Federal Energy Regulatory Commission

Office of Energy Projects

May 2020

Port Arthur Pipeline, LLC **Docket No. CP20-21-000**

Louisiana Connector Amendment Project

Environmental Assessment

Washington, DC 20426

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas Branch 4
Port Arthur Pipeline, LLC
Port Arthur Louisiana Connector
Amendment Project
Docket No. CP20-21-000

TO THE INTERESTED PARTY:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared an environmental assessment (EA) for the Louisiana Connector Amendment Project (Project), proposed by Port Arthur Pipeline, LLC (PAPL) in the above-referenced docket. The Project is an amendment to the Louisiana Connector Project (Docket CP18-7-000), which was previously authorized by the Commission on April 18, 2019. In its amended Project, PAPL requests authorization to construct and operate natural gas transportation facilities (including compression) in Beauregard Parish, Louisiana. Specifically, the Project would relocate the previously certificated but as yet not constructed compressor station from its authorized site in Allen Parish, Louisiana to a site in Beauregard Parish. The Project would also consist of associated facilities within the new Beauregard Parish Compressor Station boundaries.

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

The proposed Project includes the following new facilities in Beauregard Parish:

- a 93,880-horsepower compressor station;
- four pipeline interconnections ranging from 30 inches to 42 inches in diameter;
- four meter stations;
- one mainline block valve; and
- one pig launcher/receiver facility.[1]

The Commission mailed a copy of the *Notice of Availability* to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners and other interested parties; and local libraries and newspapers. The EA is only available in electronic format. It may be viewed and downloaded from FERC's website (www.ferc.gov), on the Environmental Documents page (https://www.ferc.gov/industries/gas/enviro/eis.asp). In addition, the EA may be accessed by using the eLibrary link on FERC's website. Click on the eLibrary link (https://www.ferc.gov/docs-filing/elibrary.asp), click on General Search, and enter the docket number in the "Docket Number" field, excluding the last three digits (i.e., CP20-21). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659.

Any person wishing to comment on the EA may do so. Your comments should focus on the EA's disclosure and discussion of potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. The more specific your comments, the more useful they will be. To ensure that the Commission has the opportunity to consider your comments prior to making its decision on this Project, it is important that we receive your comments in Washington, DC **on or before 5:00 pm Eastern Time on June 8, 2020.**

For your convenience, there are three methods you can use to file your comments to the Commission. The Commission encourages electronic filing of comments and has staff available to assist you at (866) 208-3676 or FercOnlineSupport@ferc.gov. Please carefully follow these instructions so that your comments are properly recorded.

1 A pipeline "pig" is a device used to clean or inspect the pipeline. A pig launcher/receiver is an aboveground facility where pigs are inserted or retrieved from the pipeline.

(1) You can file your comments electronically using the eComment feature on the Commission's website (www.ferc.gov) under the link to Documents and Filings. This is an easy method for submitting brief, text-only comments on a project;

(2) You can also file your comments electronically using the eFiling feature on the Commission's website (www.ferc.gov) under the link to Documents and Filings. With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "eRegister." You must select the type of filing you are making. If you are filing a comment on a particular project, please select "Comment on a Filing;" or

(3) You can file a paper copy of your comments by mailing them to the following address. Be sure to reference the project docket number (CP20-21-000) with your submission: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426.

Any person seeking to become a party to the proceeding must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedures (18 CFR 385.214). Motions to intervene are more fully described at http://www.ferc.gov/resources/guides/how-to/intervene.asp. Only intervenors have the right to seek rehearing or judicial review of the Commission's decision. The Commission may grant affected landowners and others with environmental concerns intervenor status upon showing good cause by stating that they have a clear and direct interest in this proceeding which no other party can adequately represent. **Simply filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered.**

Additional information about the project is available from the Commission's Office of External Affairs, at **(866) 208-FERC**, or on the FERC website (www.ferc.gov) using the eLibrary link. The eLibrary link also provides access to the texts of all formal documents issued by the Commission, such as orders, notices, and rulemakings.

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

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TECHNICAL ABBREVIATIONS AND ACRONYMS

AQCR	air quality control region
BCC	Birds of Conservation Concern
BPCS	Beauregard Parish Compressor Station
Certificate	Certificate of Public Convenience and Necessity
CFR	Code of Federal Regulations
CIP	Cameron Intrastate Pipeline
CO	carbon monoxide
CO_2	carbon dioxide
CO_{2e}	carbon dioxide equivalents
Commission	Federal Energy Regulatory Commission
dB	decibel(s)
dBA	decibel(s) on the A-weighted scale
EA	environmental assessment
EI	environmental inspector
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
g	gravity
GHG	greenhouse gas
H_2S	hydrogen sulfide
HAP	hazardous air pollutant
hp	horsepower
HUC	hydrologic unit code
LAS	LA Storage Pipeline
LDEQ	Louisiana Department of Environmental Quality
L_{dn}	day-night sound level
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife and Fisheries
L_{eq}	equivalent sound level
LNG	liquefied natural gas
MBTA	Migratory Bird Treaty Act
MEG	monoethylene glycol
MP	milepost
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969

NESHAP	National Emission Standards for Hazardous Air Pollutants
NGA	Natural Gas Act
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI	*Notice of Intent to Prepare an Environmental Assessment for the Proposed Louisiana Connector Amendment Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Session*
NO_x	oxides of nitrogen
NRCS	Natural Resources Conservation Service
NSA	noise sensitive area
NSPS	New Source Performance Standards
NSR	New Source Review
O_3	ozone
PALNG	Port Arthur LNG, LLC
PAPL	Port Arthur Pipeline, LLC
PHMSA	Pipeline and Hazardous Materials Safety Administration
Plan	FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan*
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
Procedures	PAPL's *Wetland and Waterbody Construction and Mitigation Procedures*
Project	Louisiana Connector Amendment Project
PSD	Prevention of Significant Deterioration
Secretary	Secretary of the Federal Energy Regulatory Commission
SHPO	State Historic Preservation Office
SIL	Significant Impact Level
SO_2	sulfur dioxide
tpy	tons per year
Transco	Transcontinental Gas Pipe Line Company
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	volatile organic compound
$\mu g/m^3$	microgram per cubic meter

A. PROPOSED ACTION

A.1 Introduction

On December 9, 2019, Port Arthur Pipeline, LLC (PAPL) filed an application with the Federal Energy Regulatory Commission (FERC or Commission) in Docket No. CP20-21-000. PAPL is seeking a Certificate of Public Convenience and Necessity (Certificate) under Section 7(c) of the Natural Gas Act (NGA) to construct and operate natural gas transmission facilities in Beauregard Parish, Louisiana. PAPL's proposed facilities, referred to as the Louisiana Connector Amendment Project (Project), would replace a compressor station previously approved (but not yet constructed) in the Louisiana Connector Project (CP18-7-000)[2] in Allen Parish, Louisiana with a compressor station and associated interconnects and metering facilities in Beauregard Parish. The amended Project would increase the design capacity of the compressor station from 89,900 horsepower (hp) to 93,880 hp. On January 31, 2020, based in part on comments received on the proposed new site, PAPL filed an update to the Project, moving the site of the proposed facilities approximately 0.5 mile south.

We[3] prepared this environmental assessment (EA) in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality regulations for implementing NEPA in Title 40 of the Code of Federal Regulations Parts 1500–1508 (40 CFR 1500-1508), and the Commission's implementing regulations under 18 CFR 380.

FERC is the lead federal agency for authorizing interstate natural gas transmission facilities under the NGA, and the lead federal agency for preparation of this EA, in accordance with NEPA (40 CFR 1501) and the Energy Policy Act of 2005.

Our principal purposes in preparing this EA are to:

- identify and assess potential impacts on the natural and human environment that would result from the proposed action;
- identify and recommend reasonable alternatives and specific mitigation measures, as necessary, to avoid or minimize Project-related environmental impacts; and
- encourage and facilitate involvement by the public and interested agencies in the environmental review process.

Under Section 7(c) 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 assessment of environmental impacts is an

2 Our analysis of the Louisiana Connector Project was completed in an environmental impact statement (EIS) issued on January 31, 2019, in Docket No. CP18-7-000. As many of the impacts disclosed in the EIS are relevant and applicable to the proposed Project, it is incorporated by reference and is available on eLibrary under Accession No. 20190131-3023. To access the public record for this proceeding (CP20-21-000) or the Louisiana Connector Project (CP18-7-000), go to FERC's Internet website (http://www.ferc.gov), click on "Documents & Filings" and select the "eLibrary" feature. Click on "Advanced Search" from the eLibrary menu and enter the accession number for the document of interest.

3 "We," "us," and "our" refer to the environmental staff of the Office of Energy Projects.

integral part of FERC's decision on whether to issue PAPL a Certificate to construct and operate the proposed facilities, as amended. The Commission bases its decisions on economic issues, including need, and environmental impacts. Approval would be granted if, after consideration of both environmental and non-environmental issues, the Commission finds that the Project is in the public interest.

A.2 Purpose and Need

PAPL states that the purpose of the amendment is to allow new natural gas transporters and suppliers to have access to Port Arthur LNG, LLC's (PALNG) Liquefaction Project (authorized in Docket No. CP17-20-000) through the addition of interconnections with three interstate pipeline companies - Cameron Intrastate Pipeline (CIP), Transcontinental Gas Pipeline (Transco), and LA Storage (LAS) on the Louisiana Connector Project. These three interstate pipelines transect the proposed Beauregard Parish Compressor Station (BPCS) site included as part of this Project, allowing interconnections to be made with minimal amount of equipment. These new interconnections would supply PALNG's Liquefaction Project with feed gas from new sources of supply emerging in the area and made possible from the development of interstate and intrastate pipeline projects in the vicinity of the BPCS. PAPL states that the emerging markets would provide PAPL's shipper, PALNG, with more diversified, price-competitive, and stable sources of supply. The Project is consistent with the purpose and need of the Louisiana Connector Project as originally proposed, as it would permit the delivery of the necessary volumes of natural gas to PALNG's Liquefaction Project.

CIP, Transco, and LAS have requested access to the Louisiana Connector Project to provide additional natural gas to the Liquefaction Project. Moving the proposed compressor station from milepost (MP) 96.1 to the proposed site at MP 72.3 as part of the proposed Project would permit a total of four interconnects (i.e., the three new pipeline interconnects and the previously certificated interconnect to Texas Eastern Transmission Company) and associated meter stations to be located within one facility boundary. The relocation of the compressor station to the site at MP 72.3 would provide the necessary throughput based on the modeled initial pressure of gas that would be supplied by the four interconnecting pipelines. The Project would increase the capacity of the previously certificated Louisiana Connector Project from 1.98 billion to 2.05 billion standard cubic feet of natural gas per day.

A.3 Scope of the Environmental Assessment

The topics addressed in this EA include geology, soils, groundwater, surface water, wetlands, vegetation, aquatic resources, wildlife, threatened and endangered species, land use, visual resources, socioeconomics, cultural resources, air quality, noise, reliability and safety, cumulative impacts, and alternatives. The EA describes the affected environment as it currently exists, discusses the environmental consequences of the Project, and compares the Project's potential impact with that of various alternatives. The EA also presents our recommended mitigation measures.

This EA also references the Louisiana Connector Project's environmental impact statement (EIS), where appropriate, as the proposed BPCS would be located along the Louisiana

Connector Project's pipeline route, affecting similar resources at MP 72.3 that were assessed in the EIS.

A.4 Proposed Facilities

The proposed Project consists of the relocation of previously approved facilities associated with the Louisiana Connector Project. The proposed BPCS would be very similar to the compressor station approved at MP 96.1 in the original Louisiana Connector Project but relocated to the site at MP 72.3, south of the authorized Louisiana Connector Pipeline and west of CIP's Ragley Compressor Station. PAPL would construct/install the following new facilities within the boundaries of the BPCS site:

- four Solar Titan 130E Gas Turbine driven compressors totaling 93,880 hp;
- CIP Interconnect and Meter Station;
- Transco Interconnect and Meter Station;
- LAS Interconnect and Meter Station;
- Texas Eastern Transmission Company Interconnect and Meter Station;
- one pig[4] launcher/receiver facility; and
- one new mainline valve.

