necessary. See section B.1 for further information on blasting.

Foundations

Once the final grade for the building sites have been established, excavation would begin for the installation of building foundations and pipe supports. Generally, foundations for compressor buildings require a significant mass of reinforced concrete to provide a stable support for the operating machinery. Once the ground surface area has been prepared, PNGTS would install forms and reinforcing bars and pour high strength concrete to the appropriate design levels. Rigid controls on concrete quality and installation procedures, as well as the deep foundation systems, when required, would ensure that a suitable foundation is obtained.

Piping

Installation of the various piping systems would begin at about the same time as the foundation work. PNGTS would dig trenches for the underground portions of the piping within the fencelines using conventional trenching techniques and would connect the new greenfield expansion portion of the compressor station to the existing facilities. Piping would be welded, radiographed, coated, and placed in the trench and backfilled. Some portions of the station piping would occur aboveground. PNGTS would install any aboveground piping on concrete or metal pipe supports and paint the piping. Acoustic insulation may be installed on some of the piping for noise control. The piping work may begin in a fabrication shop off-site, or all fabrication may take place on-site, if workspace permits. If off-site fabrication is employed, the prefabricated pieces would be shipped to the site and installed in place. PNGTS would install piping installed below grade coat the piping for corrosion protection prior to lowering-in. As major parts of the piping are completed, each section would be tested either hydrostatically or pneumatically to ensure its integrity. PNGTS would truck hydrostatic test water to the site for the testing and discharge the water with appropriate erosion and sedimentation controls to upland areas in accordance with the FERC Plan and Procedures. Electrical conduit systems would be installed during this period.

Structures and Equipment

Once the foundations have been completed and cured sufficiently, installation of the buildings and machinery for the stations may begin. This is a highly coordinated activity as the machinery, buildings, and piping are all installed during the same time period. PNGTS would connect various piping and electrical conduit systems once the machinery is set. Electrical wiring would be installed for power and instrumentation. Domestic water and septic systems would be connected to the new buildings, as necessary, as they are completed.

Start-up and Commissioning

As the various systems and subsystems are completed, PNGTS would test and calibrate them for proper operation. Use of new computerized systems would allow much of the testing to proceed before gas is introduced to the new facilities. Actual start-up of the new equipment would commence once the new facilities are tested and tied into the existing station piping. Gas pressure piping at the compressor station would involve welded construction, except where connected to flanged or screwed components.

Prior to placing the new Project facilities into service, the gas piping system (both aboveground and belowground) would be tested to meet U.S. Department of Transportation (DOT) standards. PNGTS would check and test controls and safety devices, such as the emergency shutdown system, relief valves, and other protection and safety devices on a trial basis after completion of piping and mechanical work to verify the operation of the safety and protective devices.

Final Clean Up and Stabilization

Clean up and stabilization of the compressor station, meter station, suction/discharge corridor, and associated temporary workspace would be an ongoing process throughout construction. PNGTS would final grade and cover sections of the station with gravel, fertilizer, seed, and/or mulch as work is completed and as provided in the FERC Plan. Permanent erosion controls would be installed on a similar basis.

7.0 Environmental Training and Inspection for Construction

PNGTS would provide environmental training to all personnel working on the Project prior to the start of construction and throughout the construction process, as needed. Project-specific training packages would be developed based on site conditions and specific requirements of the environmental permits issued for the Project. The training would cover the FERC Plan and Procedures, Project and site-specific permit conditions (including groundwater management), work adjacent to wetlands or waterbodies, health and safety, company policies, cultural resource procedures, threatened and endangered species restrictions, the SPCC Plan, and any other pertinent information related to the job.

As outlined in the FERC Plan and Procedures, PNGTS would designate an environmental inspector (EI) during active construction and restoration. The EI would have peer status with all other activity inspectors and would report directly to the Resident Engineer/Chief Inspector who has overall authority on the construction spread. The EI would have the authority to stop activities that violate the environmental conditions of the FERC Certificate, other federal and state permits, and landowner requirements, and to order corrective action.

8.0 Operations and Maintenance Procedures

MNOC would operate and maintain the newly constructed facilities in accordance with DOT regulations, its Standard Operating Procedures, and applicable permits and approvals. There are up to seven full-time MNOC personnel that operate and maintain the existing Westbrook Compressor Station and Meter Station 30006. MNOC does not anticipate the need to increase the size of the operational workforce as a result of the Project.

9.0 Land Requirements

The existing Westbrook Compressor Station is sited on 62.0 acres of land owned by Maritimes in Westbrook, Maine. Of that total, approximately 11.9 acres are currently developed as part of the Maritimes' Phase IV Project for the existing compressor station, meter stations, permanent access road, and associated facilities.

To accommodate the new Project greenfield expansion, PNGTS is under agreement to purchase approximately 76.3 acres of additional land directly adjacent and southwest of the existing Westbrook Compressor Station property. The PNGTS parcel is accessible from the existing permanent access road that leads to an existing meter station at the starting point of the PNGTS Westbrook lateral. The PNGTS controlled parcel is partially in the Town of Windham; approximately 1.8 acres of the greenfield expansion area are in the Town of Windham. The remaining area is in the Town of Westbrook.

The Project would temporarily disturb 20.8 acres of the 76.3-acre parcel during construction of the proposed facilities and about 8 acres during operation. The total land affected during construction and operation is provided in table 1.

Table 1 Land Requirements for the Westbrook XPress Project			
Facility	Land Affected During Construction (acres)^{a/}	New Land Affected During Operation (acres)^{b/}	Notes
Meter Station 30006	2.1	0	Of the 2.1 acres affected during construction, 1.7 acres are within the existing meter station. No additional land is permanently required for operation and maintenance of the meter station.
Westbrook Compressor Station Workspace	7.6	0	The 7.6-acre workspace includes the footprint of the existing compressor station and associated access roads. No greenfield areas are affected by the upgrades within the existing station.
Suction/Discharge Line	3.9	2.3	Of the 3.9 acres affected during construction, 1.0 acre is considered

			developed land, and 2.9 acres are considered greenfield.
Westbrook Compressor Expansion Facility	7.2	5.7	Of the 7.2 acres affected during construction, 1.6 acres are considered developed land, and 5.6 acres are considered greenfield. Approximately 1.8 acres of the expansion area is in Windham, the remaining 5.4 acres are in Westbrook.
Totals	20.8	8.0	
a/ Construction acreages include all temporary and permanent land required for the Project. b/ The newly proposed permanent facilities are in areas outside of the existing developed area and are identified in this table as "New Land."			

10.0 Construction Workforce and Schedule

Approximately 115 workers would be required during peak construction of the facilities at the Westbrook Compressor Station. PNGTS states it would employ local workers for construction when available and typically constitute roughly half of the required workforce.

Initial clearing for the greenfield construction in the expansion area and suction/discharge lines corridor is planned to occur in February/March of 2021, following receipt of all necessary regulatory permits, approvals, and authorizations. The remaining construction activities for the proposed Project are planned to commence in April 2021. Construction would be primarily limited to daytime hours (7:00 AM to 7:00 PM); however, there could be some construction occurring during nighttime hours or on Sundays as described in section B.6 below. Construction is expected to take approximately 10 months to complete and PNGTS anticipates placing the facilities in-service by November 1, 2021.

11.0 Permits and Approvals

PNGTS would obtain all necessary permits, licenses, clearances, and approvals related to construction and operation of the proposed Project. Table 2 lists the federal, state, and local permits and approvals PNGTS would obtain for the Project. PNGTS would be responsible for obtaining and abiding by all permits and approvals required for abandonment of the Project regardless if they appear in this table.

Table 2 Permits and Approvals for the Westbrook XPress Project		
Administrating Agency	Permit/Approval/Review	Status
Federal		
Federal Energy Regulatory Commission	Certificate - Section 7(c) of the NGA	Application filed November 2019
U.S. Fish and Wildlife Service	Consultation under Section 7 of the Endangered Species Act; the Migratory Bird Treaty Act; and the Fish and Wildlife Coordination Act	Initial consultation letter received September 5, 2019. Final verification/consultation letter received January 23, 2020.
U.S. Army Corps of Engineers	Clean Water Act, Section 404 Permit, Maine General Permit, Category 1 (Self Verification) for Temporary Wetland Impacts Under 15,000 sq. ft.	Self-Verification Notification Form required to be submitted at least 2 weeks prior to construction.
State		
Maine Department of Environmental Protection – Bureau of Land and Water Quality	Modification to existing Site Location of Development Act (Site Law) Permit	Amendment application filed December 30, 2019. Approval anticipated Q4 2020.
Maine Department of Environmental Protection – Bureau of Land and Water Quality	Natural Resource Protection Act Permit	Amendment application filed December 30, 2019. Approval anticipated Q4 2020.
Maine Department of Environmental Protection – Bureau of Air Quality	Clean Air Act Permit – Minor Permit Modification	Application to be filed Q2 2020. Minor modification approval anticipated Q4 2020.
Maine Department of Inland Fisheries & Wildlife	Consultation for State-listed Threatened and Endangered Species	Consultation request letter sent September 23, 2019. Response received September 26, 2019. Concurrence with Maine Department of Environmental Protection Site Law planned Q4 2020.
Maine Natural Areas Program	Consultation for Unique Natural Areas/State-listed Plants	Initial letters sent September 23, 2019; response received October 2, 2019.
Maine Historic Preservation Commission	Consultation under Section 106 of the National Historic Preservation Act	On November 11, 2019, the Phase I archaeological survey results were sent to Maine State Historic Preservation Office (SHPO). On November 22, 2019 the SHPO agreed with the results and no further archaeological documentation is necessary.

B. ENVIRONMENTAL ANALYSIS

1.0 Geology, Groundwater, and Soils

Geology

Hydrogeologic Setting

The Project is within the Seaboard Lowland physiographic zone of the New England Province. The bedrock geology underlying the Project area is mapped as crystalline bedrock comprised of carboniferous alkali feldspar granite with inclusions of muscovite (U.S. Geologic Survey [USGS] 2019a). Overlying bedrock is a cover of loose to compact poorly-sorted glacial till (Maine Geological Survey 2008). Bedrock is expected near surface, and could be encountered at a depth of approximately 20 inches or less (Natural Resources Conservation Service 2019). Karst bedrock does not occur in the Project area.

The geomorphology of the Project area is characterized by generally low relief and elevations typically of less than 400 feet, except for occasional hills and low mountains in isolated spots.

Mineral Resources

Mineral resources in the Project area consist largely of sand, gravel, clay, and stone, and are commercially extracted from widely distributed glacial outwash deposits. The state of Maine does not have oil, gas, or coal extraction or production due to the lack of reserves throughout the state.

Two active sand and gravel quarry were identified within 1 mile of the Project. The first quarry is approximately 0.1 mile north of the Project area, north of the Central Maine Power transmission corridor, and west of Small Hardy Road. The second pit is approximately 0.5 mile northeast of the Project area on the east side of Methodist Road (Shaw Brothers Construction 2019). Given that no mineral resources would be directly within Project workspace, no impacts on mineral resources are anticipated from the Project.

Geologic Hazards

Seismic activity in Maine is relatively diffuse and has historically been of relatively small magnitude. Based on USGS shake-hazard mapping, the Project facilities are in an area with peak horizontal ground acceleration values of 4 to 6-percent gravity which would be considered low to moderate intensity. As such, ground vibration due to area seismicity would not pose a concern for modern, properly constructed, aboveground

natural gas facilities and associated pipeline. Given the Project area contains near-surface crystalline bedrock conditions, and the low seismic risk in the area, the likelihood of soil liquefaction at the Project area is considered low. Also, based on the USGS's Quaternary Fold and Fault Database, no active faults were identified in the vicinity of the Project area (USGS 2019b).

Given the low topographic relief present in the Project area, as well as global mapping of landslide susceptibility (Stanley and Kirschbaum 2017), the Project area is considered to have low landslide potential. Also, there have been no recorded mass wasting events in the Project vicinity (Kirschbaum et al. 2010, 2015; Cooperative Open Online Landslide Repository 2019).

Blasting

As discussed above, shallow bedrock is expected to occur during construction of the Project facilities. As such, blasting may be required in some areas. PNGTS states that during construction of the existing Westbrook Compressor Station for Maritimes, fill material was brought in to minimize the need for blasting and so that facilities could be installed on level ground. For construction of the new compressor station, fill material would also likely be brought in to minimize the need for blasting.

However, it is anticipated that some blasting would still be required. PNGTS developed a Project-specific Blasting Plan which states licensed professionals would conduct all blasting activities according to strict guidelines designed to control energy release. These professionals would keep charges to the minimum required to break the rock, and where necessary, use mats made of heavy steel mesh or other comparable material or trench spoil to prevent the scattering of rock and debris. PNGTS would monitor during blasting to ensure vibrations are limited to two inches per second peak particle velocity, when measured at dwellings, buildings, structures, and power line towers to ensure no damage to these structures occurs.