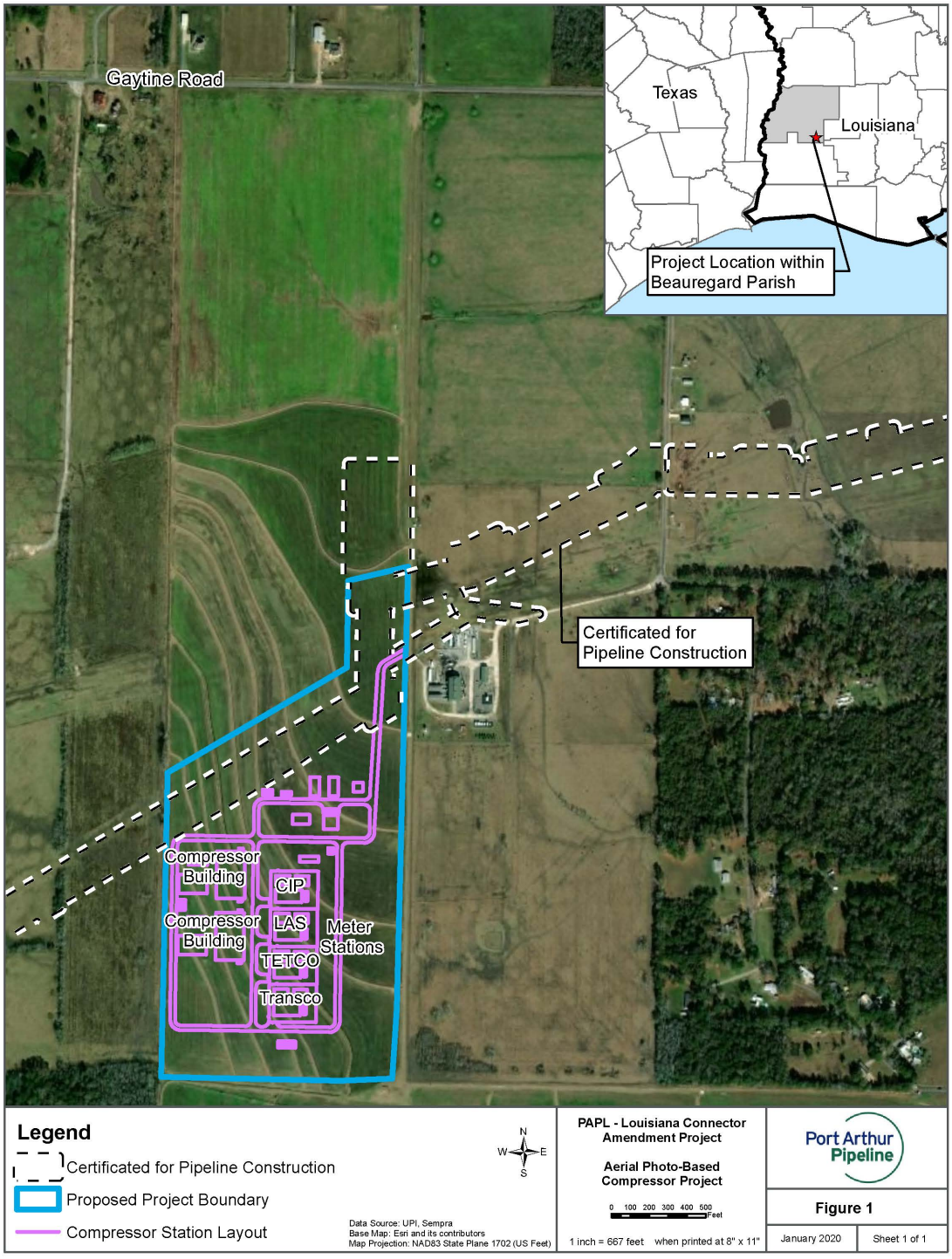
To support construction of these facilities, PAPL proposes to access the BPCS site from the existing Ragley Compressor Station access road from Coonie Jackson Road (see figure 1). From the Ragley Compressor Station access road, construction vehicles would use a portion of the certificated temporary right-of-way along previously approved (Louisiana Connector Project) temporary access road AR-BEA-12 and then AR-BEA-06 to reach the BPCS site. No new permanent access roads would be required for operating the BPCS. Permanent access would occur via the existing Ragley Compressor Station site.

A.5 Land Requirements

The Project would affect 59.9 acres of land during construction and operation, as further discussed in section B.5. The current land use of the parcel is rice farming. The 59.9 acres includes the BPCS, the four meter stations with associated interconnects, mainline valve #5A, and the pig launcher/receiver facilities. The construction and operational footprint would overlap with about 4.7 acres of previously approved temporary pipeline right-of-way and 1.8 acres of previously approved permanent pipeline right-of-way for the Louisiana Connector Project.

4 A pipeline "pig" is a device to clean or inspect the pipeline. A pig launcher/receiver is an aboveground facility where pigs are inserted or retrieved from the pipeline.

Figure 1 Project Overview Map



A.6 Construction Schedule and Workforce

PAPL anticipates that construction of the Project would commence as soon as the Project is approved, subject to the receipt of necessary permits and regulatory approvals, and would last 21 months. Construction crews typically would work 10 hours per day, 6 days per week. Work would be conducted during 7:00 a.m. and 10:00 p.m. Some time-sensitive construction activities, such as hydrostatic testing, concrete pours, and tie-ins, could require nighttime work.

According to PAPL, construction of all facilities would occur simultaneously. Construction of the BPCS would require a total estimated peak temporary work force of about 150 people. Ten permanent workers would be required for operation of the entire Louisiana Connector Project, which would include the BPCS.

PAPL proposes to place both the Project and the Louisiana Connector Project into service in the third quarter of 2024.

A.7 Construction, Operations, and Maintenance Procedures

The Project would be designed, constructed, operated, and maintained in accordance with applicable requirements defined by the U.S. Department of Transportation (USDOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations in 49 CFR 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards"; the Commission's Siting and Maintenance Requirements at 18 CFR 380.15; and other applicable federal and state safety regulations. Among other design standards, 49 CFR 192 specifies pipeline material and qualification; minimum design requirements; and protection from internal, external, and atmospheric corrosion.

PAPL has committed to implement the measures contained in FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan), which includes best management practices, spill prevention and containment procedures, and baseline construction and mitigation measures developed to minimize the potential environmental impacts of construction on upland areas. Although the Project does not impact wetlands or waterbodies, PAPL has a project-specific *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) developed as part of the Louisiana Connector Project.

Both the FERC's Plan and PAPL's Procedures are included within the Environmental Plan[5] approved by the Commission for the Louisiana Connector Project in Docket No. CP18-7-000. We have reviewed the Environmental Plan and have found it acceptable.

General Construction Procedures

PAPL would construct the facilities in accordance with all applicable federal and state regulations (including 49 CFR 192). PAPL would coordinate with Louisiana One Call to

5 The Environmental Plan for the Louisiana Connector Project was filed on October 16, 2017, and can be found on the FERC eLibrary website using Accession Number 20171016-5210.

identify existing underground utilities to be identified and flagged to minimize the potential for accidental damage during construction.

Generally, construction of aboveground facilities would begin with clearing and grading of the construction workspace, and excavation would be conducted where necessary to accommodate new foundations. Subsequent activities include preparing foundations, installing underground piping, installing aboveground piping and machinery, testing the piping and control equipment, and cleaning and stabilizing the work area. PAPL would fence aboveground facilities and cover areas around buildings, meters, piping, and associated equipment with gravel. Any areas not covered with rock or paved would be seeded with a compatible grass and maintained as herbaceous cover.

Constructing the interconnect pipelines would generally be completed using sequential pipeline construction techniques, which include survey and staking; clearing and grading; trenching; pipe stringing; bending; welding and coating; lowering-in and backfilling; hydrostatic testing; commissioning; and cleanup and restoration. A full description of the pipeline construction procedures, which would also apply to the interconnect pipelines, is included in section 2.4 of the Louisianan Connector Project's final EIS and incorporated by reference herein. Pipeline construction workspace required for the interconnect pipelines would be within the BPCS boundaries, as described in section A.5 above.

PAPL would implement restoration practices in accordance with its Environmental Plan and applicable permit requirements. This includes, but is not limited to, installing permanent erosion and sediment control measures and restoring fences, gates, driveways, and roads disturbed by Project construction to pre-construction conditions or better.

PAPL would revegetate areas disturbed by construction with an appropriate seed mixture developed in consultation with the local Natural Resources Conservation Service (NRCS) and apply mulch as appropriate to avoid erosion, unless the areas would be graveled or permanently impacted with aboveground facilities or other impermeable surfaces. PAPL proposes to gravel the interconnect pipelines within the BPCS site or otherwise stabilize these areas to prevent erosion and sedimentation.

Environmental Compliance Inspection and Monitoring

Prior to construction, PAPL would conduct environmental training for the construction personnel. Construction contractors would receive environmental training applicable to their job duties, and construction management and environmental inspectors (EI) would receive all Project-specific information. The training program would focus on PAPL's Environmental Plan; Project-specific Certificate and other permit conditions; regulatory requirements, such as those pertaining to endangered species, cultural resources, or wetlands; and other Project-specific mitigation plans. PAPL has committed to employing at least one EI during construction and restoration who would report to the Chief Inspector used as part of the overall Louisiana Connector Project construction. The EI would also be responsible for the monitoring construction of the BPCS. EIs would have the authority to stop activities that violate the Project's environmental conditions and to order appropriate corrective action.

PAPL would conduct post-construction monitoring to document restoration and revegetation of disturbed areas and to address any landowner concerns. PAPL would monitor upland areas after the first and second growing seasons following restoration or until revegetation is successful in accordance with the PAPL Environmental Plan. PAPL would also submit quarterly monitoring reports to FERC to document the status of revegetation in disturbed areas. These reports would describe the results of post-construction inspections, any problem areas, landowner/agency concerns, and corrective actions taken. Monitoring would cease if an area meets performance standards at the end of the second year (or in any subsequent year).

In addition, FERC staff would periodically inspect the Project throughout construction to independently audit the EIs to ensure compliance with the environmental conditions of the Certificate. FERC staff would continue to monitor and inspect the disturbed areas until restoration and revegetation are deemed successful.

Operations and Maintenance

During operation of the Project, PAPL would periodically inspect the facilities from the air and/or on foot, in accordance with applicable regulatory requirements, to identify potential concerns that may affect the safety and operation of the facilities.

PAPL personnel also would perform regular operation and maintenance activities on equipment at the compressor station, meter stations, pig launcher/receiver facility, and mainline valve. These activities would include calibration, inspection, and scheduled routine maintenance. Operational testing would be performed on safety equipment to ensure proper functioning, and problems would be corrected.

A.8 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 FERC. These non-jurisdictional facilities may be integral to a project (e.g., 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.

PAPL indicates that power service would be provided by Beauregard Electric Cooperative. PAPL anticipates that the existing service line from the existing Ragley Compressor Station would be extended to supply the BPCS. Similarly, PAPL anticipates that the existing water line service provided by Beauregard Water Works District 3 to the adjacent, existing Ragley Compressor Station would be extended onto the BPCS site. PAPL would also install an on-site septic system. All impacts would be within areas to be disturbed by PAPL or previously disturbed by its affiliate, CIP, at the Ragley Compressor Station and, therefore, they are not discussed further in this EA.

A.9 Public Review and Comment

On February 5, 2020, the Commission issued a *Notice of Intent to Prepare an Environmental Assessment for the Proposed Louisiana Connector Amendment Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Session* (NOI). The NOI was published in the Federal Register and was mailed to 216 interested parties, including federal, state, and local government representatives and agencies; elected officials; affected landowners; environmental and public interest groups; Native American tribes; other interested parties; and local libraries. The NOI also established a scoping period and requested that the public provide comments on specific concerns about the Project or issues that should be considered during the preparation of the EA.

We conducted one public scoping session in the area of the Project to provide an opportunity for agencies and the general public to learn more about the Project and to participate in the environmental analysis by identifying issues to be addressed in the EA. The session was held on March 4, 2020, in Ragley, Louisiana. During the scoping session, one verbal comment and five written comments were received on the Project.[6]

In total, the Commission received 106 comments on the Project (including environmental comments filed with interventions and protests), of which 16 letters/verbal comments were received during the scoping period established by the NOI (February 5 through March 6, 2020). Multiple commenters provided more than one comment. Four comments were in support of the Project. The environmental comments received are summarized in table 1 and addressed, as applicable, in the relevant sections of this EA. It should be noted that most of the comments we received were in response to the Notice of Application, prior to the relocation of the compressor station south of the existing pipelines and prior to the issuance of the NOI. Although we believe that most comments may have been addressed by the movement of the BPCS, we still address the comments applicable to the new site.

Table 1 Environmental Issues Identified During Scoping

Issue	EA Section Addressing Issue
Impact on wetlands	B.3.3
Impact on wildlife	B.4.2
Impact on agricultural land	B.5
Impacts on local roads, specifically Gaytine Road	B.6
Impacts on new development	B.5
Land use, recreation, and visual impacts	B.5
Impacts on property values and insurance	B.6
Lighting impacts	B.6
Impact on air quality	B.8.1
Impacts from vibration	B.8.2
Noise impacts	B.8.2
Safety of new and existing natural gas infrastructure	B.9
Local services for emergencies/emergency response	B.6
Cumulative impacts, specifically air quality and noise	B.10
Alternative compressor station locations	C

6 Available on eLibrary under accession nos. 20200320-4001and 20200317-3001, respectively.

A.10 Permits and Approvals

Table 2 provides a list of federal and state permits related to construction and operation of the Project, and provides the current status of each associated permit, approval, and consultation. PAPL would be responsible for obtaining and abiding by all permits and approvals required for construction and operation of the Project regardless of whether they appear in the table or not.

Table 2 Environmental Permits, Approvals, and Consultations for the Project

Agency	Permit/Authorization	Filing Date/Consultation Initiation	Status
Federal			
Federal Energy Regulatory Commission	Amendment to Certificate of Public Convenience and Necessity	December 2019	Pending
U.S. Army Corps of Engineers	Section 404/10 Permit	Jurisdictional Determination request submitted on January 7, 2020	April 3, 2020 response indicating Project non-jurisdictional features are not subject to U.S. Army Corps of Engineers jurisdiction.
U.S. Fish and Wildlife Service	Section 7 Consultation	January 6, 2020	Concurrence received January 10, 2020
Louisiana			
Louisiana Department of Environmental Quality	Air Permit for Compressor Stations	November 27, 2019, supplemented January 31, 2020	Pending
	Hydrostatic Test Water Discharge General Permit	Prior to construction	Prior to construction
Louisiana Office of Cultural Development	Section 106 Consultation	January 31, 2020	Concurrence received February 18, 2020
Louisiana Department of Wildlife and Fisheries	Letter of Comment for state listed Threatened and Endangered Species and Fish and Wildlife concerns	March 19, 2020, follow-up call March 23, 2020	No objection email received April 6, 2020

B. ENVIRONMENTAL ANALYSIS

The following sections discuss the Project's potential direct and indirect impacts on environmental resources. When considering the environmental consequences of the proposed Project, the duration and significance of any potential impacts are described below according to four levels. Construction and operation of the Project would have temporary, short-term, long-term, and permanent impacts. As discussed throughout this EA, temporary impacts are defined as occurring only during the construction phase. Short-term impacts are defined as lasting up to 3 years. Long-term impacts would eventually recover, but require more than 3 years. Permanent impacts are defined as lasting throughout the life of the Project, such as with the construction of an aboveground facility. An impact would be considered significant if it would result in a substantial adverse change in the physical environment.

As mentioned in section A, FERC staff prepared an EIS to assess the impacts of the Louisiana Connector Project. Although the specifics of the amendment Project differ from what was authorized by the Commission for the Louisiana Connector Project, the EIS and the applicable parts of its analysis can be applied to the BPCS site, as it is immediately adjacent to the Louisiana Connector Project's pipeline. Therefore, we are incorporating the EIS by reference. PAPL also acknowledges that as part of the overall broader Louisiana Connector Project, the commitments made by PAPL and detailed in the EIS also apply to the Project, as applicable. We reiterate this in section D, below.

B.1 Geology

The Project would be within the West Gulf Coastal Plain section of the Coastal Plain physiographic province. The West Gulf Coastal Plain is characterized by nearly level to moderately rolling irregular plains formed by the deposition and subsequent uplift of continental marine sediments from the end of the Cretaceous period to the Pleistocene epoch (The Nature Conservancy, 2003). Site topography is flat to gently sloping, with elevation ranging from approximately 55 to 65 feet above mean sea level. PAPL intends to complete a geotechnical investigation of the BPCS site in the first quarter of 2021 as part of the final engineering design; however, subsurface geology in the Project area is anticipated to consist primarily of terrace deposits comprised of sand, gravel, and, clay (Louisiana Geological Survey, 1984).

Mineral Resources

Mineral resources in Louisiana include fuel (oil and gas production) and non-fuel (salt, sand and gravel, crushed stone, and lime) resources. A search of oil and gas production and non-fuel mineral resources in the Project vicinity utilizing the Louisiana Department of Natural Resources (LDNR) Strategic Online Natural Resource Information System (LDNR, 2020), the U.S. Geological Survey (USGS) Mineral Resource Data System (USGS, 2011a), aerial imagery, and topographic mapping did not identify active, historic, or proposed surface or subsurface mines within 0.25 mile of the proposed workspace. The Project area does not overlie salt domes, and the closest developed salt dome is about 17.2 miles away (USGS, 1990). Two oil or gas wells were identified within 0.25 mile of the Project, both more than 500 feet away. LDNR information lists both wells as plugged (LDNR, 2020).

Geologic Hazards

Geologic hazards are natural, physical conditions that can result in damage to land and/or structures, and injury to people. Such hazards typically are seismic-related, including earthquakes, surface faulting, and soil liquefaction. Other potential hazards discussed below include landslides, flooding, and ground subsidence (including karst terrain).

Seismic Hazards

The shaking during an earthquake can be expressed in terms of acceleration as a percent of gravity (g), and seismic risk can be quantified by the motions experienced at the ground surface or by structures during an earthquake expressed in terms of g. USGS National Seismic Hazard Probability Mapping shows that for the Project area, within a 50-year period there is a 2 percent probability of an earthquake with an effective peak ground acceleration of 4 to 6 percent g, and a 10 percent probability of an earthquake with an effective peak ground acceleration of 1 to 2 percent g being exceeded (USGS, 2018). These estimates are for sites underlain by hard rock and can be amplified by a factor of 2 or more on soft soil sites such as those found in the Project area. For reference, a peak ground acceleration of 10 percent g (0.1 g) is generally considered the minimum threshold for damage to older structures or structures not constructed to resist earthquakes.

Even under much higher ground vibrations, the main risk to modern pipelines and aboveground facilities would be a fault that displaces laterally during an earthquake. The Project is within the Gulf-margin normal fault system, a belt of poorly defined, mostly seaward-facing normal faults that trend parallel to the Gulf Coast in westernmost Florida, southwestern Alabama, southern Mississippi, all of Louisiana and southernmost Arkansas, and eastern and southern Texas (USGS, 2020). Movement along active growth faults in this system tends to be minimal (less than 0.2 millimeters/year) and non-seismogenic. There are no known mapped faults with surface expression that cross the Project area (USGS, 2020; Heinrich, 2005), and Project facilities are not anticipated to be significantly affected by this fault system given the nature of movement (gradual creep) and the composition of sediments and rocks that underlie the fault system, which are likely unable to generate the energy required to produce significant seismic events (Wheeler and Heinrich, 1998).

Due to the low level of seismic activity in the region and construction of the proposed facilities using modern materials in accordance with current industry standards and federal regulations, the potential for seismic hazards, including soil liquefaction, to impact the Project facilities is low.

Subsidence

Subsidence hazards include either sudden collapse of the ground resulting in a depression, or a slow compaction of the sediments near the earth's surface. Subsidence can range from small, localized areas of collapse, to a broad, regional lowering of the ground surface. The geology of the Project area lacks shallow soluble bedrock and, therefore, karst landforms have not been identified, nor are they anticipated; however, subsidence occurs throughout the

Gulf Coast region as a result of various other processes, including sediment compaction, oil and gas extraction, and groundwater extraction (Reed and Yuill, 2009).

The Project is within the Calcasieu-Sabine River Basin. Subsidence in this region is documented to occur at a rate of up to 2 feet per century (U.S. Army Corps of Engineers [USACE], 2016). PAPL intends to construct the BPCS facility based on final engineering that may or may not include mitigation measures for potential impacts of subsidence, depending on actual site conditions identified during planned geotechnical investigation. The results of these investigations are not yet available. PAPL has committed to filing with the FERC the results of geotechnical studies for the BPCS, including any recommended mitigation measures it would adopt as part of the final engineering design, prior to compressor station construction. In addition, PAPL is required by its Order Granting Authorizations Under Sections 3 and 7 of the NGA for the Louisiana Connector Project to file this information with the Secretary of the Commission (Secretary) prior to compressor station construction, which would also apply to this Project.

Landslides

The Project area is flat to gently sloping; therefore, the potential for landslides to occur is negligible.

Flash Flooding

Based on Federal Emergency Management Agency (FEMA) Flood Hazard Maps, the Project footprint is not within a FEMA flood zone (FEMA, 2010).

Paleontological Resources

Fossil discovery in the region is rare; however, there have been occasional discoveries of fossil remains of animals such as camels and mastodons within the types of sedimentary deposits that underlie the Project (Fossilworks, 2020). No paleontological sites have been identified within the Project footprint. Further, construction of Project facilities is expected to involve shallow excavation, and the site has been previously disturbed by agricultural use. Therefore, Project activities would be unlikely to encounter paleontological resources.

Impacts and Mitigation

Impacts on geology would be limited to disturbance and excavation of surface materials during construction. After completion of construction, topographic and drainage conditions would be restored as close to pre-construction conditions as possible and maintained for the life of the facilities.

Project activities would not affect known active, inactive, or abandoned mineral resources given the distance to these features. If an orphan oil or gas well is encountered, PAPL would cordon off a 25-foot radius from the well and contact the appropriate local, state, and federal agencies to develop a plan to avoid or mitigate impacts on the orphan well. In the unlikely event that paleontological resources are discovered during construction, they would be

treated in accordance with PAPL's Unanticipated Discovery of Paleontological Resources Plan, approved by the Commission for the Louisiana Connector Project in Docket No. CP18-7.

Based on the low probability of localized seismic ground shaking near the Project, we do not anticipate significant impacts attributable to seismicity. Project facilities must be designed and installed in accordance with USDOT standards, including those in 49 CFR 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards." Specifically, the BPCS would be designed and constructed to provide adequate protection from washouts, floods, unstable soils, subsidence, movement due to growth faults, or other hazards that could cause it to move or sustain abnormal loads.

Based on this discussion, in consideration of PAPL's proposed mitigation and design criteria, we conclude that the Project would not significantly impact or be impacted by geological conditions in the area and that the overall effect of the Project on topography and geology would be minor.

B.2 Soils

Soil characteristics for the Project were assessed using the NRCS Soil Survey geographic database (NRCS, 2019). Soils were evaluated to identify major characteristics that could affect construction or increase the potential for adverse construction-related impact, including farmland designation, hydric soils, water and wind erodibility, revegetation potential, shallow bedrock, and compaction potential. Project area soils are not classified as having shallow bedrock (bedrock within 60 inches of the surface). Subsurface conditions, including the presence/absence of shallow bedrock, would be verified through PAPL's site-specific geotechnical investigation, planned for spring 2021. Other soil limitations are discussed in more detail below.

Prime Farmland

The U.S. Department of Agriculture defines prime farmland as land that has the best combination of physical and chemical characteristics for growing food, feed, forage, fiber, and oilseed crops. Unique farmland is land, other than prime farmland, that is used for production of specific high-value food and fiber crops. Soils that do not meet all of the requirements to be considered prime or unique farmland may be considered farmland of statewide or local importance if soils are capable of producing a high yield of crops when treated or managed according to accepted farming methods. The Project would disturb 57.3 acres of prime farmland soils, all of which would be permanently converted to industrial use.

Hydric Soils

Hydric soils are generally associated with wetland areas. Mapped hydric soils do not always correlate with wetland delineation-determined hydric soil areas. A total of 37.4 acres of soils in the Project area are classified as hydric.