In addition, PNGTS would conduct pre-, and post-blasting inspections, with landowner permission, to assess the conditions of structures, wells, springs, and utilities within 150 feet of the proposed construction area where blasting would occur, including photo-documentation of existing structures, and sampling of wells and springs.

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

We likewise do not anticipate any impacts from geologic hazards given the lack of significant seismic activity, the lack of karst terrain, and the lack of steep slopes and unstable slopes in the Project area. With the implementation of PNGTS' Blasting Plan,

and the FERC Plan, we do not anticipate impacts from the effects of bedrock blasting to facilitate construction, or on the erodibility of soils.

Groundwater

The Project would overlies crystalline-bedrock rock aquifers. Water transmission storage capacity within crystalline bedrock aquifers is generally small, and largely dependent on the presence of secondary openings such as fractures or joints in the rock. Water that is stored in overlying glacial deposits or water in nearby streams or other surface waterbodies is commonly connected hydraulically with the crystalline-bedrock aquifers and could provide larger quantities of water depending on the degree of interconnection. Well yields are commonly in the range of 1 to 25 gallons per minute; however, some wells may exceed 100 to 500 gallons per minute. Groundwater quality in the crystalline-bedrock aquifer systems is generally suitable for most uses. There are no documented significant surficial sand and gravel aquifers in the vicinity of the Project area (Maine Geological Survey 2019a).

One private, company-owned well is within the Westbrook Compressor Station adjacent to the northernmost office building near the station entrance. Water from this well is used for basic domestic water use, including operation of the restroom facilities and minor cleaning on the compressor station facility. PNGTS would not conduct Project construction, refueling, and storage of hazardous materials within 200 feet of this well. Additionally, based on a review of the Maine Department of Health and Human Services, Division of Environmental and Community Health Center for Disease Control & Prevention database, no additional public water supplies, private wells, or springs occur within 200 feet of the Project, and there are no wellhead protection areas in the vicinity of the Project (DHHS-MeCDC 2019).

EPA-designated sole source aquifers are not present in the Project area, nor is the Project within any wellhead protection areas.

The Maine Department of Environmental Protection (MDEP) maintains an Environmental and Geographic Analysis Database which stores site and water quality information for potential and actual sources of contamination to groundwater in Maine. PNGTS conducted database research to identify facilities with potentially impacted groundwater within 0.25 mile of the Project area. The database search did not identify any potential sources of groundwater contamination within 0.25 mile of the Project area (MDEP 2019). However, if contaminated media is discovered during construction, PNGTS would adhere to its waste management procedures identified in its SPCC Plan, which we find acceptable for addressing unanticipated discovery of contaminated media.

There are no surficial sand and gravel aquifers, sole-source aquifers, or potential sources of groundwater contamination in the Project area. In addition, PNGTS would not

impact the privately owned well within the Project area; therefore, we conclude Project impacts on groundwater would not be significant.

Soils

Pre-construction soils mapped within the Project area were identified using the U.S. Department of Agriculture's Natural Resources Conservation Service gridded Soil Survey Geographic Database. According to the database, the Project footprint is within five unique soil types. None of the soils are considered to be prime farmland or farmland of state-wide importance.

While none of the mapped soils in the Project area are considered to have high wind erosion potential, some are considered to have high water erosion potential, and all are considered to have poor revegetation success. However, PNGTS states that based on past construction in the Project area, revegetation was achieved successfully following construction and vegetation has been maintained without incident.

To mitigate for soil erosion, PNGTS would install erosion control devices as required in compliance with the FERC Plan and Procedures. Temporary erosion control devices, including interceptor diversions and sediment filter devices (hay bales, silt fences, sandbags) would be installed as necessary immediately following initial ground disturbance. PNGTS would inspect erosion control devices on a regular basis and after each rain event of 0.5 inch or greater to ensure proper functioning, and maintain erosion control devices over the course of Project construction until revegetation is complete.

PNGTS would use existing gravel access roads for construction access to limit soil compaction issues, and PNGTS would restore and revegetate areas temporarily disturbed during construction and would address any soil compaction issues that affect revegetation, as needed per the FERC Plan.

2.0 Surface Water and Wetlands

Surface Water

The Project would be within two watersheds: the Upper Presumpscot River Watershed (hydrologic unit code (HUC) 010600010304) and the Lower Presumpscot-Mill Brook Watershed (HUC 010600010306). PNGTS conducted wetland and waterbody delineation and biological surveys between May and August 2019. A waterbody, as defined by the FERC Procedures, is "any natural or artificial stream, river, or drainage with perceptible flow at the time of crossing and other permanent waterbodies such as ponds and lakes." One intermittent minor waterbody (S-ML-5) was identified during field surveys in the proposed Project vicinity. This intermittent stream was dry at the time of field surveys and would be crossed by the Project

suction/discharge lines, using a dry-cut crossing method, which would involve use of a dam and pump method and/or a flume pipe as described below, if there is perceivable flow at the time of proposed construction. No permanent impacts on surface waterbodies are anticipated.

The dam and pump method typically involves placing sandbags across the existing stream channel upstream from the proposed crossing to stop water flow, and downstream from the crossing to isolate the work area. For this particular crossing, there is an existing access road with a culvert just downstream of the crossing that would function as the downstream dam. Pumps would be used to pump the water across the disturbed area and back into the stream further downstream. PNGTS would use screens at the inlet hose to prevent the entrapment of aquatic life. Spare pumps would be on-site in the event of a pump failure, and PNGTS would monitor pumps at all times until the construction is complete.

Once the stream is flowing fully within the flume pipe(s) or is being pumped around by the dam and pump method, the pipeline trench would then be excavated in drier conditions across the channel. If flume pipe(s) are used, the Contractor may remove the flume pipe(s) for the lowering-in phase. If the flume pipe(s) are to be removed, the dam and pump method must first be in place and operating properly. After lowering-in is complete, either the flume pipe(s) must be replaced, or the dam and pump method must be continued until backfill and final streambed and bank restoration is complete. For this dry crossing, either the flume pipe(s) or dam and pump method must be in operation from initial trenching activities until the final streambed and bank restoration is complete.

The flume pipe method begins with the initial installation of the flume pipe(s) on sandbags at each end to prevent water from leaking under the pipe into the work area. Alternatively, steel plates welded to the flume(s) can be used to divert the water. The openings to the pipe are then sand bagged (diked) around each end. The upstream dike is constructed first to channel the stream flow through the flume. The downstream dike would then be constructed to isolate the work area. Sandbags used during construction would be filled with sand free of silt, organics, and other material.

Once the stream construction preparation phase is complete and the stream is flowing fully within the flume pipe(s), the pipeline trench would then be excavated in drier conditions across the channel and under the flume. Once the trench is complete, the pipe would either be pushed from the bank, lowered into place with side-boom tractors or other equipment, or pulled with a winch attached to the pipeline from the opposite bank of the waterbody. The pipe is then weighted to reduce buoyancy or filled with water and allowed to sink. The ends of the prefabricated pipeline used to cross the waterbody would be left exposed to facilitate tie-ins to the cross-country pipeline. Following construction, the trench would be backfilled, the stream channel stabilized, and the area restored.

If the waterbody crossing requires blasting and there is perceivable flow when the blasting would occur, the following procedures will apply:

- establish the dam and pump;
- excavate overburden from the streambed;
- store overburden 25 feet from top of streambank;
- drill and blast streambed;
- smooth blast rock and install flume pipe;
- reestablish flow through flume pipe; and
- complete the crossing, including restoration of the streambed, banks, and right-of-way within 100 feet of the top of bank.

Blast rock must be removed immediately upon completion of blasting activities if it impedes the flow of the waterbody.

One ephemeral waterbody (S2), is 290 feet from the Project workspace; however, indirect impacts are not anticipated on this waterbody. No other surface waterbodies were identified within or adjacent to the Project workspaces. No sensitive surface waters under the National Wild and Scenic Rivers Act, state designated outstanding waters, or the EPA, were identified in the vicinity of the Project. Additionally, the Project is outside of the state-designated Surface Water Intake Direct Watersheds and River Intake and Riverbank Well Source Protection Areas (DHHS-McCDC 2019).

Based on the limited impacts on surface waterbodies and implementation of PNGTS' best management practices for erosion control mitigation, its SPCC Plan, and the FERC Procedures to minimize direct and indirect impacts, we conclude that the Project has minimized impacts on surface water to the greatest extent possible, and impacts would be mostly temporary and not significant.

Wetlands

Wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands adjacent to the existing Westbrook Compressor Station were previously delineated using the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual as part of the Maritimes Phase IV Project in 2006 and the Portland Xpress Project in 2018. The boundaries for these wetlands were verified through PNGTS environmental field surveys in August 2019.

Four wetlands were delineated within the proposed construction workspace associated with the suction/discharge lines. Two of these wetlands (Wetlands B15-WBCS-2W [A & B]) are small isolated wetlands at the southwestern edge, and within the

fenceline of the existing Westbrook Compressor Station facility. These wetlands formed after the construction of the Westbrook Compressor Station. These wetlands are dominated by broad-leaved cattail, woolgrass, soft-stemmed bulrush, shallow sedge, pointed broom sedge, and common fox sedge. The other two wetlands (W-ML-3 and W-ML-5) occur southwest of the existing compressor station fenceline along the proposed suction/discharge line corridor. Wetlands W-ML-3 and W-ML-5 are small forested wetlands. Table 3 identifies each wetland affected or within Project workspaces, including wetland identification, classification, crossing length, and impacts.

Table 3 Wetlands Affected by the Westbrook XPress Project					
Facility / Wetland ID(s)	NWI Classification^a	Crossing Length (feet)	Wetland Affected During Construction^b (Acres)	Wetland Area Affected by O&M^c (Acres)	Forested Wetland Conversion / Area Affected by O&M(Acres)
Existing Station / Facility Workspace					
B15-WBCS-2-W (A)	PEM	25	<0.1	<0.1	0.00
B15-WBCS-2-W (B)	PEM	41	<0.1	<0.1	0.00
Suction / Discharge Line					
W-ML-3	PFO	64	0.2	0.1	0.1
W-ML-5	PFO	59	<0.1	<0.1	<0.1
Totals^d		189	0.2	0.2	0.1
^a National Wetland Inventory (NWI) Classification: palustrine emergent wetland (PEM), palustrine forested wetland (PFO). (Cowardin, 1979) ^b Construction acreages include all temporary and permanent land required for the Project. ^c O&M = operation and maintenance ^d Total may not equal due to rounding.					

PNGTS would impact 0.2 acre of wetlands during construction, operation, and maintenance of the Project. Of this, 0.1 acre of forested wetland would be converted to palustrine emergent wetland. However, no permanent loss of wetland would result from the Project as PNGTS proposes to operate and maintain these areas in a palustrine emergent vegetated state. PNGTS would avoid indirect impacts on any additional wetlands through installation of erosion and sedimentation controls.

Potential impacts on wetlands could occur from stormwater runoff, hydrostatic test discharges, and spills or leaks of hazardous liquids from refueling construction vehicles or storage fuel, oil, and other fluids. PNGTS would minimize construction impacts on wetlands by implementing best management practices in the FERC Procedures. Best management practices include measures such as the installation of erosion control devices, including silt fences and/or straw bales at the edges of the construction work area adjacent to wetland resources and revegetation or stabilization of disturbed areas upon completion of construction. PNGTS would inspect temporary erosion control

devices on a regular basis and after each rain event of 0.5 inch or greater to ensure they are functioning properly. During construction, PNGTS would continue to monitor the effectiveness of temporary erosion control devices. Additionally, PNGTS would implement its SPCC Plan, which includes preventative measures to avoid spills of hazardous materials and response procedures it would implement in the event of a release.

Construction equipment and vehicle refueling, and lubricating would occur in upland areas more than 100 feet from the edge of a surface waterbody or wetland, except under limited, highly controlled circumstances, and under direct supervision of the EI. There are two areas where refueling within 100 feet of wetlands and waterbodies may be required for the Project, the workspace for suction/discharge lines and Meter Station 30006. The Project workspace for the suction/discharge lines has been designed to parallel the existing mainline pipeline corridor and the existing permanent access road which leads to a lateral south of the proposed compressor station expansion area. The existing permanent access road consists of compacted gravel fill and would be used to facilitate refueling the small pump(s) which may be needed for proper dewatering of the suction/discharge pipelines' trench, as well as the dam and pump crossing of the intermittent stream (S-ML-5). The gravel road would make a stable location to refuel the small pump(s) on the surface where a potential spill can be adequately contained and cleaned without entering adjacent resource areas. Meter Station 30006 is immediately adjacent to wetland areas north of the fenceline. The proposed site work would be contained to a relatively small area because the work must be conducted around the existing facilities within that station. Consequently, PNGTS may need to refuel equipment within 100 feet of the wetlands adjacent to the station. Refueling within 100 feet of resources would only occur on an as-needed basis and within the developed footprint of the Meter Station 30006. PNGTS would maintain equipment and check it daily for leaks.