Erosion Potential

Erosion is a continuing natural process that can be accelerated by construction and earth-disturbing activities. Factors that influence erosion potential include soil characteristics, climate,

topography, vegetation cover, soil texture, surface roughness, and percent slope. Soils most susceptible to erosion by water are typified by bare or sparse vegetation cover, non-cohesive soil particles with low infiltration rates, and moderate to steep slopes. Wind erosion typically occurs in an arid climate with soils containing little vegetation growth and high wind conditions. Clearing, grading, and equipment movement can accelerate erosion processes and, without adequate protection, result in discharge of sediment into waterbodies and wetlands. Soil loss due to erosion can also reduce soil fertility and impair revegetation rates. All Project area soils are characterized as having high potential for erosion by water; no soils are classified as highly erodible by wind.

Revegetation Potential

Long-term revegetation success and restoration are essential for maintaining soil productivity and minimizing future erosion. PAPL evaluated revegetation potential based on soil characteristics including texture, slope, and drainage class. Based on this assessment, we agree that Project area revegetation potential is moderate.

Soil Compaction

Compaction modifies soil structure and reduces porosity and moisture-holding capacity. Compaction potential is dependent on moisture content and texture of a soil. Project area soils are moderately to highly compaction prone.

Inadvertent Spills or Discovery of Contamination

Other potential impacts on soils during construction include the accidental release of petroleum hydrocarbons or other hazardous materials, as well as the discovery of contaminated soils during site excavation and grading activities.

Based on a review of state and federal databases, PAPL did not identify areas of known contaminated soil within 0.25 mile of the Project site (U.S. Environmental Protection Agency [EPA], 2020; Louisiana Department of Environmental Quality [LDEQ], 2020). Further, given current agricultural land use, contaminated soils are unlikely to be encountered at the Project site. PAPL would minimize the potential for inadvertent spills during construction and operation by implementing its Environmental Plan, which includes spill prevention measures and containment procedures to minimize impacts should a spill occur.

General Impacts and Mitigation

The Project site would be graded and converted to industrial use. The 57.3 acres of permanently impacted prime farmland would constitute only a fraction of a percent of the over 539,000 acres of prime farmland within Beauregard Parish (NRCS, 2017). Therefore, the overall impact on prime farmland by the construction and operation of the Project facilities would be minimal.

Other impacts on soils include compaction, rutting, and erosion. Soils underlying permanent aboveground facility foundations would be permanently affected by compaction; however, these effects would be highly localized and minor.

Temporary erosion controls would be installed immediately following initial disturbance. These devices would be inspected on a regular basis and after each rainfall event of 0.5 inch or greater to ensure proper function. PAPL would additionally utilize dust-control measures, including routine wetting of the construction workspace as necessary where soils are exposed. Workspace not covered with gravel or asphalt would be graded, restored, and reseeded in accordance with PAPL's Environmental Plan. PAPL would implement its Noxious Weed Plan to minimize the establishment and spread of noxious and invasive weeds during construction activities. Temporary erosion control devices would be maintained until the Project area is successfully revegetated or otherwise stabilized with surface covering.

Additionally, PAPL would implement measures in its Environmental Plan to prevent or minimize potential impacts on soils from spills of hazardous materials used during construction and operation. If existing soil contamination is discovered, PAPL would abide by the conditions of its Unanticipated Hazardous Waste Discovery Plan as included in the Environmental Plan and in accordance with local, state and federal regulations pertaining to the specific type of contamination.

With PAPL's proposed mitigation measures, we conclude that overall impacts on soils would be minor.

B.3 Water Resources

B.3.1. Groundwater Resources

The Project area is within the Coastal Lowlands aquifer system, a regional aquifer spanning from coastal Texas to Florida. Groundwater withdrawn from the aquifer is used for agricultural, public supply, industrial, and other domestic and commercial purposes (USGS, 1999).

The Coastal Lowlands aquifer system contains the Chicot aquifer, which is the principal aquifer underlying the Project area and the most heavily pumped aquifer system in Louisiana (USGS, 2003). In 2010, about 650 million gallons per day of groundwater was withdrawn from the Chicot aquifer system in Louisiana (USGS, 2011b). The Chicot aquifer is comprised of coarse sands and gravel with generally good water quality; however, it is most suitable for irrigation and contains saltwater near coastal areas (Stuart et al., 1994). Depth to groundwater within the Beauregard Parish surficial water-bearing zones typically ranges from 2 to 10 feet, with water-bearing zones being present at roughly 10, 20, and 50 feet, depending on local geology; however, saturated soils could be encountered within 3 feet of the surface of the BPCS site.

The EPA oversees the Sole Source Aquifer Protection Program to protect high production aquifers that supply 50 percent or more of a region's water supply and for which there are no reasonably available alternative drinking water sources, should the aquifer become contaminated. The Chicot aquifer is a designated sole source aquifer (EPA, 2019).

The LDEQ Drinking Water Protection Program establishes and protects wellhead areas associated with public water supply systems from contaminants that may have adverse effects on public health (Safe Drinking Water Act Amendments of 1986). PAPL consulted with the LDEQ

regarding the location of source water protection areas in the vicinity of the Project; none were identified. The Project is also not within an LDNR-designated Area of Groundwater Concern or Critical Area of Groundwater Concern, which would indicate state-regulated restrictions on water use and withdrawal (LDNR, 2020).

No known groundwater withdrawal wells, drinking water supply wells, seeps, or springs were identified within 150 feet of the Project workspace (LDNR, 2020).

Surface drainage and groundwater recharge patterns can be altered by clearing, grading, excavation, and soil stockpiling activities, potentially causing minor fluctuations in groundwater levels and/or increased turbidity, particularly in shallow surficial aquifers. PAPL would not directly appropriate groundwater for Project construction or operational water needs, except as necessary for excavation dewatering. We expect the resulting changes in water levels and/or turbidity in these aquifers to be localized and temporary because water levels quickly re-establish equilibrium, and turbidity levels rapidly subside. The addition of impervious surfaces at aboveground facilities may permanently affect overland flow patterns and subsurface hydrology. However, these effects would be highly localized and minor.

An accidental spill of fuel or hazardous material during refueling or maintenance of construction equipment could affect groundwater if not cleaned up appropriately. Soils impacted from spills could continue to leach contaminants to groundwater long after the spill has occurred. PAPL would implement measures in its Environmental Plan to prevent or minimize potential impacts on groundwater from spills of hazardous materials used during construction and operation.

B.3.2. Surface Water Resources

Field delineations were completed in accordance with methods defined in the USACE Wetlands Delineation Manual (USACE, 1987), and as modified in the regional supplement (USACE, 2010). No surface water resources are within the Project area, and no known Source Water Protection Areas would be affected by construction or operation of the Project. Therefore, a 401 Water Quality Certification is not required. Further, in accordance with section 402(l)(2) of the CWA, the NPDES Construction Stormwater General Permit does not apply to the Project because it is considered an oil and gas production facility, and as such, non-contact stormwater runoff from these facilities are exempted.

The nearest waterbody to the Project area is part of a drainage ditch just off the southwest corner of the site. This drainage ditch flows southwesterly through the adjacent parcel away from the Project. PAPL's Environmental Plan would be utilized during construction to prevent spills, leaks, or other releases of hazardous materials that could adversely impact the adjacent drainage ditch.

Hydrostatic testing would be performed in accordance with USDOT pipeline safety regulations identified in 49 CFR Part 192, "Transportation of Natural and other Gas by Pipeline: Minimum Federal Safety Standards," the Project testing specifications, and the Project-specific Procedures.

About 30,000 gallons of water would be used for hydrostatic and pneumatic testing of the Project piping. Water would be sourced from commercial or municipal sources and trucked to the site and filtered, if necessary, prior to use. No chemicals would be added to the test water. PAPL would use about 2.6 million gallons of commercially available water for fugitive dust control for the Project.

Specific discharge points for the test water are unknown at this point; in general, water would be discharged to vegetated upland areas following the completion of testing. Erosion control measures would be used and may include discharge to energy dissipation structures, filter bags, or splash bags to minimize erosion and sedimentation. All hydrotest discharge water would be sampled, tested, and discharged in accordance with the Louisiana General Permit (LAG67000) for discharge of hydrostatic test discharges and conducted in accordance with regulatory agency permit requirements and PAPL's Environmental Plan. No significant impacts are expected as a result of hydrostatic test water discharge.

With the lack of surface waterbodies, use of commercially sourced or municipal water for Project needs, and the implementation of PAPL's Environmental Plan, we conclude that construction and operation of the Project would not have a significant impact on water resources.

B.3.3. Wetlands

The USACE and EPA jointly define wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (USACE, 1987). Wetlands generally include swamps, marshes, bogs, and similar areas. Based on field delineations of the Project area, there are no jurisdictional wetlands identified within the Project area. PAPL requested a jurisdictional determination for the Project from the USACE. The USACE responded by letter on April 3, 2020, confirming that the Project property consists entirely of non-jurisdictional features that are not subject to USACE jurisdiction.

The Project area is used for rice farming, which includes the use of levees for periodic flooding. The nearest wetland to the Project area is approximately 45 feet east of the northeastern corner of the Project site. PAPL's Environmental Plan would be utilized during construction to prevent spills, leaks, or other releases of hazardous materials that could adversely impact the adjacent wetlands and also includes the use of erosion control devices to prevent offsite impacts including sedimentation. Therefore, with the implementation PAPL's Environmental Plan, we conclude that construction and operation of the Project would not have a significant impact on wetlands.

B.4 Vegetation, Wildlife, and Threatened and Endangered Species

B.4.1. Vegetation

The proposed Project is in the South Central Plains Level III ecoregion, which is characterized by rolling plains typically used for timber production, livestock grazing, and oil and gas production (EPA, 2013). Within this larger ecoregion, the Project is in the Flatwoods

Level IV ecoregion. The Flatwoods ecoregion tends to be flat to gently sloping and was once dominated by longleaf pine flatwoods and savannas. The State of Louisiana does not further divide level IV ecoregions. The Project area is entirely leveed agricultural land periodically flooded for Asian rice (*Oryza sativa*) cultivation.

No vegetation communities of special concern have been identified in the Project area. No noxious and/or invasive species were observed within the Project footprint.

The Project would permanently remove approximately 59.9 acres of agricultural land used for rice cultivation and convert it to upland and/or graveled surfaces. This would result in a permanent conversion of agricultural vegetation to non-vegetated land, unless the land is restored to open land and not graveled. With the implementation of the PAPL's Environmental Plan, the availability of adjacent farming lands, and the disturbed nature of the farmed area, construction and operation of the Project would not have a significant impact on vegetation.

B.4.2. Wildlife Resources

Wildlife habitats are based on the vegetation cover types within the Project area and includes primarily agricultural rice fields. This vegetation community provides foraging, cover, and habitat for a variety of wildlife species, including common muskrat, marsh rice rat, North American mink, coyote, eastern cottontail rabbit, gray squirrel, nine-banded armadillo, raccoon, white-tailed deer, wild hog, swamp rabbit, American bittern, barred owl, red-tailed hawk, bald eagle, American white ibis, cattle egret, cottonmouth water moccasin snake, diamondback water snake, green anole, bronze frog, and Northern cricket frog. No flowing waterbodies were identified during survey of the Project site, and therefore no impacts on fisheries are anticipated.

No managed or sensitive wildlife areas are present within the vicinity of the Project site.

The impact of construction on wildlife species and their habitats would vary depending on the resource requirements of each species and the existing habitat present at the proposed facilities. The greatest effects to wildlife would occur during clearing and grading of the site, which would reduce the amount of available habitat within the workspaces and could result in mortality to small, less mobile species, such as small mammals, amphibians, and reptiles. A total of 59.9 acres of habitat associated with agricultural land would be disturbed and permanently altered for construction and operation of the Project. This land would not be expected to return to habitat for most of the wildlife species that previously inhabited the agricultural area, as it would be converted to industrial land. Only wildlife that inhabits disturbed/industrial areas would be expected to return once the facilities are in operation.

The proposed compressor station would generate noise on a continuous basis once in operation. The noise impacts associated with the compressor station would be limited to the general vicinity of the facilities; however, certain operations, such as blow-downs, would generate infrequent, but high noise levels that would extend for a greater distance from the station (see also section B.8.2, below). While compressor station noise could affect birds in the area, we expect that in subsequent years birds and other wildlife would either be habituated to the noise source or would have moved into similar available habitat farther from the noise source. This, in turn, could lead to increased competition for preferred habitats, depending on

the amount of habitat available. We note that the Project would be sited next to the existing Ragley Compressor Station, so we expect that the wildlife in the adjacent areas are already habituated to the operation of a compressor station.

With the implementation PAPL's Environmental Plan, the presence of abundant similar wildlife habitat adjacent to the affected areas, the disturbed nature of the actively cultivated rice field, and the existing adjacent Ragley Compressor Station, we conclude that construction and operation of the Project would not have a significant impact on local wildlife populations or habitat.

B.4.3. Migratory Birds

Migratory bird species nest in the United States and Canada during the summer months and then migrate south to the tropical regions of Mexico, Central and South America, and the Caribbean for the non-breeding season. Some species migrate from breeding areas in the north to the Gulf Coast for the non-breeding season. Migratory birds are protected under the Migratory Bird Treaty Act (MBTA), which prohibits the intentional take or killing of individual migratory birds, their eggs and chicks, and active nests. The MBTA provides that it is unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg of any such bird.

The U.S. Fish and Wildlife Service (USFWS) is the agency with statutory authority and responsibility for enforcement of the MBTA. Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds, issued January 10, 2001) directs federal agencies to consider the effects of agency actions on migratory birds and determine where unintentional take is likely to have a measurable negative effect on migratory bird populations, and to avoid or minimize adverse impacts on migratory birds through enhanced collaboration with the USFWS. The executive order states that emphasis should be placed on species of concern, priority habitats, and key risk factors, and that particular focus should be given to addressing population-level impacts. On March 30, 2011, the USFWS and the Commission entered into a Memorandum of Understanding that focuses on avoiding or minimizing adverse impacts on migratory birds and strengthening migratory bird conservation through enhanced collaboration between the two agencies. This voluntary Memorandum does not waive legal requirements under the MBTA, Bald and Golden Eagle Protection Act, Endangered Species Act (ESA), Federal Power Act, NGA, or any other statute and does not authorize the take of migratory birds.

Migratory birds follow broad routes called flyways between breeding grounds in Canada and the United States and wintering grounds in Central and South America and the Caribbean. Additionally, several species migrate from breeding areas in the north to winter along the Gulf Coast, where they remain throughout the non-breeding season. The Gulf Coast is considered one of the most important waterfowl areas in North America, specifically for Nearctic-neotropical migrating birds (Shackelford et al., 2005). For example, the Gulf Coast provides wintering and migration habitat for large numbers of continental duck and goose populations that use this flyway. The Project site is within the Mississippi Flyway.

To accurately identify bird species with the greatest conservation priority and stimulate action by federal/state agencies and private parties, the USFWS Migratory Bird Office issued a

report describing the Birds of Conservation Concern (BCC) (USFWS, 2008). The report identifies priority bird species at the national, regional, and Bird Conservation Region levels. The proposed Project is within Bird Conservation Region 37 – Gulf Coastal Prairie (USFWS, 2008). Appendix N of the final EIS[7] identifies the BCCs with the potential to occur near the Project, which species breed within the region, and the nesting habitat of the breeding species.

No migratory bird rookeries or nesting colonies were observed during the site surveys within the vicinity of the Project. The Project is not within any Important Bird and Biodiversity Areas. Bald eagles are listed as endangered in Louisiana and have the potential to occur within the Project area; however, the site does not contain suitable habitat such as tall trees around rivers, lakes, or marshes. PAPL would perform bald eagle nest surveys prior to construction of the Project. If active nests are identified, PAPL would comply with buffers recommended in the USFWS' National Bald Eagle Management Guidelines (USFWS, 2007).

The Project areas provides minimal quality nesting habitat (rice field) for migratory bird species and BCC species such as songbirds, waterbirds, and raptors. Removal or conversion of agricultural habitat type would reduce some bird foraging habitat, but there is abundant adjacent farmed land that would continue to be available. Impacts on migratory birds and BCC species and their habitat due to construction and operation of the Project would typically be similar to impacts on general wildlife resources (see section B.4.2) and those discussed in the EIS prepared for the Louisiana Connector Project and incorporated by reference herein.

Based on the availability of similar habitat in the Project area, the disturbed nature and habitat quality of the actively cultivated rice field, and the BPCS site being adjacent to the existing Ragley Compressor Station, we conclude that the Project would not have a significant impact on migratory birds. Port Arthur has also agreed to comply with the migratory bird survey and protection measures described in and committed to in the final EIS for the original project. These measures include conducting surveys for active rookeries and colonial nesting areas and complying with any buffers should any active nests be found during surveys.

B.4.4. Special Status Species

Federally Listed Species

Federal agencies are required under Section 7 of the ESA, as amended, to ensure that any actions authorized, funded, or carried out by the agency would not jeopardize the continued existence of a federally listed endangered or threatened species, or result in the destruction or adverse modification of the designated critical habitat of a federally listed species. As the lead federal agency authorizing the Project, FERC is required to consult with the USFWS and National Marine Fisheries Service (NMFS), if applicable, to determine whether federally listed endangered or threatened species or designated critical habitat are found in the vicinity of the Project, and to evaluate the proposed action's potential effects on those species and/or critical habitats. No designated critical habitat or federally protected species under the jurisdiction of the NMFS occur in the Project area (NMFS, 2019).

7 Available on eLibrary under Accession No. 20190131-3023.

PAPL, acting as our non-federal representative for the purpose of complying with Section 7(a)(2) of the ESA, consulted the USFWS's Information Planning and Consultation (IPaC) system and determined that two endangered species (red-cockaded woodpecker and American chaffseed) and one threatened species (Louisiana pine snake) could occur in the Project area. PAPL conducted habitat surveys during wetland delineations in December 2019. None of the three identified species were observed during the surveys. On January 6, 2020, PAPL uploaded its determinations to the IPaC system for each species. The Project was determined to have *no effect* on the red-cockaded woodpecker and American chaffseed due to lack of suitable habitat for these species. It was also determined that the Project would *not likely adversely affect* the Louisiana pine snake. Louisiana pine snakes could be present in the Project area, but the proposed compressor station site and areas immediately adjacent do not contain the preferred habitat, as the site is a cultivated rice field and often flooded. On January 10, 2020, the USFWS Ecological Field Office in Lafayette, Louisiana concurred with the IPaC determinations made by PAPL. We have reviewed PAPL's resource information and agree with these determinations and conclusions; thus, Section 7 consultation is complete for the Project.

State-Listed Species

Title 56 of the Louisiana Revised Statutes as well as relevant rules and regulations adopted by the Louisiana Wildlife and Fisheries Commission and the Secretary of the Louisiana Department of Wildlife and Fisheries (LDWF) includes regulations to provide for the conservation of endangered or threatened species.

On April 6, 2020, the LDWF responded to PAPL's consultation requests indicating that it had no objection to the Project provided that the applicant implement adequate erosion/sediment control measures to ensure that no sediments or other activity related debris are allowed to enter any adjacent wetlands or waters. We conclude that the Project area does not contain suitable or preferred habitat for state-listed or sensitive species, and through implementation of PAPL's Environmental Plan, we believe LDWF's concerns have been addressed.

B.5 Land Use

The Project would impact 59.9 acres of agricultural land during construction. The typical agricultural crops found in the Project area include rice fields and soybeans. Of this impact area, the BPCS would overlap 1.8 acres of permanent pipeline right-of-way and 4.7 acres of temporary pipeline right-of-way associated with the previously certificated Louisiana Connector Project's pipeline. No residential land or forested land would be impacted by construction of the Project. Given that the Project would be sited on agricultural land that has already been subject to permanent conversion and farming practices, impacts on land use would be permanent but minor.

Residential Land and Planned Developments

PAPL consulted with planning departments and Parish Administrator for Beauregard Parish and reviewed public records to identify planned residential or industrial/commercial developments. Each entity indicated no known developments are planned within 0.25 mile of

the Project. The Parish Administrator indicated that there are currently no zoning or land use development requirements in Beauregard Parish, Louisiana.

One nearby landowner commented that she is planning a housing development (Kingrey Estates) about 1 mile north of the proposed BPCS. The owner indicates that approximately 18 lots would be developed. The site is currently forested land. The landowner recommended the selection of an alternative site due to the presence of trees as a barrier for noise and light pollution and the increased distance between her property and the compressor station site. An analysis of the proposed BPCS and the alternative site (Alternative Site 2) is provided in section C. The landowner also indicated concerns with this development related to safety, which is discussed in section B.9, and visual impacts, which are discussed in this section below.

Public Land, Recreation, and Special Interest Areas

The Project would not be within 0.25 mile of any national parks, forests, wildlife refuges, or trails; state or local parks or forests; protected open spaces; or federally designated wilderness areas. In addition, PAPL conducted a search of the U.S. Department of Agriculture, NRCS portal which contains data on various easements including: Emergency Watershed Protection Program—Floodplain Protection Easement, Emergency Wetland Reserve Program, Farm and Ranch Lands Protection Program, Grassland Reserve Program, Healthy Forest Reserve Program, and Wetland Reserve Program.[8] Based on PAPL's previous agency outreach associated with the Louisiana Connector Project, and agency consultations for this Project, we agree that no impacts on public lands, recreation, and /or special interest areas would occur as a result of construction and operation of the Project.

Coastal Zone Consistency

Based on a review of the Project's location with the information available from the Coastal Management Division of the LDNR, the Project would not be in a designated coastal zone (LDNR, 2017).

Visual Resources

The Project could alter existing visual resources during construction and operation of the BPCS. The significance of visual impacts would primarily depend on the quality of the viewshed, the degree of alteration of that viewshed, the sensitivity or concern of potential viewers, and the perspective of the viewer.

The BPCS site is an undeveloped parcel of land currently used for agriculture. The compressor station site would be accessed from Coonie Jackson Road and through the Ragley Compressor Station, which is a rural road with limited traffic resulting in limited views of the compressor station. The area surrounding the compressor station site is largely open agricultural lands. Isolated residences occur along Gaytine Road to the north and Coonie Jackson Road to the east and southeast of the Project. The nearest residences are over 0.5 mile from the site.

8 Available online at: https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/dma/?cid=stelprdb1043925.

Several more residences are present outside the 0.5-mile radius; however, most of the residents' views of the Project from the southeast would be impeded by mature trees.

Visual effects from construction activity would result primarily from the presence of construction equipment on site, and also from dust generated from site activities. Dust control measures, such as spraying construction areas with water, would be implemented, when needed, during all construction activities involving ground disturbance at the compressor station. Because construction of the compressor station is temporary in nature, these effects would also be temporary and would not be significant.

Following construction, the most prominent feature in the viewshed would be the compressor buildings, which would be about 35 feet in height. The office and warehouse buildings would be 12 feet and 20 feet in height, respectively. These buildings would be new features in the viewshed and noticeable by adjacent or nearby landowners. The BPCS would be constructed in a relatively remote and unpopulated area and due to the set-back of the larger buildings would not be highly visible from nearby roads. The facility would also be adjacent to the existing Ragley Compressor Station. By placing the BPCS adjacent to existing infrastructure, visual impacts would be more consistent with surrounding area than installation in an area with no adjacent natural gas infrastructure. Only lighting required for operation, maintenance, and security would be used at the compressor station, and the light would be directed towards the facility to minimize offsite effects.

We received comments on the visual impacts of the BPCS on existing and planned residences. PAPL relocated the originally considered amended site for the BPCS to be adjacent to the Ragley Compressor Station. This would minimize new visual impacts on residences, by siting the facilities in an area consistent with the existing viewshed. PAPL has also committed to painting the buildings in neutral earth tones and installing screening mechanisms that may include trees, earthen berms, privacy fencing, or a combination of these or other options. Further, by relocating the BPCS from its originally proposed amendment location and away from Gaytine Road, the visibility of the compressor station facility is further distanced from the nearest residences, including the proposed development of Kingrey Estates. In addition, PAPL would use down-shielded lighting at the facility.

PAPL would use two access roads that were approved for use for the Louisiana Connector Project for construction of the BPCS. Public roads (such as the use of Gaytine Road and Coonie Jackson Road), as well as use of the Ragley Compressor Station access road, would be used to reach these access roads. During operation, PAPL plans to access the BPCS site from the Ragley Compressor Station, owned by its affiliate, CIP.