Wetlands within construction workspaces would be allowed to revegetate to their original condition following restoration, except for the converted forested wetland (0.1 acre) that would be maintained in an emergent vegetated state. The herbaceous vegetation would regenerate quickly (typically within 1 to 3 years).

Based on the limited impacts on wetlands and implementation of PNGTS' best management practices for erosion control mitigation, its SPCC Plan, and the FERC Procedures to minimize direct and indirect impacts, we conclude that the Project has minimized impacts on wetlands to the greatest extent possible, and impacts would be mostly temporary and not significant.

Deviation from FERC Procedures

PNGTS has requested one deviation from the FERC Procedures in order to properly and safely construct both suction/discharge lines and to construct the interconnection area of the greenfield portion of the station. PNGTS states it needs a 120-foot-wide right-of-way to install the two 30-inch-diameter suction/discharge pipelines and a 200-foot-wide construction workspace where the suction/discharge lines would connect to the expansion area of the existing Westbrook Compressor Station, which crosses wetland W-ML-3. PNGTS requests workspace greater than 75 feet in wetland W-ML-3, which is a deviation to the FERC Procedures. Both lines would be less than 25 feet apart, in accordance with the FERC Procedures. PNGTS would follow best management practices for erosion control measures, its SPCC Plan, and FERC Procedures to mitigate impacts on wetland W-ML-3. Mitigation measures for wetlands, including W-ML-3, are discussed further below. The majority of temporary construction workspace would be restored to pre-construction and vegetated conditions.

We have reviewed the requested deviation to the FERC Procedures and find the justification and mitigation proposed by PNGTS to be acceptable.

Hydrostatic Testing

In accordance with DOT regulations, PNGTS would perform hydrostatic testing of the Westbrook Compressor Station and associated piping and suction/discharge lines prior to placing the Project facilities into service. Hydrostatic testing is a method by which water is introduced to segments of pipe and then pressurized to verify the integrity of the pipeline. A total of 145,000 gallons of water is anticipated to be used for hydrostatic testing. PNGTS would source hydrostatic test water from municipal sources. Following hydrostatic testing, test water would first pass through an energy-dissipation device as necessary, before being discharged into a well vegetated, upland area in accordance with the FERC's Procedures. PNGTS may also source water from municipal sources for the control and mitigation of fugitive dust from the Project.

Based on the limited volume of water that would be used and PNGTS' implementation of the FERC's Procedures, we conclude that hydrostatic test water and fugitive dust control impacts would not result in significant impacts.

3.0 Vegetation and Wildlife

Vegetation

The majority of the Project impacts would occur within industrial areas, forested/woodland upland, and open herbaceous vegetation. The upland and wetland forest areas consist of woody plant communities dominated by trees greater than 3 inches in diameter at breast height and greater than 20 feet in height. The upland forest community is common throughout the Project area outside of developed areas. Uplands in the forest are dominated by red oak, white pine, and eastern hemlock, with red maple also a significant component. The open herbaceous vegetation consists of shrublands with a history of disturbance and vegetation cutting. Vegetation management practices and/or other prior disturbances typically result in early successional vegetative cover that ranges from early successional upland scrub-shrub to field and roadside habitats. Early successional vegetation in the Project area includes false sarsaparilla, hay-scented fern, Timothy grass, bracken fern, early goldenrod, and New York fern. The open herbaceous vegetated areas are regularly disturbed by ongoing maintenance activities and primarily consist of yarrow, common milkweed, Queen Anne's lace, bird's-foot trefoil, tall white clover, red milkwort, and field cover.

Project construction impacts would include 11.9 acres of existing industrial land, 7.6 acres of forested woodlands, and 1.3 acres of open herbaceous vegetation. Following construction, PNGTS would permanently maintain 9.0 acres of industrial land, 6.9 acres of forested woodlands, and 0.9 acre of open herbaceous vegetation. See table 4 for a detailed summary of land use and vegetation impacts.

The primary impact of the Project facilities on vegetation would occur from cutting, clearing, and/or removal of the existing vegetation within the construction workspaces. Secondary effects associated with disturbances to vegetation could include increased soil erosion, increased potential for the introduction and establishment of invasive weed species, and a local reduction in available wildlife habitat. Short-term, long-term, and permanent impacts are anticipated in forested areas as a result of the construction and operation of the facilities. However, PNGTS would clear trees outside of the migratory bird nesting season and PNGTS has minimized forest impacts, particularly avoiding fragmentation, by locating the facility adjacent to existing utility corridors and industrial lands. Permanent impacts on vegetation from gravel or paving would occur from new operational areas enclosed by security fencing, and the suction/discharge pipelines corridor which PNGTS would vegetate, but regularly mow and maintain.

There are currently no significant populations of invasive plant species at the Project site. To prevent colonization and spread of invasive species at the Project sites from construction or operation, PNGTS would implement the following measures during construction:

- ensure all construction equipment and prefabricated equipment mats brought to the Project would be clean and free of excess dirt, mud, or plant fragments;
- install sediment/erosion control devices on slopes leading into wetlands and along the edge of the construction workspace to prevent spoil from migrating into these areas. This would also help to prevent the dispersion of seeds from invasive plant species into un-infested wetlands during construction;
- seed restored upland areas with a Project approved, weed-free upland seed mix;
- use only noxious and invasive weed-free straw bales, including any mulch obtained off-site (hay would not be used as mulch); and
- use only weed-free straw, wood fiber hydromulch, erosion control fabric, or some functional mulch equivalent.

PNGTS would employ best management practices to prevent erosion and sedimentation from temporarily disturbed soils and would adhere to the mitigation measures identified in the FERC Plan. These include the utilization of erosion and sediment control devices, such as erosion control fabric, interceptor diversions, and sediment filter devices (e.g., hay bales, silt fences, sand bags). PNGTS would restore temporary workspaces to pre-construction conditions following construction in accordance with the FERC Plan. Vegetation within the work areas impacted by construction is expected to recover quickly following restoration and stabilization of Project workspaces. PNGTS would conduct follow-up inspections of all disturbed areas to ensure revegetation is successful.

Given PNGTS would implement best management practices for erosion control mitigation, its SPCC Plan, its implementation of the FERC Plan to minimize impacts on vegetation, and the limited permanent impacts on vegetation associated with the aboveground facilities, we conclude that impacts on vegetation would not be significant.

Unique, Sensitive, or Protected Vegetation Areas

Although no unique, sensitive, or protected vegetation was identified in the Project footprint, one state designated unique natural vegetated community, a Pitch Pine Woodland, was identified directly northeast of the Project area. The Pitch Pine Woodland is between the existing compressor station and existing Meter Station 30006. This community type may include rare moths (such as the oblique zale, southern pine

sphinx, and pine-devil moth, a historical species for Maine) that utilize pitch pines as a larval host plant.

On October 2, 2019 and January 13, 2020, the MNAP provided correspondence to PNGTS and in response to our NOI, respectively, stating if equipment installation would take place on currently cleared land within the existing property boundary, and that no vegetation clearing or disturbance would occur in the area of the Pitch Pine Woodland (Lorenzon Hill), MNAP has no concerns with the proposed Project.

The majority of the Project would occur within the existing compressor and meter station boundaries. PNGTS does not propose to clear vegetation within the Pitch Pine Woodland. The Pitch Pine habitat occurs on the northeast side of the existing compressor station; proposed clearing activities would occur on the southwest side of the existing compressor station. Thus, we conclude no impacts on this sensitive habitat would occur.

Wildlife

The Project workspace includes terrestrial habitats that can support a diversity of wildlife species. The workspace within the existing compressor station fenceline is primarily developed with occupied buildings and paved surfaces. The Project area beyond the developed existing facilities is mainly comprised of forest woodlands with small areas of scrub-shrub. The wildlife communities within forested habitats depend largely on tree species composition and successional stage. Nuts and seeds from trees such as oaks, pines, hemlocks, and maples provide food for deer, turkey, mice, squirrels, and birds. Berries from understory shrubs also may provide important wildlife foods. Secondary canopy shrubs and saplings, brush piles, and fallen logs provide cover for various small- to medium-sized mammals. Large standing dead trees (particularly with cavities and/or exfoliating bark) provide nesting or roosting sites for a variety of birds, bats, and mammal species, as well as foraging opportunities for birds. Open herbaceous vegetation can support ground-nesting birds such as killdeer and song sparrow. Edge habitat adjacent to open spaces and low-growing areas could create habitat for bird species, such as blue-winged warbler, field sparrow, eastern towhee, and prairie warbler.

Potential impacts on wildlife include habitat removal, construction-related ground disturbance, and noise. Some slow moving individuals, such as some reptiles and small mammals, could be inadvertently injured or killed by construction equipment. However, more mobile species, such as birds and large mammals would likely relocate to other nearby suitable habitat and avoid the Project area once construction activities commence. Given the limited Project area, limited duration of disturbance (about 10 months), and abundant adjacent habitat, the short-term disturbance of local habitat is not expected to have population-level effects. Long-term impacts from habitat alteration would be further minimized by the use of previously disturbed areas (i.e., the existing compressor

station) and implementation of PNGTS best management practices, and the FERC Plan, which would ensure revegetation of areas temporarily disturbed by construction.

Noise levels by the facilities would return to pre-construction levels immediately following completion of construction activities. Noise associated with new aboveground facilities would be permanent; however, the aboveground facilities associated with the Project would be adjacent to existing industrial facilities. Therefore, noise associated with construction and operation of the Project is not anticipated to significantly impact wildlife in the Project area, and we conclude that the Project would have a short-term and not significant impact on wildlife or their habitat in the Project area.

Significant or Sensitive Wildlife Habitat

The Maine Department of Inland Fisheries and Wildlife (MDIFW) did not identify any significant wildlife habitats as designated by Maine's Natural Resources Protection Act within the Project vicinity. However, PNGTS' spring 2019 field surveys confirmed presence of one vernal pool that is designated as state significant wildlife habitat.

Vernal pools, also referred to as seasonal forest pools, are natural, temporary to semi-permanent bodies of water occurring in shallow depressions that typically fill during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet or outlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs, spotted salamanders, blue-spotted salamanders, and fairy shrimp, as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. The substrate in vernal pools generally consists of dense leaf litter over hydric soils. Because vernal pools cannot support fish populations, there is no threat of fish predation on amphibian egg masses or invertebrate larvae. Characteristic animals of vernal pools include species of amphibians, reptiles, crustaceans, mollusks, annelids, and insects (Maine Department of Environmental Protection 2019).

Two vernal pools have been previously identified within 250 feet of the Project footprint. One pool is approximately 100 feet outside of the eastern fenceline and south of the existing Westbrook Compressor Station, and one small vernal pool is adjacent to the northern side of the existing compressor station fenceline.

The much larger vernal pool to the south was determined to meet the criteria for significant wildlife habitat prior to construction of the Westbrook Compressor Station during the Maritimes Phase IV Project based on, at that time, proposed Chapter 335 Rules implementing Maine's Natural Resources Protection Act. PNGTS' field surveys performed during the amphibian breeding season indicated that this pool qualifies as significant wildlife habitat based on Maine's current Chapter 335 Rules. The original

Westbrook Compressor Station was designed to minimize forest clearing within 250 feet of this vernal pool in consultation with the MDEP and MDIFW.

This proposed Project was specifically designed and sited to minimize disturbance within 250 feet of this significant vernal pool; as such, no forest clearing within 250 feet would occur. A third vernal pool was identified during PNGTS' 2019 field surveys conducted for the entire greenfield expansion area of the Project. This vernal pool is more than 400 feet southwest of the Project footprint; therefore, we conclude no impacts on vernal pools would occur from construction or operation of the proposed Project.

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.C. 703-711), and bald and golden eagles are additionally protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 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.

On March 30, 2011, the FWS and FERC entered into a Memorandum of Understanding regarding implementation of EO 13186, 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.

Though many migratory birds in this region do not nest in the Project area, they may still occur in the area. However, due to the transitory nature of migratory birds, potential impacts by construction and operations of the Project are largely limited to potential nesting habitat. Of 45 migratory bird species of special concern known to occur in the Bird Conservation Region 30, PNGTS identified five species (blue-winged warbler, prairie warbler, red-headed woodpecker, whip-poor-will, and wood thrush), that could support nesting habitat in the Project area.

Construction of the Project would result in permanent conversion of 0.1 acre of palustrine forested wetland and 6.9 acres on forested woodland. PNGTS proposes to conduct initial tree clearing in February and March, outside of the migratory bird nesting period (April 1 to August 31), thus, minimizing potential impacts on migratory birds. PNGTS initiated consultation with the FWS on September 5, 2019. No species-specific conservation measures have been recommended by the FWS. PNGTS would adhere to the FERC Plan and Procedures, including not conducting operational vegetative maintenance between April 15 and August 1 of any year, to reduce the potential for incidental take and other impacts on migratory birds.

Given the limited amount of vegetative clearing (7.6 acres of forested woodland during construction), ample adjacent habitats suitable for any birds that may be disturbed, and that no eagles or nests were observed in the Project area, we conclude that the Project would not significantly impact migratory birds or eagles.

Special Status Species

Special status species are those species for which state or federal agencies provide an additional level of protection by law, regulation, or policy. Included in this category are federally listed species that are protected under the ESA, species considered as candidates for such listing by the FWS, and those species that are state-listed as threatened, endangered, or state species of special concern.

Federally Listed Species

In accordance with Section 7 of the ESA, the FERC, in coordination with the FWS, must ensure that any federal action authorized, funded, or carried out by the agency does not jeopardize the continued existence of a federally listed threatened or endangered species or result in an adverse modification of designated critical habitat of a federally listed species.

On September 5, 2019, PNGTS utilized the Information Planning and Conservation review to obtain a list of threatened and endangered species that may occur in the Project area. One species, the federally threatened northern long-eared bat, was identified as potentially present within the vicinity of the existing station.

The northern long-eared bat roosts in trees during the summer and hibernates in caves and abandoned mines during the winter. Roosting habitats include living and dead trees greater than 5 inches in diameter at breast height with cracks, crevices, and/or exfoliating bark. The Project is not within the vicinity of known northern-long eared bat hibernacula or maternity roost trees. Limited tree clearing (7.6 acres) would be required for construction. Initial tree clearing would occur within February and March, which is

outside of the active bat season (April 1 to September 30). Therefore, we conclude that the Project may affect but *is not likely to adversely affect* the northern long-eared bat.

On January 23, 2020, the FWS verification letter included the determination key results under the January 5, 2016 Programmatic Biological Opinion (PBO) on Final 4(d) Rule for the northern long-eared bat and Activities Excepted from Take Prohibitions from the FWS. The results determined the Project may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the FWS PBO; however, any taking that may occur incidental to this action is not prohibited under the final 4(d) rule. Therefore, the PBO satisfies consultation under the ESA Section 7 relative to the northern long-eared bat.

State-Listed Species

On September 23, 2019, PNGTS consulted with the MDIFW to identify state-listed species potentially present in the Project area. On September 26, 2019, the MDIFW identified eight bat species that occur in Maine. Three bat species are protected under Maine's Endangered Species Act and are afforded special protection under 12 Maine Revised Statutes (sections 12801–12810). The three state-listed species include the little brown bat (endangered), northern long-eared bat (endangered), and small-footed bat (threatened). The five remaining bat species are listed as special concern; these include, the big brown bat, red bat, hoary bat, silver-haired bat, and tri-colored bat. Based on historical evidence, several of these species could occur within the Project area during migration and/or the breeding season. PNGTS proposes to conduct initial tree clearing within February and March, which is outside of the active bat season (April 1 to September 30). In the September 26, 2019 correspondence, the MDIFW indicated no significant impacts are anticipated to any of these state-listed species as a result of this Project. Thus, we conclude the Project would not adversely impact state-listed species.

4.0 Land Use, Public Land, and Visual Resources

Land Use

Land uses within the Project area include industrial/commercial, open land, and forest/woodland. The Project would disturb 20.8 acres of land during construction on two properties, a 40-acre property owned by Maritimes and a 76.3-acre property controlled by PNGTS. Approximately 11.9 acres of land is already developed for the operation and maintenance of existing facilities, which includes a compressor station, metering and regulating station, electrical and control buildings, auxiliary buildings, and additional buildings, such as office buildings and warehouse/storage buildings, and gravel access paths. The proposed Project includes modifications of the Westbrook Compressor Station and Meter Station 30006, and an expansion of the compressor station. Installation and operation of the station modifications would mainly occur within the

fenceline of the facilities, including the 7.6-acre compressor station facility, and the 1.6-acre Meter Station 30006 facility.

Approximately 8.9 acres of the Project area is beyond the existing station/facilities and existing gravel paths; this area is considered greenfield. The land uses of the construction areas within the greenfield area are categorized as forested land and open land. Table 4 shows the breakdown of land use impacts from the Meter Station 30006, the suction/discharge lines corridor, the existing compressor station facility, and the Westbrook Compressor Expansion Facility.

Table 4 Land use Acreage Affected by Construction and Operation of the Westbrook XPress Project								
Project Facility	Industrial/Commercial ^{a/}		Open Land ^{b/}		Forest/ Woodland ^{c/}		Totals	
	Const Area ^{d/}	O&M Area ^{e/}	Const Area	O&M Area	Const Area	O&M Area	Const Area	O&M Area
Meter Station 30006	1.7	1.2	0.2	0.0	0.2	0.0	2.1	1.2
Existing Compressor Station Facility	7.6	7.6	0.0	0.0	0.0	0.0	7.6	7.6
Suction/Discharge Line	1.0	0.1	1.0	0.9	1.9	1.3	3.9	2.3
Westbrook Compressor Expansion Facility	1.6	0.1	0.0	0.0	5.6	5.6	7.2	5.7
Totals	11.9	9.0	1.3	0.9	7.6	6.9	20.8	16.8
a/ Industrial/Commercial Land includes maintained existing pipeline ROW, other utility ROWs, open fields, vacant land, herbaceous and scrub-shrub uplands, non-forested lands. b/ Open Land includes developed and paved areas, existing roads, and commercial or retail facilities. c/ Forest/Woodland includes upland forest community types. d/ Total construction workspace includes both temporary and permanent work areas. e/ O&M = Total operation and maintenance area (acres) that would be permanently maintained after construction of the Project.								

Impacts on the industrial/commercial land would be consistent with the existing condition and land use, and impacts on open land uses would be temporary and short-term as vegetation would be allowed to revert to pre-construction conditions after construction is complete. The primary permanent impact on land use would be the conversion of 5.6 acres of forested areas to industrial/commercial land as discussed below.

Construction of the compressor station expansion and suction/discharge line corridor in forested areas would require the removal of trees. In addition, PNGTS would clear a small area of forested land adjacent to Meter Station 30006 and use it as temporary workspace. PNGTS has minimized forest impacts by locating the facility adjacent to existing utility corridors and industrial/commercial land. Following

construction, the temporarily disturbed areas outside of the suction/discharge line corridor would be allowed to revert to pre-construction conditions, and revegetated. During operation, PNGTS would regularly maintain the suction/discharge pipeline corridor in accordance with FERC's Plan and Procedures. PNGTS would also landscape and maintain the area within the fenceline of the greenfield facilities to remain clear of trees and woody shrubs during operations.

Existing Residences and Planned Development

The Project site is completely surrounded by low density development with a quarry to the northwest and a golf course to the southeast. The nearest residence is 1,100 feet from the Project area. No new planned residential or commercial developments were identified within 0.25 mile of any construction work areas.

Hazardous Waste Sites

According to the MDEP Bureau of Remediation and Waste Management database of known hazardous waste sites, there are no sites within 0.25 mile of the construction workspaces.

Coastal Zone Management Areas

The Project is not within the coastal zone of Maine.

Public Land, Recreation, and Other Designated Areas

The Project is not within 0.25 mile of any designated federal and/or state wildlife preserve areas, conservation land, municipal parks and public lands, transportation corridors, or other designated areas. One snowmobile trail crosses the proposed Project area. The portion of the trail that transects the proposed Project area is owned by Maritimes, and maintained by a local club, The Westbrook Trail Blazes Snowmobile Club. The club would be notified of activities prior to construction, and use of the trail would be allowed to resume following restoration. Clearing is scheduled to occur during late February and early March when the trail could still be in use. However, the majority of construction would be conducted outside the winter snowmobile season; therefore, we conclude any temporary disruption to trail usage for snowmobiles would be minimal.

Visual Resources

The Project would involve modifications to the existing Westbrook Compressor Station and Meter Station 30006; and a greenfield expansion of the Westbrook Compressor Station and installation of suction/discharge pipelines to connect the stations. The property borders an approximately 500-foot-wide utility corridor containing five

Central Maine Power Company electric transmission lines. The greenfield facilities would be bordered by forest on the other three sides and sited so that it would not be visible from surrounding development. Therefore, we conclude the Project would be consistent with the existing landscape and would not have a significant visual impact.

The Project would result in approximately 7.8 acres of permanent impact on land use with the conversion of forest and open land to industrial land for the new facilities. All other areas would be restored to pre-construction condition and land use. The Project would not impact residential areas, visual resources, hazardous waste sites, or coastal zone management areas. Therefore, we conclude the Project would not have a significant impact on land use in the Project area.

5.0 Cultural Resources

In addition to accounting for impacts on cultural resources under NEPA, Section 106 of the National Historic Preservation Act (NHPA), as amended, requires FERC to take into account the effects of its undertakings on historic properties listed, or eligible for listing, on the National Register of Historic Places (NRHP)⁴ and to afford the Advisory Council on Historic Preservation an opportunity to comment on the undertaking. The Section 106 process is coordinated at the state level by the State Historic Preservation Office (SHPO), represented in Maine by the Maine Historic Preservation Commission. PNGTS, as a non-federal party, is assisting FERC in meeting our obligations under Section 106 and the implementing regulations at 36 CFR Part 800.

Area of Potential Effects

The Area of Potential Effects (APE) is the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16(d)). PNGTS defined the Project APE as the proposed Project area, totaling 45 acres, including about 21 acres of Project workspace. The APE is sufficient to account for all the potential direct and indirect effects to historic properties by the proposed Project.

⁴ In accordance with 36 CFR 800.16(l)(1), a historic property is any prehistoric or historic district, site, building, structure, object, or property of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization, included in, or eligible for inclusion in, the NRHP. This term includes artifacts, records, and remains that are related to and within such properties. Cultural resources are those properties that have not been evaluated for NRHP eligibility.

Cultural Resources Investigations

In an effort to identify historic properties within the Project APE and to account for any effects to those properties by the proposed Project, PNGTS conducted a cultural resources investigation, which included background research and survey (PAL 2019).

On August 13, 2019, PNGTS sent a letter to the SHPO, initiating consultation under Section 106. On September 4, 2019, the SHPO responded by letter, informing PNGTS that no architectural or prehistoric archaeological resources would be affected by Project implementation, but the SHPO requested a Phase I archeological survey of the APE that takes into consideration potential Project impacts on the Lorenzen Hill Quarry, an archaeological site that was determined by the FERC as eligible for listing in the NRHP in 2008 as part of the Maritimes Phase IV Project (FERC Docket No. CP06-336-000).

On November 11, 2019, PNGTS provided to the SHPO a copy of the Lorenzen Hill Quarry Site survey report, requesting review and concurrence with their recommendations. On November 22, 2019, the SHPO responded by email, agreeing with PNGTS' recommendation that "no further archaeological documentation is necessary at the proposed project workspace." We agree.

Tribal Consultation

On August 13, 2019, PNGTS contacted the following Native American tribes regarding the proposed Project: Mashpee Wampanoag Tribe, Passamaquoddy Tribe, Penobscot Nation, and Wampanoag Tribe of Gay Head - Aquinnah. FERC sent the Project NOI to these same tribes. The Penobscot Nation indicated that the Project appeared to have no impact on structures or sites of significance to the Penobscot Nation, but requested to be contacted if cultural materials were encountered during construction. If cultural resources are encountered during construction, PNGTS would contact the listed tribes per its *Unanticipated Discoveries Plan* described below. The Passamaquoddy Tribe indicated the Project would not have any adverse impact on cultural and historical concerns of the tribe. On August 15, 2019, the Passamaquoddy tribe responded that "the Project listed above is near the Lorenzen Hill Quarry Site, we believe the site should have the National Register listing and the listing should be completed." The Lorenzen Hill site is NRHP-eligible and was treated as such, as described above.

To date, PNGTS and FERC have not received any additional responses from the other tribes.

Unanticipated Discoveries Plan

PNGTS developed a Project-specific plan titled *Procedures Guiding the Discovery of Unanticipated Historic Properties and Human Remains: Post-Review Discoveries* (36 CFR 800.13), which outlines the procedures to follow, in accordance with state and federal laws, in the event that unanticipated cultural resources or human remains are discovered during construction of the Project, including consultation with FERC, the SHPO, and tribes regarding discoveries. FERC requested minor revisions to the plan. PNGTS provided a revised plan which we find acceptable.

6.0 Air Quality and Noise

Air Quality

Air quality would be affected by construction and operation of the Project. During construction, short-term emissions would be generated from the usage of equipment, land disturbance, and increased traffic from worker and delivery vehicles for all locations. Operational emissions would be limited to the proposed 15,900 horsepower unit at the existing Westbrook Compressor Station, emergency generator, gas heater, boiler, and fugitive emissions from station piping.