Based on PAPL's commitment to paint the facilities a neutral color, install screening to reduce visual impacts, use downlighting, and install the BPCS adjacent to the Ragley Compressor Station, we believe visual impacts, while permanent, would be minimized and not significant.

B.6 Socioeconomics

Impacts on socioeconomics associated with the Project would be similar to that described in the final EIS for the Louisiana Connector Project (CP18-7-000), specific to Beauregard Parish, Louisiana where the new facilities are proposed. In summary, some potential construction and operation effects would be related to the number of construction workers working on the Project and their impact on population, public services, temporary housing during construction, tourism and transportation, and government revenue associated with sales and payroll taxes. However, PAPL does not anticipate requiring additional temporary or permanent personnel to support construction and operation of the Project beyond that already identified for the Louisiana Connect Project (230 temporary workers for compressor station construction and 10 permanent personnel for operation). As such, the Project would not incrementally affect these resources.

Environmental justice considers disproportionately high and adverse impacts on minority or low-income populations in the surrounding community resulting from the programs, policies, or activities of federal agencies. Items considered in the evaluation of environmental justice include human health or environmental hazards, the natural physical environment, and associated social, economic, and cultural factors. According to the Council on Environmental Quality's environmental justice guidance under NEPA (Council on Environmental Quality, 1997) and *Promising Practices for EJ Methodologies in NEPA Reviews* (EPA, 2016), minorities are those groups that include American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. Minority populations are defined where either: a) the minority population of the affected area exceeds 50 percent; or b) the minority population of the affected area is meaningfully greater (10 percent greater) than the minority population percentage in the general population or other appropriate unit of geographic analysis. The guidance also directs low-income populations to be identified based on the annual statistical poverty thresholds from the U.S. Census Bureau. Low-income populations are defined as those individuals with reported income below the poverty level.

Based on a review of U.S. Census Bureau census tract information (American Community Survey, 2018), no minority or low-income populations are present in the Project area. As such, construction of the Project would not disproportionately affect any population group.

Construction of the Project may result in minor, temporary impacts on roadways due to construction and the movement of workers and heavy equipment. The Project is in the vicinity of Gaytine Road, a rural road, which intersects State Highway 171 about 1 mile west of the proposed compressor station and Coonie Jackson Road, which intersects with Gaytine Road and leads to the existing access for the Ragley Compressor Station. The Project area is about 16 miles north of Interstate 10, a major transportation corridor. Workers traveling to the site to work and trucks making deliveries could cause brief traffic congestion on local roads and cause minor and temporary impacts on traffic flow. PAPL would use traffic control measures, such as flagmen and signs to ensure the safety of drivers. To further minimize and mitigate potential impacts, PAPL would limit construction activities to between 7:00 a.m. and 10:00 p.m. Therefore, workers would travel to and from the site earlier and later in the day, outside of peak traffic hours, thus minimizing their contribution to traffic congestion.

We received comments on impacts to public roads (such as Gaytine Road) during construction and who would be responsible for the repair of any damage to those roads. Most states fund road repairs with motor fuel taxes, motor vehicle registration fees, and compensatory fees paid by commercial carriers. Commercial carriers need registrations to operate in each state and may need special permits for oversize and overweight vehicles, temporary trip permits within the state, or to haul hazardous materials. PAPL would coordinate with the state department of transportation to obtain the required permits to operate trucks on public roads. Following construction, roads would be restored in accordance with road encroachment permit requirements and/or as requested by the landowner.

Because operation of the facility would not require additional personnel beyond that already identified for the Louisiana Connector Project, the Project would have a minimal effect on local transportation infrastructure and traffic, primarily related to that associated with permanent, operational staff, which would be 10 persons for the entire Louisiana Connector Project. As a result, construction and operation activities related to the Project would result in minor and temporary to short-term impacts on transportation infrastructure and traffic.

We received comments from landowners that the presence of the compressor station might lower their property values. Many of the properties are already within view of the existing Ragley Compressor Station to the southeast of the proposed Project and we are not aware of a consistent impact on the sales price of a property due to the presence of nearby natural gas infrastructure. We also received comments on the impact of natural gas facilities on homeowner's insurance. We discuss these issues below.

Property Values

We have previously examined the impact the presence of a natural gas compressor station had on residential property values. Staff identified a recent study that assessed the effects of natural gas pipeline compressor stations on property values prepared for National Fuel. The study assesses the impacts on property values in neighborhoods surrounding compressor stations in seven locations in New York state. Sales data over the previous 15 years were evaluated, and assessors from six of the seven areas were interviewed. The study found no quantifiable evidence of a discernable effect on property values or appreciation rates of properties within 0.5 mile of compressor stations. The study, which notes the general lack of sales data for analysis, identified the following commonalities among the seven areas: the compressor stations were sited on large land parcels and set back from the road, natural and constructed buffers were utilized, and compressor station sites were generally in rural areas removed from higher density development (Griebner, 2015).

Based on the research we have reviewed, we find no conclusive evidence indicating that natural gas pipeline easements or compressor stations have a significant negative impact on property values, although this is not to say that any one property may or may not experience an impact on property value for either the short or long term. We also note that the BPCS is adjacent to the Ragley Compressor Station and that landowners are continuing to develop housing projects in the area, even with the presence of the existing Ragley Compressor Station. Commentors also noted that this area is rapidly developing as a suburb of the city of Lake Charles. The comments lend credit to the above studies that many other factors are considered in

the valuation of property, and that proximity to natural gas facilities may not necessarily drive property values or the desire to own a property.

Insurance

We also received comments on the impact of nearby natural gas facilities on homeowner's insurance. We have examined concerns in several previous projects that insurance premiums would increase and/or insurance companies would not insure properties due to natural gas facility proximity. These concerns were examined by contacting insurance offices to ask whether the presence of a utility crossing would change the terms of an existing or new residential insurance policy, which types of utilities may cause a change, how a policy might change, and what factors would influence a change in the policy terms, including the potential for a policy to be dropped completely. This investigation was specific to pipelines crossing private lands, rather than a compressor station in the general vicinity, but the results do provide some indication of how the insurance industry approaches the issue.

Results of our initial investigation suggested that the potential for a residential insurance policy to be affected could exist, but the extent of any action and corresponding corrective action would depend upon several factors, including the terms of the individual landowner's policy and the terms of the pipeline company's own policy. Insurance company contacts were not able to speak directly to the potential factors that could cause a change in a policy (e.g., type of utility, proximity of residence to utility), or provide quantitative information on the potential change in a policy premium (in dollars or percent). Further, we have requested in some previous projects, including the Atlantic Sunrise Project, FERC Docket No. CP15-138-000 (FERC, 2016), PennEast Pipeline Project, FERC Docket No. CP15-558-000 (FERC, 2017), and Constitution and Wright Interconnect Projects, FERC Docket Nos. CP13-499-000 and CP13-502- 000 (FERC, 2014), that the pipeline company notify us of any landowner-reported instances where property insurance was either dropped, denied, or had rates affected due to the presence of a pipeline. To date, the only project that has completed construction is the Atlantic Sunrise Project, and there have been no such reports.

In 2016, the Interstate Natural Gas Association of America released a study, conducted by Integra Reality Resources, of selected FERC-jurisdictional natural gas transmission pipelines throughout the county and their impact on property values and insurance rates (INGAA, 2016). Integra Reality Resources contacted the corporate offices of State Farm, Allstate, and Farmers, the three largest home insurers in the nation. Representatives of all three companies indicated that proximity to a pipeline was not taken into consideration when underwriting a homeowner's policy. In addition, premiums would not increase because a pipeline was installed on a property. There is no evidence that insurance companies view properties with pipeline easements, or those in the general vicinity of a compressor station, any different than properties without easements or nearby infrastructure. As such, there is no conclusive evidence indicating that insurance premiums would be affected by the presence of a natural gas pipeline easement. We assume the same logic applies to compressor stations as to pipelines.

Because the proposed BPCS would be installed adjacent to the existing Ragley Compressor Station, we do not anticipate that the addition of the BPCS would impact insurance rates any different than the existing Ragley Compressor Station has. In addition, none of the

comments we received from local residents provided any empirical evidence that they have already had insurance rates increase or insurance cancelled due to installation of the Ragley Compressor Station.

We conclude that the Project would not adversely affect the ability of homeowners' insurance rates or the ability to acquire a homeowner's insurance policy.

B.7 Cultural Resources

Section 106 of the National Historic Preservation Act, as amended, requires FERC to take into account the effects of its undertakings on properties listed or eligible for listing on the National Register of Historic Places, and to afford the Advisory Council on Historic Preservation an opportunity to comment on the undertaking. PAPL, as a non-federal party, is assisting FERC in meeting our obligations under Section 106 and the implementing regulations at 36 CFR 800 by preparing the necessary information, analyses, and recommendations, as authorized by 36 CFR 800.2(a)(3).

PAPL completed a Phase I Cultural Resources Survey for the Project and provided the resulting report to the FERC and the Louisiana State Historic Preservation Office (SHPO). A total of 91 acres was surveyed, and no cultural resources were identified. In a letter dated February 18, 2020, the SHPO concurred with the report and indicated that no properties listed in or eligible for listing in the National Register of Historic Places would be affected by the Project. We agree with the SHPO.

We sent our NOI to the following Native American tribes: Alabama-Coushatta Tribe of Texas; Caddo Nation; Chitimacha Tribe of Louisiana; Choctaw Nation of Oklahoma; Coushatta Tribe of Louisiana; and Quapaw Nation of Oklahoma. No responses to our NOI have been received. PAPL contacted the following Native American tribes regarding the Project: Alabama-Coushatta Tribe of Texas; Chitimacha Tribe of Louisiana; Choctaw Nation of Oklahoma; Coushatta Tribe of Louisiana; Jena Band of Choctaw Indians; Mississippi Band of Choctaw Indians; and Tunica Biloxi Indian Tribe of Louisiana. The Choctaw Nation of Oklahoma requested shapefiles and a copy of the survey report, which PAPL provided. On April 13,2020, the Choctaw Nation of Oklahoma concurred with a finding of "no historic properties affected" and requested to be contacted if Native American artifacts or human remains were encountered during construction. No other comments have been received.

PAPL provided an unanticipated discovery plan to FERC and the SHPO, which would be implemented if cultural resources or human remains are encountered during construction of the BPCS. The plan also provides for the notification of Native American tribes in the event of any discovery. We requested revisions to the plan. PAPL provided a revised plan which we find acceptable.

PAPL completed a cultural resources survey for the Project, and the SHPO and FERC agree that no historic properties would be affected by construction or operation of the BPCS. Therefore, the process of complying with Section 106 of the National Historic Preservation Act is complete.

B.8 Air and Noise

This section provides a description of the existing air quality and noise environment in the Project vicinity and an assessment of the potential impacts on these resources resulting from Project construction and operation.

B.8.1. Air Quality

The Project would result in temporary impacts on regional air quality associated with Project construction; in addition, the Project would result in permanent impacts associated with the long-term operation of the BPCS.

Existing Air Quality

The Project site is in Beauregard Parish, which is part of the Gulf Coast Region. Climate in the Gulf Coast Region is dominated by the flow of warm, humid, tropical air from the Gulf of Mexico. During winter, the area is alternately influenced by a continental regime, with winds from the north and west, and by a modified maritime regime that prevails during most of the winter.

Based on climatological data measured at the Lake Charles Regional Airport (National Oceanic and Atmospheric Administration's [NOAA] Summary of Monthly Normals, 1981–2010), the average low temperature in January (typically the coldest month of the year) is 42.3 °F and the average high temperature in July is 91.9 °F. The average annual mean temperature is 68.6 °F.

Severe weather events documented for Beauregard Parish include thunderstorms, tornados, hail, drought, flooding, tropical storms, and hurricanes. According to NOAA's Storm Events Database, about 53 tornados, 3 tropical storms and 3 hurricanes were recorded in Beauregard Parish between 1965 and 2010 (NOAA, 2015).