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, nitrogen oxides (NO_x), ozone, particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), and sulfur dioxide (SO₂).⁵ 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. The NAAQS are presented in table 5.

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

⁵ The current NAAQS are listed on EPA's website at <https://www.epa.gov/criteria-air-pollutants/naaqs-table>.

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. The Project is in Cumberland County, Maine, within the Metropolitan Portland Intrastate AQCR and is in a region that is designated as attainment for all criteria pollutants. Maine is currently part of the ozone transport region and, thus, nonattainment new source review requirements associated with moderate nonattainment areas apply for ozone.

Table 5 National Ambient Air Quality Standards			
Pollutant	Averaging Period	Standards	
		Primary	Secondary
Sulfur dioxide (SO ₂)	1-hour l/ m/	75 ppb 196 µg/m ³	
	3-hour b/	--	0.5 ppm
			1300 µg/m ³
	Annual a/ m/	0.03 ppm 80 µg/m ³	--
	24-hour b/ m/	0.14 ppm 365 µg/m ³	--
PM ₁₀	24-hour d/	150 µg/m ³	150 µg/m ³
PM _{2.5} (2012 Standard)	Annual e/	12.0 µg/m ³	15.0 µg/m ³
PM _{2.5} (2006 Standard)	24-hour f/	35 µg/m ³	35 µg/m ³
Nitrogen Dioxide (NO ₂)	Annual a/	0.053 ppm (53 ppb) 100 µg/m ³	0.053 ppm (53 ppb) 100 µg/m ³
	1-hour c/	100 ppb 188 µg/m ³	--
Carbon Monoxide (CO)	8-hour b/	9 ppm 10,000 µg/m ³	--
	1-hour b/	35 ppm 40,000 µg/m ³	--
Ozone (2008 Standard)	8-hour g/ h/	0.075 ppm	0.075 ppm

Ozone (2015 Standard)	8-Hour i/	0.070 ppm	0.070 ppm
Ozone (O3)	1-hour j/ k/	0.12 ppm	0.12 ppm
Lead	Rolling 3-month a/	0.15 µg/m ³	0.15 µg/m ³

a/ Not to be exceeded
 b/ Not to be exceeded more than once per year
 c/ Compliance based on 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area
 d/ Not to be exceeded more than once per year on average over 3 years
 e/ Compliance based on 3-year average of weighted annual mean PM_{2.5} concentrations at community-oriented monitors
 f/ Compliance based on 3-year average of 98th percentile of 24-hour concentrations at each population-oriented monitor within an area
 g/ Compliance based on 3-year average of fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area
 h/ The 2008 8-hour ozone standard would remain in effect until one year after an area is designated for the 2015 8-hour ozone standard, which corresponds with January 16, 2019 based upon attainment designations for the 2015 ozone standard issued on January 16, 2018
 i/ Permit applications that have not met EPA's grandfathering criteria would have to demonstrate that the proposed project does not cause or contribute to a violation of any revised ozone standards that are in effect when the permit is issued, including the 2015 revised standards
 j/ Maximum 1-hour daily average not to be exceeded more than one day per calendar year on average
 k/ The 1-hour ozone standard has been revoked in all areas in which Project activities would occur
 l/ Compliance based on 3-year average of 99th percentile of the daily maximum 1-hour average at each monitor within an area
 m/ The 24-hour and annual average primary standards for SO₂ have been revoked.
 ppm = parts per million by volume;
 ppb = parts per billion by volume.
 µg/m³ = micrograms per cubic meter.

Permitting/Regulatory Requirements

Prevention of Significant Deterioration and Nonattainment New Source Review

The Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) air permit programs are designed to protect air quality when air pollutant emissions are increased either through the construction of new major stationary sources or major modifications to existing stationary sources. The MDEP administers the PSD and NNSR permitting programs in their state. The Westbrook Compressor Station is an existing minor source operating under state minor source air emissions license A-957-71-E-R/A, issued April 3, 2019. Based on preliminary design, modifications to the Westbrook Compressor Station, which include the new gas-fired turbine, gas heater, boiler, emergency engine and piping modifications, would require a minor modification to the facility's air license and would not be subject to NSR permitting.

One additional factor considered in the PSD permit review process is the potential impacts on protected Class I areas. Class I Areas were designated because the air quality was considered a special feature of the area (e.g., national parks, wilderness areas,

national forests). Class 1 requirements for air quality analysis apply to new sources within 100 kilometers (62 miles) of a Class 1 area. The nearest Class 1 area to the Project is the Great Gulf Wilderness and Presidential Range Dry River Wilderness, 84 kilometers north of the Project site. As the Project is not subject to NSR permitting and does not require a PSD review, a Class 1 assessment is not required.

Title V Permitting

Title V is an operating air permit program run by each state for each facility that is considered a “major source.” The Westbrook Compressor Station is an existing minor source and would continue to remain below the major source thresholds and would not require a Title V license.

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. Below are the New Source Performance Standard subparts that would apply for the proposed Project.

Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) would apply to the new emergency generator at the Westbrook Compressor Station.

Subpart KKKK (Standards of Performance for Stationary Combustion Turbines) would apply to the stationary combustion turbine at the Westbrook Compressor Station.

Subpart OOOOa (Standards of Performance for Crude Oil and Natural Gas Production Transmission and Distribution) would apply to the new compressor unit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The 1990 CAA Amendments established a list of 189 hazardous air pollutants (HAPs), resulting in the promulgation of NESHAP. The NESHAP regulate HAP emissions from specific source types located at major or area sources of HAPs by setting emission limits, monitoring, testing, record keeping, and notification requirements.

Subpart ZZZZ- National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines would apply to the new emergency engine, and would be met by compliance with Subpart JJJJ standards.

State and County Regulations

Maine regulations applicable to the Project include visible emission restrictions for the combustion engine, fuel burning, and boiler. Additionally, the combustion turbine, boiler, and emergency engine at the Westbrook Compressor Station would be subject to fuel burning equipment particulate emission standards. The Westbrook Compressor Station would be subject to annual reporting requirements for criteria air pollutants and GHG. No county regulations apply to the Project.

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.

As noted earlier, the Project facilities would be constructed and operated within counties in attainment for all criteria pollutants; therefore, a General Conformity Determination would not be required.

Greenhouse Gases

GHGs 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 gases has been determined by the EPA to endanger public health and welfare by contributing to global climate change. The

most common GHGs emitted during fossil fuel combustion and natural gas transportation are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide. Emissions of GHGs are typically expressed in terms of CO₂ equivalents (CO₂e), where the potential of each gas to increase heating in the atmosphere is expressed as a multiple of the heating potential of CO₂ over a specific timeframe, or its global warming potential (GWP)⁶. The 100-year GWP of CO₂ is 1, CH₄ is 25, and nitrous oxide 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 CH₄ leaks from the aboveground facilities.

On November 8, 2010, the EPA signed a rule that finalizes reporting requirements for the petroleum and natural gas industry under 40 CFR Part 98. Subpart W of 40 CFR Part 98 requires petroleum and natural gas facilities that emit 25,000 metric tons or more of CO₂e 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 existing and 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 emissions of GHGs from major stationary sources under the PSD program. The EPA's current rules require that a major stationary source 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 CO₂e equal to or greater than 75,000 tpy. There are no NAAQS or other significance thresholds for GHGs.

Construction Emissions Impacts and Mitigation Measures

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, SO₂, and PM₁₀).

PNGTS 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, including using ultra-low sulfur diesel fuel, and limiting idling of diesel and gasoline powered on-road vehicles and non-road construction

⁶ These GWPs are based on a 100-year time period. We have selected their use over other published GWPs for other timeframes because these are the GWPs the EPA has established for reporting of GHG emissions and air permitting requirements. This allows for a consistent comparison with these regulatory requirements.

equipment operating at, or visiting, the construction site. Fugitive dust emissions during construction would be mitigated by measures outlined in its *Fugitive Dust Control Plan*, such as spraying water on unpaved areas subject to frequent vehicle traffic.

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. PNGTS conservatively utilized emission factors from EPA's AP-42 along with EPA's NONROAD2008a and MOVES emission modeling software.

Construction is estimated to occur between February 2021 and November 2021. The air quality impacts of Project construction would be considered short-term and would be further minimized by PNGTS' implementation of fugitive dust control measures outlined in its *Fugitive Dust Control Plan*, which we have reviewed and find acceptable. Construction emissions for the proposed Project are presented in table 6.

Table 6 Estimated Construction Emissions (tons)								
Source	Pollutant							
	NO _x (tpy)	CO (tpy)	VOC (tpy)	SO ₂ (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)	Total HAPs (tpy)	CO ₂ e (tpy)
Non-Road and On-Road	7.1	5.4	1.1	0.02	0.4	0.4	1.5	3,697
Commuter Emissions	0.3	3.5	0.08	0.003	0.06	0.01	0.09	456
Fugitive Dust	-	-	-	-	24.7	2.8	-	-
Blowdown and Purge	-	-	1.2	-	-	-	-	297.1
Total	7.4	8.9	2.38	0.023	25.16	3.21	1.59	4,450.1

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

Operational Emissions Impacts and Mitigation Measures

Emission generating modifications at the Westbrook Compressor Station would include the addition of one new 15,900 horsepower gas-fired compressor unit, emergency generator, gas heater, boiler and facility fugitives. Operational emissions for the Project are presented in table 7.

Table 7 Proposed Operational Emissions (tons per year)							
Source	Pollutant						
	NO _x (tpy)	CO (tpy)	VOC (tpy)	SO ₂ (tpy)	PM10/ PM2.5 (tpy)	Total HAPs (tpy)	CO ₂ e (tpy)
Existing Station PTE	65.1	85.6	39.1	6.5	7.6	5.5	156,238
Proposed Compressor Unit	20.5	6.6	2.3	3.3	3.9	0.5	69,502
Proposed Gas Heater	0.65	1.0	0.2	-	-	-	795
Proposed Boiler	4.2	3.6	0.2	0.1	0.1	-	2,322
Proposed Emergency Generator	0.2	0.4	0.2	-	<0.1	0.1	86.5
New Piping Components, Gas Releases, & Tanks	0.0	0.0	6.3	0.0	0.0	0.2	5,617
Change in Existing Station PTE due to Project	25.6	11.6	9.2	3.4	4.1	0.8	78,322
Post-Project Station PTE	90.7	97.2	48.3	9.9	11.7	6.4	234,560
NNSR/PSD Permitting Threshold (MST)	100	100	50	100	100	N/A	N/A
Title V Permitting Threshold (MST)	100	100	50	100	100	25	N/A
MST = Major Source Threshold							

Emissions presented represent the facility running at full capacity for the year, which represents the maximum emissions the facility would produce. Considering the minimal operational emissions associated with the Project, we conclude that operational emissions would not have a significant impact on air quality.

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.

The EPA published its *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA 1974). 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 pm to 7:00 am), noise exposures are penalized +10 decibels, 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 decibels above the measured L_{eq} .

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 a perceivable change in loudness on the A-weighted sound level is about 3 dBA, whereas a 6 dBA change is clearly noticeable, and a 10 dBA change is perceived as either twice or half as loud.

State and County Noise Ordinances

The MDEP regulates noise levels under its Site Location of Development Law and Regulations, which establishes hourly sound level limits at facility property boundaries and protected locations. These include an operational L_{eq} daytime limit of 75 dBA at any facility property boundary, a 60 dBA daytime limit and 50 dBA nighttime limit for residential areas, and a 70 dBA daytime and 60 dBA nighttime limit for commercial or industrial areas.

The Town of Windham limits permissible sound level abutting residential areas to 55 dBA during daytime and 45 dBA for nighttime hours.

No additional local ordinances apply to the Project.

Construction Noise Impacts and Mitigation Measures

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, construction would primarily be limited to daytime hours. FERC staff considers daytime hours to be 7:00 am to 7:00 pm. If PNGTS conducts any nighttime construction, it would comply with the MDEP limit of 50 dBA Ldn for nighttime construction noise, as described above. Potential nighttime construction noise would not any impact nearby residents since the nearest residence is 1,100 feet away.

PNGTS would mitigate blowdowns associated with operation of the expanded Westbrook Compressor Station by installing a unit blowdown system with silencers. During initial start up and testing, it is anticipated that a unit blowdown could occur 2 to 5 times per week and 1 to 3 times monthly during normal operation.

There are several NSAs within 0.5 mile of construction activities, but based on the short-term construction period, we conclude that construction noise would not have a significant impact on the environment.

Operation Noise Impacts and Mitigation Measures

The expanded Westbrook Compressor Station would generate operational noise from the additional compressor unit. PNGTS would mitigate operational noise through installation of air inlet and exhaust silencers and an acoustically-lined weatherhood and blowdown silencer; PNGTS would also cover any outdoor aboveground piping with acoustical pipe insulation and installation of low-noise coolers and heater. The estimated noise from the modifications at the compressor station would be below the FERC's noise criterion of 55 dBA and the Project modifications at this facility would result in a small noise increase at NSAs from existing levels. Seven NSAs were identified near the Project site (see figure 3). Predicted noise levels from the Project are presented in table 8.

Table 8					
Noise Quality Analysis					
NSA	Distance (Feet)/ Direction	Existing facilities + ambient Ldn (dBA)	New Turbine Ldn (dBA)	Total L_{dn} (dBA)	Potential Noise Increase (dBA)
1	3,100/N	47.9	34.4	48.1	0.2
2	4,500/N	48.5	30.3	48.6	0.1
3	1,100/W	44.0	45.4	47.8	3.8
4	3,650/NE	48.0	32.6	48.1	0.1
5	2,500/SSW	44.0	36.8	44.8	0.8
6	2,900/SE	48.0	35.1	48.2	0.2
7	3,200/E	48.0	34.0	48.2	0.2

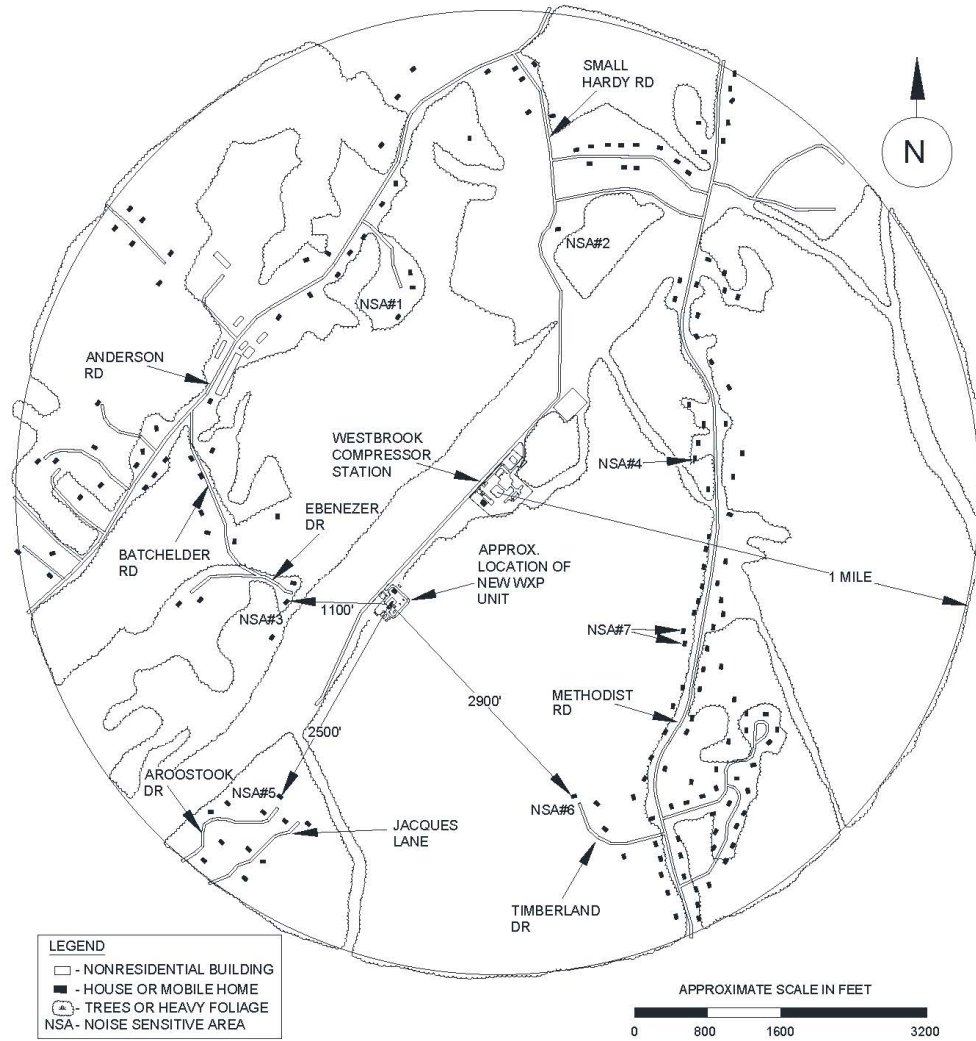


Figure 3

WXP and Westbrook Compressor Station: General Area Layout—Map showing NSAs within 1 Mile of the Station Site and Other Areas of Interest.

Figure 3

To confirm the noise modeling and verify that noise generated from the modifications would not cause a significant increase to the existing noise, we **recommend that:**

- **PNGTS should file a noise survey with the Secretary of the Commission (Secretary) no later than 60 days after placing the authorized unit at the Westbrook Compressor Station in service. If a full load condition noise survey is not possible, PNGTS should file an interim survey at the maximum possible horsepower load and file the full load survey within 6 months. If the noise attributable to the operation of all of the equipment at the station under interim or full power load conditions exceeds an L_{dn} of 55 dBA at any nearby NSAs, PNGTS should:**
 - a) **file a report with the Secretary on what changes are needed, for review and written approval by the Director of the Office of Energy Projects (OEP);**
 - b) **install additional noise controls to meet that level within 1 year of the in-service date; and**
 - c) **confirm compliance with the L_{dn} of 55 dBA requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.**

No noise generating modifications would occur at M&R 30006 and would not contribute to sound levels in the vicinity. Based on the analysis above and our recommendation, we conclude that the Project would not result in significant noise impacts on residents or the surrounding communities.

7.0 Reliability and Safety

The transportation of natural gas by pipeline involves some risk to the public in the event of an accident and subsequent release of gas. The greatest hazard is a fire or explosion following a major pipeline rupture. 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 aboveground facilities associated with the Project must be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR 192. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures.

The DOT pipeline standards are published in Parts 190-199 of Title 49 of the CFR. For example, Part 192 of 49 CFR specifically addresses natural gas pipeline safety issues, prescribes the minimum standards for operating and maintaining pipeline

facilities, and incorporates compressor station design, including emergency shutdowns and safety equipment. Part 192 also requires a pipeline operator to establish a written emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency.

The operator must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a natural gas pipeline emergency and report it to appropriate public officials.

Facilities associated with the Project must be designed, constructed, operated, and maintained in accordance with DOT standards, including the provisions for written emergency plans and emergency shutdowns. PNGTS would provide the appropriate training to local emergency service personnel before the facilities are placed in service.

Modifications at the Westbrook Compressor Station would represent a minimal increase in risk to the public and they would be constructed and operated according to the DOT's safety regulations.

8.0 Cumulative Impacts

In accordance with NEPA, we considered the cumulative impacts of the Project and other projects or actions in the Project area. Cumulative impacts represent the incremental effects of the proposed action when added to other past, present, or reasonably foreseeable future actions. Cumulative impacts can result in individually minor actions becoming collectively significant impacts on environmental resources if they take place in the same general area over a given period of time.

The cumulative impact analysis generally follows the methodology set forth in relevant guidance from the Council on Environmental Quality and the EPA and focuses on potential impacts from the proposed projects on resource areas or issues where incremental contributions would be potentially significant when added to potential impacts of other actions. To avoid unnecessary discussions of insignificant impacts and to adequately address and accomplish the purpose of this analysis, an action must meet the following criteria to be included in the cumulative impacts analysis:

- impact a resource area potentially affected by the Project;
- cause this impact within all, or part, of the Project's geographic scope; and
- cause this impact within all, or part, of the time span for the potential impact of the Project.

This EA analyzes the Project impacts on geology and soils; water resources; wildlife; cultural resources; land use and visual resources; and air quality and noise. As described earlier in section B of this EA, the Project-related construction and operational

impacts would not impact historical properties, groundwater, and geological resources or be impacted by geologic hazards; therefore, cumulative impacts on these resources would not be realized and are not evaluated for cumulative impacts.

Below, we assess the potential for cumulative impacts on soils, water resources, vegetation, wildlife, land use, visual resources, air quality, and noise. The geographic scope used to assess cumulative impacts for each resource are discussed below in table 9.

Table 9 Geographic Scope for Cumulative Impacts		
Environmental Resources	Geographic Scope	Rationale
Soils	Construction workspace	Impacts on soils would be highly localized and would not be expected to extend beyond the area of direct disturbance associated with the Project.
Water Resources; Vegetation, Wildlife, and Special Status Species	HUC 12 Watersheds (Upper Presumpscot River and Lower Presumpscot River-Mill Brook)	Impacts on water resources, vegetation, and wildlife could extend outside of the workspaces, but would generally be contained to a relatively small area. We believe the watershed scale is most appropriate to evaluate impacts as it provides a natural boundary and a geographic proxy to accommodate general wildlife habitat and ecology characteristics in the Project area.
Land Use	1 mile radius	Impacts on general land uses would be restricted to construction workspaces and the immediate surrounding vicinity.
Visual Resources	Distance of tallest visible facility	Assessing the impact based on the viewshed allows for the impact to be considered with any other feature that could have an effect on visual resources.
Noise	0.25 mile- construction 1.0 mile- operation	Construction noise is limited and is commonly associated with the utilization of large equipment. Noise from the Project's permanent facilities could result in cumulative noise impacts on NSAs within 1 mile, but attenuate with distance from the compressor unit.
Air Quality	0.25 mile- construction 50 km (31.1 miles)- operation	Construction equipment is the primary source of emissions during construction; however, these emissions will be minimal and will quickly dissipate to ambient levels as distance increases from the site. We adopted the distance used by the EPA for cumulative modeling of

		large PSD sources during permitting which is a 50-km radius. Impacts on air quality beyond 50 km would be <i>de minimis</i> .
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PNGTS identified major projects within the vicinity of the Project by reviewing publicly available resources, including federal, state, and local agency websites. The projects identified as occurring within the resource-specific geographic scopes and within current and/or reasonably foreseeable timeframes are identified based on resource type in appendix A, including two FERC-jurisdictional projects, subdivisions and commercial developments, school expansions, jetport expansion, road improvements, and various boilers, generators, and similar equipment replacements.

Soils

Construction of the Project would result in temporary, short-term impacts on soils during construction and permanent impacts on soils resulting from installation of new facilities. PNGTS would employ best management practices to prevent potential erosion and sedimentation from temporarily disturbed soils and would adhere to the mitigation measures identified in the FERC Plan and Procedures to stabilize soils during and following construction and to ensure successful revegetation.

Two FERC-jurisdictional projects were identified within the geographic scope for cumulative impacts on soils, the Atlantic Bridge Project (AB Project) and the Portland Xpress Project Phase III (PXP Project). These projects would occur within the existing Westbrook Meter Station and Westbrook Compressor Station fencelines. There would be overlapping soil impacts from these projects; however, they would be subject to the same erosion and sediment controls and restoration requirements as the proposed Project. Therefore, we conclude that any potential cumulative impact on soils would be temporary and not significant.

Water Resources

As shown in appendix A, there are eight projects, the AB and PXP Projects, Cumberland Woods Subdivision Project, Village Review Subdivision, Saccarappa School Expansion and Renovation Project, Babbidge Road Paving Project, Unnamed Project (car wash, coffee shop, associated parking improvements), and the Portland International Jetport Expansion Project within the water resources geographic scope of the Project.

Construction of the Project would cross one intermittent surface waterbody and impact 0.2 acre of wetlands, of which, 0.1 acre would be converted from palustrine forested wetland to palustrine emergent wetland. PNGTS proposes to operate and maintain these wetlands in a palustrine emergent state, thus, no loss of wetland

functionality is proposed. No permanent impacts are anticipated on surface waterbodies during Project operation.

The Cumberland Woods Subdivision Project, Village Review Subdivision, Babbidge Road Paving Project, and the Unnamed Project, are not anticipated to contribute discernably to cumulative impacts on water resources because the projects involve building subdivisions on an existing vacant lot, demolishing an existing subdivision and reconstructing new residential building, and paving an existing road. The Saccarappa School Expansion and Portland International Jetport Expansion Projects may have direct or indirect impacts on water resources.

Cumulative impacts from the proposed Project and other projects on water resources could occur from spills of hazardous materials during construction and operation, erosion from construction, increased sedimentation from hydrostatic test water, and sedimentation from construction of the other projects. PNGTS, and the AB and PXP Project proponents, would implement its SPCC Plan and measures included in the FERC Procedures to minimize impacts on wetlands and waterbodies. The other projects would have similar permit requirements to minimize impacts on water resources, which could include erosion control measures and spill prevention.

Given that the majority of the other projects are on existing infrastructure and industrial land, the proposed Project has mostly temporary impacts on water resources, and based on PNGTS' proposed mitigation measures, including implementation of its SPCC Plan and the FERC Procedures, we conclude that the cumulative impacts from the proposed Project and the other projects on water resources, would not be significant.