Ambient Air Quality Standards

Construction and operation of the Project would affect local and regional air quality. Ambient air quality is protected by federal and state regulations. The EPA has established NAAQS for "criteria pollutants" to protect human health and welfare (EPA, 2020b). These criteria pollutants are ground-level ozone (O_3), carbon monoxide (CO), nitrogen oxides (NOx), sulfur dioxide (SO_2), fine particulate matter (i.e., inhalable particulate matter with an aerodynamic diameter less than or equal to 10 microns [PM_{10}] and less than or equal to 2.5 microns [$PM_{2.5}$]), and airborne lead. Ozone is not emitted into the atmosphere from an emissions source but develops as a result of a chemical reaction between NOx and volatile organic compounds (VOC) in the presence of sunlight; therefore, NOx and VOCs are often referred to as ozone precursors and are regulated to control the potential for ozone formation. The NAAQS include primary standards that are designed to protect human health, including the health of "sensitive" individuals such as children, the elderly, and those with chronic respiratory problems. The NAAQS also include secondary standards designed to protect public welfare, including visibility, vegetation, animal species, economic interests, and other concerns not related to human health.

Hazardous air pollutants (HAP), also known as toxic air pollutants or air toxics, are specific pollutants that are known or suspected to cause cancer (carcinogens) or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. There are no national air quality standards for HAPs, but their emissions are limited through permit thresholds and technology standards.

Greenhouse gases (GHG), the most common of which are carbon dioxide (CO_2), methane, nitrous oxide, ozone, hydrofluorocarbons, and perfluorocarbons, are naturally occurring pollutants in the atmosphere and products of human activities, including burning fossil fuels. Fossil fuel combustion emits CO_2, methane, and nitrous oxide. GHG emissions are generally calculated in terms of carbon dioxide equivalents (CO_{2e}) where the atmospheric heating potential of each gas is expressed as a multiple of the atmospheric heating potential of CO_2.

Existing Air Quality and Attainment Status

Air quality control regions (AQCR) are areas established by the EPA and local agencies for air quality planning purposes, which are managed through State Implementation Plans that describe how the NAAQS would be achieved and maintained. The AQCRs are intra- and interstate regions, such as large metropolitan areas, where improvement of the air quality in one portion of the AQCR requires emission reductions throughout the AQCR. Each AQCR or smaller portion within an AQCR (such as a county or multiple counties) 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 that were previously designated as nonattainment and have since demonstrated compliance with the NAAQS are designated as maintenance. Areas without sufficient data available are designated as unclassifiable and are treated as attainment areas. The proposed Project is in Beauregard Parish, which is within the Southern Louisiana-Southeast Texas Interstate AQCR (AQCR 106) and is attainment or unclassified for all pollutants.

The EPA as well as state and local agencies have established a network of ambient air quality monitoring stations to measure and track the background concentrations of criteria pollutants across the United States. To characterize the existing ambient air quality for the Project, available data were gathered from air quality monitoring stations that are nearest to the Project's sources of operational emissions. The most recent validated data from these monitoring sites are presented in table 3, which compares the monitored data with the appropriate NAAQS standard for each criteria pollutant (EPA, 2020c). All monitored data are below the NAAQS.

Table 3 Ambient Air Quality Concentrations Representative of the Project Area					
Pollutant	**Monitor**	**Averaging Period [a]**	**Units**	**Monitored Concentration [b]**	**Primary NAAQS [b]**
CO	Capitol Baton Rouge AQS Site ID: 22-033-0009	1-hour	µg/m^3	2,934	10,000
		8-hour	µg/m^3	1,870	40,000
NO_2	Westlake (Louisiana) AQS Site ID: 22-019-0008	1-hour	µg/m^3	73.1	188
		Annual	µg/m^3	12.4	100
PM_{10}	Lafayette (Louisiana) AQS Site ID: 22-055-0007	24-hour	µg/m^3	72.7	150
$PM_{2.5}$	Vinton (Louisiana) AQS Site ID: 22-019-0009	24-hour	µg/m^3	21.2	35
		Annual	µg/m^3	7.8	12
O_3	Carlyss (Louisiana) AQS Site ID: 22-019-0002	8-hour	ppm	0.065	0.70
SO_2	Westlake (Louisiana) AQS Site ID: 22-019-0008	1-hour	µg/m^3	74.8	196
		3-hour	µg/m^3	54.6	NA

[a] Consistent with the definition of the NAAQS, second-high short-term concentrations are listed for most pollutants, but the fourth-highest 8-hour concentration is listed for ozone, the 98th percentile 24-hour concentration is listed for $PM_{2.5}$ and 1-hour nitrogen dioxide (NO_2), the 99th percentile 1-hour concentration is listed for SO_2. The arithmetic mean concentrations are listed for the annual averages.

[b] The form for each pollutant/averaging period (i.e., H1H, H4H, and H8H) is based on EPA rulemaking. See: https://www.epa.gov/criteria-air-pollutants/naaqs-table Source: Data from EPA AIRS Database (https://www.epa.gov/outdoor-air-quality-data).

µg/m^3 = microgram per cubic meter

ppm = parts per million

Permitting/Regulatory Requirements

The Clean Air Act is the basic federal statute governing air pollution in the United States. The provisions of the Act that are potentially relevant to the Project includes the items discussed below.

New Source Review/Prevention of Significant Deterioration

New Source Review (NSR) is a preconstruction permitting program designed to protect air quality when air pollutant emissions are increased either through the modification of existing sources or through the construction of a new source of air pollution. There are three basic categories of NSR permitting: Prevention of Significant Deterioration (PSD), Nonattainment NSR, and Minor Source NSR. Separate procedures have been established for federal preconstruction air permit review of certain large projects in attainment areas and nonattainment areas. In areas with good air quality, NSR ensures that the new emissions do not degrade the air quality, which is achieved through the implementation of the PSD permitting program. In addition, NSR ensures that any large, new, or modified industrial source uses air pollution control technology. Projects for which pollutants are not subject to PSD or Nonattainment NSR may be subject to minor source NSR, which is the minor source permitting process for the state or local jurisdictional agency. The LDEQ has been delegated authority by the EPA and administers the NSR and PSD program in Louisiana.

Based on potential to emit calculations discussed below, the BPCS would be required to obtain minor source NSR permits prior to construction.

Title V Operating Permit

Title V of the Clean Air Act requires states to establish an air operating permit program. If a facility's potential to emit is equal to or greater than the criteria pollutant or HAP thresholds, the facility is considered a major source. The major source threshold level for an air emission source is 100 tons per year (tpy) for criteria pollutants and 10 tpy of any single HAP or 25 tpy of all HAPs in aggregate. The State of Louisiana has been delegated authority by the EPA to administer the Title V program through the LDEQ. The potential emissions of the BPCS, which are discussed below, trigger Title V major source status. PAPL submitted a Title V permit application to LDEQ on November 27, 2019. As of the issuance of this EA, we have not been notified by PAPL of a permit issuance by the LDEQ.

New Source Performance Standards

The EPA promulgates New Source Performance Standards (NSPS), codified in 40 CFR 60, that require new, modified, or reconstructed sources to control emissions as specified in the applicable source category provisions. Any source that is subject to provisions under an NSPS subpart is also subject to the general monitoring, reporting, and record keeping provisions of NSPS Subpart A (General Provisions), except as noted in the applicable subpart. This section outlines the applicability of NSPS subparts for the Project.

Subpart KKKK, Standards of Performance for Stationary Combustion Turbines, applies to stationary combustion turbines with a maximum heat input equal to or greater than 10 million British thermal units per hour, that were constructed, modified, or reconstructed after February 18, 2005. NSPS Subpart KKKK regulates emissions of NOx and SO_2. The proposed new turbines at the BPCS would be subject to NSPS Subpart KKKK. Compliance with the NOx emission limit would be demonstrated through annual performance tests as required under Section 60.4340. Compliance with the SO_2 limit would be demonstrated through the use of pipeline quality natural gas per Section 60.4365(a).

Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, applies to manufacturers and owner/operators of compression ignition internal combustion engines manufactured after the applicability date stated in the rule for the particular type and size engine. The standby generators at the BPCS would be subject to NSPS Subpart IIII, which sets emission standards, reporting and recordkeeping requirements, and requirements for fuel, compliance, and testing. The engine manufacturer for the proposed diesel-fired standby generators would provide a certificate of conformity to meet the applicable standards. Standby diesel (emergency) generators would be operated in compliance with all other applicable requirements.

Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution, establishes emission standards and compliance schedules for the control of VOCs and SO_2, which would apply to the collection of fugitive emissions components at the BPCS.

National Emissions Standards for Hazardous Air Pollutants

The Clean Air Act Amendments established a list of 189 HAPs resulting in the promulgation of National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Source Categories. The NESHAPs, codified in 40 CFR 61 and 63, regulate the emissions of HAPs from new and existing stationary sources by setting emission limits, monitoring, testing, recordkeeping, and notification requirements. Any source that is subject to a subpart of 40 CFR 61 or 63 would also be subject to the general provisions of Subpart A (General Provisions), unless otherwise noted in the applicable subpart. This section outlines the applicability of NESHAP subparts for the Project facilities.

Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) would apply to the emergency electrical power generators associated with the Project. These units would be subject to all applicable Subpart ZZZZ monitoring, recordkeeping, and reporting requirements, and/or would comply with NESHAPs Subpart ZZZZ by complying with NSPS Subpart IIII requirements.

General Conformity

The General Conformity Rule is codified in 40 CFR 96, Subpart B and was developed to ensure that federal actions in nonattainment and maintenance areas do not impede states' attainment of the NAAQS. A conformity determination must be conducted by the lead federal agency if a federal action's construction and operation activities are likely to result in generating direct and indirect emissions that would exceed the conformity applicability threshold level of the pollutant(s) for which a county is designated as nonattainment or maintenance. Conforming activities or actions should not, through additional air pollutant emissions:

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

The General Conformity Rule entails both an applicability analysis and a subsequent conformity determination, if applicable. According to the conformity regulations, emissions from sources that are subject to any Nonattainment NSR or PSD permitting/licensing (major or minor) are exempt and are deemed to have conformed. A General Conformity Determination must be completed when the total direct and indirect emissions of a project would equal or exceed the specified pollutant thresholds on a calendar year basis for each nonattainment or maintenance area.

As discussed previously, the Project area is in attainment; therefore, general conformity requirements do not apply.

Greenhouse Gas Reporting Rule

The EPA established the final Mandatory Greenhouse Gas Reporting Rule, requiring the reporting of operational GHG emissions from applicable sources that emit greater than or equal to 25,000 metric tons of GHGs (as CO_{2e}) in 1 year. Recent additions to the Reporting Rule

effective for calendar year 2016 require reporting of GHG emissions generated during operation of natural gas pipeline transmission systems, including blowdown emissions, equipment leaks, and vent emissions at compressor stations, as well as blowdown emissions between compressor stations.

Although the rule does not apply to construction emissions, we have provided GHG construction emission estimates as CO_{2e} for accounting and disclosure purposes in the section below and table 4. Operational GHG emission estimates for the Project are presented as CO_{2e} in the section below and table 5. Based on the emission estimates presented, actual GHG emissions from operation of the BPCS have the potential to exceed the 25,000 metric tpy reporting threshold for the Mandatory Reporting Rule. Therefore, if the actual operational emissions from the BPCS are greater than 25,000 metric tpy, PAPL would be required to report GHG emissions.

State Air Quality Requirements

In addition to federal regulations, the State of Louisiana has its own regulations that PAPL would need to comply with during construction and operation of the Project. Air pollution control regulations are promulgated in Louisiana Administrative Code Title 33, Part III. Some of the specific emission standards applicable to the equipment related to the BPCS including turbines, generators, condensate loading, condensate tank, and associated fugitive emissions) are:

- Section 1103: Impairment of Visibility on Public Roads Prohibited;
- Section 1109: Control of Air Pollution from Outdoor Burning;
- Section 1305: Control of fugitive emission of Particulate Matter (PM);
- Section 1311: Emission Limits (PM);
- Section 2103: Storage of Volatile Organic Compounds;
- Section 2111: Pumps and Compressors;
- Section 2113: Housekeeping.

PAPL would comply with state air quality requirements as detailed in the Title V Air Permit Application that has been developed for the BPCS.

Construction Emissions

Construction of the Project would result in intermittent and temporary emissions of criteria pollutants. These emissions generally include fugitive dust (PM_{10} and $PM_{2.5}$) generated from soil-disturbing activities, such as earthmoving and wind erosion of disturbed areas, and vehicle traffic during construction. The amount of dust generated during construction would be a function of precipitation, vehicle numbers and types, vehicle speeds, and roadway characteristics. Dust emissions would be greater during dry periods and in areas of fine-textured soils.