Vegetation and Wildlife

As shown in appendix A, there are eight projects, the AB and PXP Projects, Cumberland Woods Subdivision Project, Village Review Subdivision, Saccarappa School Expansion and Renovation Project, Babbidge Road Paving Project, Unnamed Project (car wash, coffee shop, associated parking improvements), and the Portland International Jetport Expansion Project within the vegetation and wildlife geographic scope of the Project.

The Cumberland Woods Subdivision, Village Review Subdivision, and Babbidge Road Paving Projects are not expected to contribute discernably to cumulative impacts on vegetation or wildlife because they involve existing subdivisions and roadway repavement. These projects could impact adjacent vegetation habitats that would not be considered quality habitat. The Saccarappa School Expansion and Renovation Project, the Unnamed Project, and the Portland International Jetport Expansion Project may impact vegetation and wildlife.

The primary impact on vegetation from the proposed Project and the other projects would occur from cutting, clearing, and/or removal of the existing vegetation within the construction workspaces. Of the listed projects, only the Cumberland Woods Subdivision (1.8 miles from the proposed Project) has proposed tree clearing (less than 7 acres). The subdivision project abuts a larger forested area greater than 90 acres, so the project would (at a maximum) clear less than 8 percent of that forested tract. PNGTS proposes to clear 7.6 acres during construction and maintain 6.9 acres of forested land for the proposed Project. The proposed Project, AB and PXP Projects, and Cumberland Woods Subdivision have anticipated minimal tree clearing compared to the overall forested areas immediately adjacent to each project, specifically impacting less than 10 percent of adjacent forested lands cumulatively. Additionally, the clearing proposed is largely considered edge habitat and would cause minimal forest fragmentation.

Potential impacts on wildlife from the proposed Project and other projects, include habitat removal, construction-related ground disturbance, and noise. Where construction schedules overlap, increased noise, lighting, and human activity could also disturb wildlife in the area. However, these impacts attenuate with distance and, given that the nearest project is about 2 miles from the Project, we do not anticipate any additive noise, lighting, or human activity impacts on wildlife or vegetation. More mobile species, such as birds, may temporarily displace to nearby suitable habitat or avoid the areas affected by construction, but are anticipated to return to those areas temporarily impacted following the completion of project activities. Direct mortality of smaller, less mobile species may occur as a result of project activities in the area. Overlapping construction timelines increase the area and duration of disturbance for wildlife, thus increasing cumulative impact. Nevertheless, there is abundant available habitat within the geographic scope; therefore, we conclude cumulative impacts on vegetation and wildlife would be of short duration, localized, and minor.

Land Use and Visual Resources

The greenfield expansion area for the new compressor station would require conversion of 6.9 acres of existing forested land to industrial land use. The Project would not impact active agricultural land, residential land, or open water. PNGTS would implement the measures in the FERC Plan and Procedures to minimize impacts during construction. All temporary workspaces would be restored to pre-construction conditions following construction.

There are two projects within the geographic scope for cumulative impacts on land use and visual resources, the AB and PXP Project. The AB and PXP Projects, would involve modifications within the existing Westbrook Compressor and M&R Station. There is an existing 500-foot-wide utility corridor containing five Central Maine Power Company electric transmission lines adjacent to the proposed Project. The proposed Project's greenfield expansion facilities would be bordered by forest on the other three

sides and sited so that it would not be visible from surrounding development. Therefore, we conclude that the proposed Project, and AB and PXP Projects, would be consistent with the existing landscape and would not have a significant cumulative impact on land use or visual resources.

Air Quality

Two projects were identified within the vicinity of the Project that could contribute to cumulative impacts on air quality during construction, the AB and PXP Projects. Construction activities would result in short-term emissions that would be localized, temporary, and intermittent. To the extent any of the projects are constructed at or near the same time, the combination of construction activities could have a cumulative impact on air quality in the immediate area. However, the direct effects of the projects from construction activities would be localized and limited to the period of construction.

Several projects were identified within the vicinity of the Project that could contribute to cumulative impacts on air quality during operation which include: a car wash/coffee shop, new portable crushed stone and gravel facility upgrades, new boilers, new generators, iron works facility upgrades, and new emergency and non-emergency engines. Each of these projects would be required to meet applicable state and federal air quality regulations to avoid significant impacts on air quality, and therefore, we conclude there would be no significant cumulative impacts on air quality during operation of the Project.

Noise

Construction of the Project would result in temporary increases in noise equipment, which would be localized, temporary, and intermittent. To the extent any of the projects are constructed at or near the same time, the combination of construction activities could have a cumulative impact on noise. However, the direct effects of the projects would be localized and limited to the period of construction. The noise attributable to the operation of the Project facilities at the nearby NSAs must comply with FERC's sound level guideline and state noise requirements; therefore, cumulative noise impacts from operation of the facilities following the Project are not expected to have an adverse noise impact on nearby NSAs.

Therefore, we conclude there would be no significant cumulative impacts on noise during construction or operation of the Project.

Conclusions on Cumulative Impacts

Based on the impacts and mitigation measures described in this EA, we conclude that the impacts from this Project when considered cumulatively with past, present, and reasonably foreseeable projects would not contribute significantly to cumulative impacts on the environment.

C. ALTERNATIVES

In accordance with NEPA and Commission policy, we evaluated alternatives to the Project to determine whether they would be reasonable and environmentally preferable to the proposed action. These alternatives included the no-action alternative. The evaluation criteria used for developing and reviewing alternatives were:

- ability to meet the amendment Project's stated objective;
- technical and economic feasibility and practicality; and
- significant environmental advantage over the proposed action.

Under the No-Action Alternative, PNGTS would not construct the Project and none of the environmental impacts identified in this EA would occur. The No-Action Alternative would not accomplish the Project objective of the permanent incremental addition of capacity gained from the additional compression and capacity at the Westbrook Compressor Station. Assuming there continues to be demand by these customers for service, it is likely that other natural gas projects would be proposed. Because these other projects would likely have similar or greater impact than the proposed Project, we have dismissed this as a reasonable alternative as it could not meet the Project's objectives.

The facilities proposed as part of the Project are limited to modifications to the existing Westbrook Compressor Station and Meter Station 30006. The Project does require expansion of the compressor station into previously undeveloped property; however, all proposed Project facilities would be constructed on property controlled by PNGTS. Based on the limited environmental impact associated with this Project, and collocation with the existing compressor station, we did not identify any unresolved resource conflicts which would present a need to examine further alternatives. Additionally, no comments were received regarding resources that would be impacted by the Project. Therefore, because the impacts associated with the proposed Project are not significant, we did not evaluate additional alternatives. We conclude that the proposed action is the preferred alternative to meet the Project objectives.

D. CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis in this EA, we have determined that if PNGTS constructs the proposed Westbrook XPress Project facilities in accordance with its application 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 Order (Order) contain a finding of no significant impact and include the mitigation measures listed below as conditions to any authorization the Commission may issue.

1. PNGTS 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. PNGTS 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 the Office of Energy Projects **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**, PNGTS shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. The authorized facility location 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**, PNGTS 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.

PNGTS' exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. PNGTS' right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its 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. PNGTS shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or 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/sheets/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 the Commission'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 route realignments and facility location changes resulting from:

- a. implementation of cultural resources mitigation measures;
- b. implementation of endangered, threatened, or special concern species mitigation measures;
- c. recommendations by state regulatory authorities; and
- d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. **Within 60 days of the acceptance of the authorization and before construction begins**, PNGTS shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP. PNGTS must file revisions to the plan as schedules change. The plan shall identify:

- a. how PNGTS 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 PNGTS 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 PNGTS 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 PNGTS' organization having responsibility for compliance;
- g. the procedures (including use of contract penalties) PNGTS will follow if noncompliance occurs; and
- h. for each discrete facility, a Gantt or PERT chart (or similar Project scheduling diagram), and dates for:
 - (1) the completion of all required surveys and reports;
 - (2) the environmental compliance training of onsite personnel;
 - (3) the start of construction; and
 - (4) the start and completion of restoration.

7. PNGTS 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. 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
 - e. responsible for maintaining status reports.
- 8. Beginning with the filing of its Implementation Plan, PNGTS shall file updated status reports 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 PNGTS' efforts to obtain the necessary federal authorizations;
 - b. the construction status of the Project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally-sensitive areas;
 - c. a listing of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
 - d. a description of the corrective actions implemented in response to all instances of noncompliance;
 - 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 PNGTS from other federal, state, or local permitting agencies concerning instances of noncompliance, and PNGTS' response.
- 9. PNGTS must receive written authorization from the Director of OEP **before commencing construction of any Project facilities.** To obtain such authorization, PNGTS must file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).
- 10. PNGTS must receive written authorization from the Director of OEP **before placing the Project into service.** Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way and other areas affected by the Project are proceeding satisfactorily.
- 11. **Within 30 days of placing the authorized facilities in service,** PNGTS shall file an affirmative statement with the Secretary, certified by a senior company official:

- a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the conditions in the Order PNGTS 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. PNGTS shall file a noise survey with the Secretary **no later than 60 days** after placing the authorized unit at the Westbrook Compressor Station in service. If a full load condition noise survey is not possible, PNGTS shall file an interim survey at the maximum possible horsepower load and file the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at the station under interim or full power load conditions exceeds an L_{dn} of 55 dBA at any nearby NSAs, PNGTS shall:
- a) file a report with the Secretary on what changes are needed, for review and written approval by the Director of the OEP;
 - b) install additional noise controls to meet that level **within 1 year** of the in-service date; and
 - c) confirm compliance with the L_{dn} of 55 dBA 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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- United States Fish and Wildlife Service. 2019. FWS Information Planning and Conservation List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project: WestBrook Xpress Project, Consultation Code: 05E1ME00-2019-SLI-1122. Maine Ecological Services Field Office. Received September 5, 2019.

APPENDIX A Recently Completed, Current, and Potential Future Projects with Resource Areas of Impact Affected by the Westbrook XPress Project <u>a/</u>					
Project Name and location	Description	Construction Date / Project Status <u>b/</u>	Approximate Distance to Westbrook XPress Project (miles)	Resource Areas Potentially Affected <u>a/</u>	Source <u>c/</u>
<i>Proposed Westbrook XPress Project, Cumberland County, Maine</i>					
Atlantic Bridge Project, Westbrook, Cumberland County, Maine (FERC Docket# CP16-9-000) https://sape2016.files.wordpress.com/2017/06/atlantic-bridge-approved.pdf	The Atlantic Bridge Project includes resizing existing valves and associated piping from 12-inch to 24-inch within the existing Westbrook Meter Station fenceline.	2020	Existing Westbrook M&R & Compressor Station Site	Soils, Vegetation, Wildlife, Water Resources, Land Use, and Noise & Air Quality	FERC Certificate issued January 25, 2017
Portland XPress Project, Phase III, Westbrook, Cumberland County, Maine (FERC Docket #CP18-506 and CP18-539) https://www.ferc.gov/whats-new/comm-meet/2019/022119/C-1.pdf	The Portland XPress Project includes proposed new cooling and ancillary facilities, new garage for vehicle storage at the existing Westbrook Compressor Station. Install gas cooling, enable bi-directional compression	2020	Existing Westbrook Compressor Station Site	Soils, Vegetation, Wildlife, Water Resources, Land Use, and Noise & Air Quality	FERC Certificate issued February 21, 2019
Cumberland Woods – Graiver Family Holdings, LLC 72-Unit Multifamily Subdivision 425 Cumberland Street, Westbrook, Maine Tax Map 010, Lot 028B: Residential Growth Area1 https://www.westbrookmaine.com/AgendaCenter/ViewFile/Minutes/_07022019-517	The applicant is proposing to develop a 72-unit multifamily subdivision on an existing vacant lot located at 425 Cumberland Street.	2020	1.82	Vegetation, Wildlife, Water Resources, and Noise & Air Quality	Westbrook Planning Board Minutes July 2, 2019
Village Review Subdivision MTR Development, LLC 660 Main Street, Westbrook, Maine Tax Map 033 Lot 028: City Center District https://www.westbrookmaine.com/AgendaCenter/ViewFile/Minutes/_07022019-517	The applicant is preparing to demolish an existing residential building and construct a two-story multi-use building with first floor commercial space and three residential units on the second floor.	2020	2.74	Water Resources, and Noise & Air Quality	Westbrook Planning Board Minutes July 2, 2019
Saccarappa School Expansion and Renovation 110 Huntress Ave. Westbrook, Maine Tax Map 007 Lots 19 and 20A https://www.westbrookmaine.com/AgendaCenter/ViewFile/Agenda/_06042019-512	Saccarappa Elementary School is planning additions and renovations including new swings, an open sand area, mud kitchen, water pump and other natural play features.	2020	3.02	Vegetation, Wildlife, Water Resources, and Noise & Air Quality	Westbrook Planning Board Minutes June 4, 2019

<p style="text-align: center;">APPENDIX A Recently Completed, Current, and Potential Future Projects with Resource Areas of Impact Affected by the Westbrook XPress Project <u>a/</u></p>					
Project Name and location	Description	Construction Date / Project Status <u>b/</u>	Approximate Distance to Westbrook XPress Project (miles)	Resource Areas Potentially Affected <u>a/</u>	Source <u>c/</u>
Babbidge Road Paving (Project ID 024055.00), Falmouth, Cumberland County, Maine https://www.maine.gov/mdot/projects/workplan/docs/2019/Work-Plan-2019-2020-2021-Feb-2019.pdf (Page 33)	Beginning at the Windham town line and extending east 0.86 of a mile to Backstrap Road.	2020	4.4	Water Resources, Vegetation, and Wildlife	MDOT 2019
(Unnamed) Car Wash, Coffee Shop, and Associated Parking Improvements 959 Spring Street, Westbrook, Maine Tax Map 003 Lot 015 Zone; Highway Services https://www.westbrookmaine.com/AgendaCenter/ViewFile/Minutes/_07022019-517	The applicant is requesting to construct a car wash, coffee shop and associated parking and site improvements	2020	4.87	Water Resources, and Noise & Air Quality	Westbrook Planning Board Minutes July 2, 2019
Portland International Jetport Expansion (MDOT Project ID 018711.01 - 018711.15), Portland County, Cumberland, Maine https://www.maine.gov/mdot/projects/workplan/docs/2019/Work-Plan-2019-2020-2021-Feb-2019.pdf (Page 39)	Safety and infrastructure improvements that may include long-term hold area, deicing pad expansion and overnight apron construction, taxiway bypass and perimeter service road realignment, construction of taxiway, tree removal for Glidepath Qualification Surface (GQS) on Runway, rehabilitation of the cargo apron, and airport security fence and gate upgrades.	2020-21	5.67	Water Resources, Vegetation, and Wildlife	MDOT 2019
Shaw Brothers Construction, Inc. 341 Mosher Road Gorham, Maine	One new cone crusher w/ associated diesel-fired engine (2.9 MMBtu/hr)	Permit issued by Maine DEP October 26, 2019	1.84	Air	MDEP 2019
Shaw Brothers Construction, Inc. 341 Mosher Road Gorham, Maine	Remove one cone crusher, convert one existing jaw crusher and one existing cone crusher to electric and remove associated diesel-fired engines from license	Permit issued by Maine DEP August 1, 2019	1.84	Air	MDEP 2019

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Granite State Gas Transmission, Inc. 756 Warren Avenue Portland, Maine	Four new natural gas-fired boilers (3.0 MMBtu/hr each), one new natural gas-fired emergency generator (1.21 MMBtu/hr)	Permit issued by Maine DEP June 25, 2019	2.98	Air	MDEP 2019
Regional School Unit #14 - Windham Campus 404 – 408 Gray Road Windham, Maine	Replace two existing dual fuel boilers with two new dual fuel boilers (3.03 MMBtu/hr each), add propane as a backup fuel for seven of eight boilers, and remove diesel fuel as a fuel for two of eight boilers	Permit issued by Maine DEP October 25, 2019	4.76	Air	MDEP 2019
Barber Foods, Inc. Portland, Maine 54 Saint John Street, Portland, Maine	Two existing natural gas-fired heaters, not previously permitted (3.0 MMBtu/hr and 2.3 MMBtu/hr) New Powder Coat Line (Batch Powder Booth, Liquid Paint Booth, Automated Powder Booth, Aluminum Oxide Abrasive Blast Booth, Steel Grit Abrasive Blast Booth, two Paint Booths) and Natural Gas Fuel Burning Equipment at Building 11-0090, permitting existing equipment not previously permitted at adjacent East Brunswick Manufacturing Facility, Consolidated Warehouse, and Building 11-0090 (two 4.25 MMBtu/hr makeup air units, one 2.5 MMBtu/hr steam boiler, two 3.75 MMBtu/hr steam boilers, one 1.5 MMBtu/hr boiler, two new powder coat batch ovens - 2.9 MMBtu/hr and 1.6 MMBtu/hr each.	Permit issued by Maine DEP September 16, 2019	6.85	Air	MDEP 2019
Sweetwater Partners, LLC 340 Cumberland Avenue Portland, ME	Two existing diesel-fired generators (2.3 MMBtu/hr and 5.7 MMBtu/hr), previously not permitted	Permit issued by Maine DEP November 19, 2018	6.86	Air	MDEP 2019
St. Joseph's College 278 Whites Bridge Road Standish, ME	Removal of three diesel-fired boilers, update power output rating of existing emergency generator	Permit issued by Maine DEP December 18, 2018	9.08	Air	MDEP 2019

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Abbot Diagnostics Scarborough, Inc. 10 Southgate Road, Scarborough, Maine	Two existing natural gas-fired emergency generators (2.05 MMBtu/hr and 3.67 MMBtu/hr), not previously permitted	Permit issued by Maine DEP September 16, 2019	9.38	Air	MDEP 2019
LL Bean Desert Road Freeport, Maine	Replace existing natural gas-fired boiler w/ like-kind (3.0 MMBtu/hr)	Permit issued by Maine DEP February 8, 2019	14.25	Air	MDEP 2019
Regional School Unit #14 423 Webbs Mills Road Raymond, Maine	Replace existing diesel-fired boiler with two smaller dual fuel boilers (1.66 MMBtu/hr each)	Permit issued by Maine DEP October 10, 2019	15.08	Air	MDEP 2019
Charter Communications 16 Abbey Road Sebago, Maine	Two existing diesel-fired generators (2.63 MMBtu/hr each), previously not permitted	Permit issued by Maine DEP June 7, 2019	17.70	Air	MDEP 2019
University of New England 11 Hills Beech Road Biddeford, ME	Replace existing dual fuel boiler (4.2 MMBtu/hr) with new dual fuel boiler (8.4 MMBtu/hr)	Permit issued by Maine DEP December 21, 2018	17.84	Air	MDEP 2019
Fiber Materials Inc. 5 Morin Street Biddeford, Maine	Replace one pair impregnation vessels w/ like-kind equipment. Replace one graphitizer w/ like-kind equipment.	Permit issued by Maine DEP June 29, 2019	17.91	Air	MDEP 2019
Ray Labbe & Sons, Inc 4 Highland Road Brunswick, Maine	New portable jaw and cone crusher w/ associated diesel-fired engines (2.67 MMBtu/hr and 1.0 MMBtu/hr) and new diesel-fired generator (0.56 MMBtu/hr)	Permit issued by Maine DEP November 19, 2018	20.12	Air	MDEP 2019
Tambrands Inc. 2879 Hotel Road Auburn, ME	New natural gas-fired boiler (8.0 MMBtu/hr), removal of existing natural gas-fired boiler (6.3 MMBtu/hr)	Permit issued by Maine DEP May 29, 2019	21.82	Air	MDEP 2019
Bowdoin College 3800 College Station, Brunswick Maine	Install new natural gas-fired non-emergency generator (3.5 MMBtu/hr), one new natural gas-fired emergency generator (1.8 MMBtu/hr), remove four existing emergency generators (3 oil-fired, 1 natural gas-fired) and one natural gas-fired boiler	Permit issued by Maine DEP August 30, 2019	23.5	Air	MDEP 2019

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Pioneer Plastics Corporation 1 Pionite Road, Auburn, ME	New digital printing system	Permit issued by Maine DEP November 19, 2018	24.19	Air	MDEP 2019
Pioneer Plastics Corporation 1 Pionite Road, Auburn, ME	Update CO emission rates for existing dual fuel boiler/thermal oxidizer	Permit issued by Maine DEP May 28, 2019	24.19	Air	MDEP 2019
Village Green Maine, LLC LLC, Orion Street Brunswick, ME	Remove existing natural gas-fired boiler (1.2 MMBtu/hr), replace existing biogas-fired emergency flare (15 MMBtu/hr) with new biogas-fired emergency flare (39.8 MMBtu/hr), convert combined heat and power unit from biogas-fired to natural gas-fired only, install new anaerobic digester, new natural gas-fired combined heat and power unit (9.92 MMBtu/hr), new emergency generator (1.55 MMBtu/hr), and new thermal oxidizer	Permit issued by Maine DEP January 22, 2019	24.41	Air	MDEP 2019
The Dingley Press, Inc. 119 Lisbon Street Lisbon, ME	Change frequency of performance testing on existing regenerative thermal oxidizer (9.0 MMBtu/hr)	MDEP permit# A-506-77-5-M	25.22	Air	MDEP 2019
Bath Iron Works Corporation Harding Facility 375 Bath Road and 16 Mallet Part Drive, Brunswick, Maine	New Powder Coat Line (Batch Powder Booth, Liquid Paint Booth, Automated Powder Booth, Aluminum Oxide Abrasive Blast Booth, Steel Grit Abrasive Blast Booth, two Paint Booths) and Natural Gas Fuel Burning Equipment at Building 11-0090, permitting existing equipment not previously permitted at adjacent East Brunswick Manufacturing Facility, Consolidated Warehouse, and Building 11-0090 (two 4.25 MMBtu/hr makeup air units, one 2.5 MMBtu/hr steam boiler, two 3.75 MMBtu/hr steam boilers, one 1.5 MMBtu/hr boiler, two new powder coat batch ovens - 2.9 MMBtu/hr and 1.6 MMBtu/hr each)	Permit issued by Maine DEP August 1, 2019	26.98	Air	MDEP 2019

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Bath Iron Works Corporation Harding Facility 375 Bath Road	New Powder Coat Line (Batch Powder Booth, Liquid Paint Booth, Automated Powder Booth, Aluminum Oxide Abrasive Blast Booth, Steel Grit Abrasive Blast Booth, two Paint Booths) and Natural Gas Fuel Burning Equipment at Building 11-0090, permitting existing equipment not previously permitted at adjacent East Brunswick Manufacturing Facility, Consolidated Warehouse, and Building 11-0090 (two 4.25 MMBtu/hr makeup air units, one 2.5 MMBtu/hr steam boiler, two 3.75 MMBtu/hr steam boilers, one 1.5 MMBtu/hr boiler, two new powder coat batch ovens - 2.9 MMBtu/hr and 1.6 MMBtu/hr each)	Permit issued by Maine DEP August 1, 2019	27.31	Air	MDEP 2019
Bates College Lewiston, Maine	Redesignate three existing diesel-fired emergency generators as non-emergency generators (1.1 MMBtu/hr, 1.4 MMBtu/hr, and 3.4 MMBtu/hr), replace oil-fired boiler w/ new natural gas-fired boiler (1.0 MMBtu/hr)	Permit issued by Maine DEP June 5, 2019	27.43	Air	MDEP 2019
Bridgton Hospital 10 Hospital Drive Bridgton, Maine	Two new propane-fired boilers (1.0 MMBtu/hr each)	Permit issued by Maine DEP January 24, 2019	28.19	Air	MDEP 2019
St. Laurent & Sons, Inc. 168 Middle Road Sabattus, ME	Two existing rock crushers w/ associated diesel-fired engines, not previously permitted	Permit issued by Maine DEP March 6, 2019	29.79	Air	MDEP 2019

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<p><u>a/</u> The <i>Geographic Scope for Cumulative Impact Analyses</i> used in this cumulative impact assessment was identified by the FERC for use on previous projects and are summarized below:</p> <ul style="list-style-type: none"> -Hydrologic Unit Code 12 Watersheds (HUC 12 Watersheds) for surface water (if projects have direct in-water work within same resources impacted by Project) groundwater, wetlands, vegetation, and wildlife; -construction workspace for soils and geology; -overlapping Area of Potential Effects (APE) for cultural resources; -1 mile radius for land use; affected counties for socioeconomics and census tracts for environmental justice; -1 mile from noise emitting permanent aboveground facilities for operations noise; 0.25 mile from proposed pipeline or aboveground facilities for construction noise; -distance that the tallest feature at the planned facility would be visible from neighboring communities for visual impacts; -50 kilometers (31.1 miles) for air quality during operations and 0.25 mile for air quality during construction. <p><u>b/</u> Construction dates and status are best estimates based on public information available prior to the filing date on this report.</p> <p><u>c/</u> Sources:</p> <p>Maine Department of Transportation. 2019. Maine DOT Work Plan Calendar Years 2019-2020-2021. Available at: http://maine.gov/mdot/projects/workplan/. Accessed October 29, 2019.</p> <p>Maine Department of Environmental Protection. 2019. Maine Department of Environmental Protection List of Minor Source Licenses and Major Source Licenses. Available at:</p> <p>https://www.maine.gov/tools/whatsnew/index.php?topic=DEP+Minor+Source. Accessed October 29,2019.</p>					