Construction also results in combustion emissions from diesel- and gasoline-fueled vehicles used in various construction activities. Combustion-related emissions would include NOx, CO, VOC, SO_2, PM_{10} and $PM_{2.5}$, small amounts of HAPs, and GHGs. The EPA requires manufacturers of on- and off-road engines to certify their products to engine emission standards based on the year of manufacture. For diesel engines, the emission standards have been phased

in over the past two decades in four steps, referred to as Tier 1 to Tier 4. Each engine must comply with the emission standards throughout its life. In 2010, the EPA required the sulfur concentration in diesel fuels be lowered from historical concentration of 500 parts per million to 15 parts per million (ultra-low sulfur diesel fuel), which allows diesel engines to meet current Tier 4 emission requirements.

Construction-related emission estimates are based on typical diesel-fueled construction equipment, hours of operation, and vehicle miles traveled by the construction equipment and supporting vehicles for each construction spread. Construction emissions for the Project are presented in table 4. The following assumptions and protocols were used in the construction emissions estimates for the Project:

- combustion emissions from on-road vehicles (e.g., delivery and material removal vehicles) were estimated using the EPA Motor Vehicle Emission Simulator (2014a), which estimates emissions for on-road vehicles and equipment based on the anticipated types of equipment and their associated levels of use;

- emission estimates for off-road construction equipment engines are based on the equipment that is expected to be used (number, type, capacity, and level of activity). Emission factors in grams per horsepower-hour for NOx, CO, PM_{10}, $PM_{2.5}$, SO_2, VOC, and CO_2 for non-road equipment engines were obtained using the most recent version of NONROAD model (EPA, 2008) produced by the EPA;

- fugitive particulate emissions of PM_{10} and $PM_{2.5}$ were calculated using the WRAP Fugitive Dust Handbook (Countess Environmental, 2006) recommended emission factors for heavy construction equipment, combined with estimates of the extent and duration of active surface disturbance during construction. Fugitive emissions from soil pile wind erosion were also calculated using the WRAP Fugitive Dust Handbook;

- GHG emissions were estimated from non-road construction equipment using factors from the 2016 Climate Registry Default Emission Factors (EPA, 2020d); and

- emission factors for HAP are based on EPA's AP-42 (EPA, 2020e).

Table 4 Construction Emissions Summary Estimated for the BPCS								
	Emissions (tons)							
	Criteria Pollutants						CO_{2e}	Total for All HAPs
Project/County/Source	NOx	CO	SO_2	VOC	PM_{10}	$PM_{2.5}$		
2022								
Commuter transit	0.002	0.033	3.7E-05	0.0004	6.9E-05	6.1E-05	5.5	9.1E-05
On-road vehicles	0.056	0.027	0.0002	0.003	0.002	0.002	30.1	0.0007
Off-road equipment	0.065	0.065	0.0004	0.008	0.003	0.003	23.2	0.0005
Open burning	---	---	---	---	---	---	---	---
Fugitive dust	---	---	---	---	13.84	1.40	---	---
2022 Total	0.122	0.125	0.0006	0.011	13.84	1.40	58.8	0.0012
2023								
Commuter transit	0.006	0.126	0.0001	0.001	0.0003	0.000	21.3	0.0003
On-road vehicles	0.159	0.041	0.0006	0.007	0.005	0.004	95.4	0.0018
Off-road equipment	0.868	6.300	0.0101	0.282	0.042	0.042	331.4	0.0103
Open burning	---	---	---	---	---	---	---	---
Fugitive dust	---	---	---	---	41.52	4.19	---	---
2023 Total	1.034	6.467	0.0108	0.289	41.56	4.23	448.1	0.0124
2024								
Commuter transit	0.001	0.020	2.3E-05	0.000	4.3E-05	3.8E-05	3.4	4.5E-05
On-road vehicles	0.024	0.006	9.9E-05	0.001	0.001	0.001	15.8	0.0002
Off-road equipment	0.010	0.005	2.2E-05	0.001	0.001	0.001	3.0	6.3E-05
Open burning	---	---	---	---	---	---	---	---
Fugitive dust	---	---	---	---	17.45	1.77	---	---
2024 Total	0.034	0.031	0.0001	0.002	17.45	1.77	22.3	0.0003
Project Total	1.19	6.623	0.0115	0.302	72.85	7.4	529.2	0.0139

Most construction-related emissions from the Project would be temporary and localized and would dissipate with time and distance from areas of active construction. Therefore, we conclude that construction of the Project would result in minor impacts on regional air quality.

Operational Emissions

Most of the operational emissions from the Project would result from natural gas combustion sources and fugitive emissions of natural gas. The proposed equipment at the BPCS would include turbine-driven compressors with natural gas, suction scrubbers upstream of the compressors, electric motor-driven fin-fan natural gas coolers downstream of the compressors, unit and station blowdowns with silencers, above and below ground piping and valves, and system utilities, e.g., fuel gas, service and domestic water supply, and instrument air supply.

The emission sources that would be installed or otherwise occur at the BPCS include the following:

- four Solar Titan 130 combustion turbines driving gas compressors;
- four catalytic fuel gas heaters (each <1 million British thermal units per hour);
- two diesel-fired standby generators (762 hp each);
- one pipeline condensate storage tank (19,500 gallons);
- two diesel storage tanks (8,400 and 4,200 gallons);

- one lube oil storage tank (4,200 gallons);
- one used oil storage tank (630 gallons);
- truck loading/unloading;
- fugitives (piping component leaks and interconnect metering), and
- venting (blowdowns).

The turbines would be fueled by pipeline quality natural gas, which would first be sent through the fuel gas heaters. The turbines would be equipped with SoLoNOx dry low Nox emission combustion technology to limit emissions of NOx, CO, and VOC. Operational emissions from the turbines would also include emissions from maintenance, startup, and shutdown operations.

Both individual turbine blowdowns and station blowdowns would occur at the BPCS. A blowdown is a type of planned or unplanned venting which releases pressurized natural gas, containing mostly methane, from pipelines or facilities by venting it to the atmosphere. Blowdowns occur during normal maintenance procedures as well as emergency shutdowns. A station blowdown refers to venting and depressurizing all piping and equipment at the facility, whereas a turbine blowdown is the evacuation of pressurized natural gas only for an individual turbine and associated piping. Turbine blowdowns for the proposed BPCS are based on 40 blowdowns a year (10 times per year per unit) and 83,724 standard cubic feet of gas emitted during each blowdown. The BPCS's proposed station blowdowns are based on three blowdowns per year and 1,174,234 standard cubic feet of gas emitted during per blowdown. The emission calculations include CO_{2e} emissions, which are discussed below. Fugitive emissions attributable to component leaks at the BPCS were estimated using gas compositions provided by PAPL. Air pollutant emissions from operation of the proposed BPCS were calculated using emissions factors from vendor data, the EPA's AP-42, and 40 CFR 98. The potential to emit from the BPCS are summarized in table 5.

Air Modeling of Compressor Station

To evaluate the air quality impacts of operational emissions from the BPCS, PAPL performed air quality modeling analyses. Modeling for the Project was performed using the EPA-approved air dispersion model AERMOD Version 19191. PAPL conducted a screening analysis to determine whether operating emissions of SO_2, nitrogen dioxide (NO_2), CO, PM_{10}, or $PM_{2.5}$ would cause a significant impact. If impacts are determined to be significant, the cumulative impact of the facility is required to be reviewed. The modeling parameters for the Project are presented in table 6.

Table 5 Estimated Operational Emissions Summary for the BPCS								
Equipment	NOx	CO	SO_2	VOC	$PM/PM_{10}/PM_{2.5}$	CO_{2e}	Formald-ehyde	Total for All HAPs
	(tons per year)							
Natural Gas Fired Turbine 1	41.08	41.68	1.04	13.12	4.91	87,044	0.53	0.73
Natural Gas Fired Turbine 2	41.08	41.68	1.04	13.12	4.91	87,044	0.53	0.73
Natural Gas Fired Turbine 3	41.08	41.68	1.04	13.12	4.91	87,044	0.53	0.73
Natural Gas Fired Turbine 4	41.08	41.68	1.04	13.12	4.91	87,044	0.53	0.73
Natural Gas-Fired Turbines – Startup/Shutdown	0.06	3.48	-	0.42	-	35	-	-
Turbine and Station Blowdowns	-	-	-	1.43	-	3,961	-	0.12
Fuel Gas Heater No. 1	0.36	0.28	0.002	0.16	0.02	333	0.005	0.005
Fuel Gas Heater No. 2	0.36	0.28	0.002	0.16	0.02	333	0.005	0.005
Fuel Gas Heater No. 3	0.36	0.28	0.002	0.16	0.02	333	0.005	0.005
Fuel Gas Heater No. 4	0.36	0.28	0.002	0.16	0.02	333	0.005	0.005
Standby Diesel Generator No. 1	0.39	0.22	0.0004	0.01	0.013	44	0	0.001
Standby Diesel Generator No. 2	0.39	0.22	0.0004	0.01	0.013	44	0	0.001
Fugitive Equipment Leaks	-	-	-	0.89	-	2,459	0	0.071
Condensate Storage Tank	-	-	-	0.91	-	-	0	0.03
Diesel Storage Tank No. 1	-	-	-	0.001	-	-	-	-
Diesel Storage Tank No. 2	-	-	-	0.001	-	-	-	-
Lube Oil Storage Tank	-	-	-	0.0002	-	-	-	-
Used Oil Storage Tank	-	-	-	0.00004	-	-	-	-
Condensate Truck Loading	-	-	-	0.10	-	-	0	0.01
Total Potential to Emit	166.61	171.76	4.18	56.90	19.73	356,053	2.13	3.20

Table 6 BPCS Modeling Parameters									
		Stack Data				Pollutant Emission Rate (lb/hr)			
Source ID	Description	Height (feet)	Temp (°F)	Exit Velocity (fps)	Exit Diameter (feet)	NOx	CO	SO_2	$PM_{2.5}/PM_{10}$
A1	Natural Gas Fired Turbine 1	50	908	56.79	9.8	11.25	11.42	0.29	1.34
A2	Natural Gas Fired Turbine 2	50	908	56.79	9.8	11.25	11.42	0.29	1.34
A3	Natural Gas Fired Turbine 3	50	908	56.79	9.8	11.25	11.42	0.29	1.34
A4	Natural Gas Fired Turbine 4	50	908	56.79	9.8	11.25	11.42	0.29	1.34
GEN1	Standby Diesel Generator No. 1	25	1022	476	0.4	9.37	5.26	0.01	0.25
GEN2	Standby Diesel Generator No. 2	25	1022	476	0.4	9.37	5.26	0.01	0.25
FGH1	Fuel Gas Heater No. 1	23	860	14	0.8	0.08	0.06	0.001	0.005
FGH2	Fuel Gas Heater No. 2	23	860	14	0.8	0.08	0.06	0.001	0.005
FGH3	Fuel Gas Heater No. 3	23	860	14	0.8	0.08	0.06	0.001	0.005
FGH4	Fuel Gas Heater No. 4	23	860	14	0.8	0.08	0.06	0.001	0.005

fps = feet per second

PAPL completed the screening analyses by modeling operating emissions from the BPCS to determine the maximum ground level concentrations for each pollutant. Further modeling was required for pollutants that exceeded the corresponding Significant Impact Level (SIL), summarized in the screening results shown in table 7.

Table 7 Significant Impact Analysis for Potential Emissions of the BPCS

Pollutant	Averaging Period	Maximum Modeled Concentration ($\mu g/m^3$)	SIL ($\mu g/m^3$)	Below SIL? (Yes or No)
SO_2	1-hour	2.07	7.8	Yes
	3-hour	2.05	25	Yes
NO_2	1-hour	70.5	7.5	No
	Annual	2.8	1	No
CO	1-hour	178	2,000	Yes
	8-hour	105	500	Yes
$PM_{2.5}$	24-hour	5.87	1.2	No
	Annual	0.28	0.2	No
PM_{10}	24-hour	6.39	5	No

$\mu g/m^3$ = microgram per cubic meter

Screening results for the BPCS indicate that SO_2 and CO are below their respective PSD modeling SILs; therefore, further modeling was not required. However, the 1-hour NO_2, annual NO_2, $PM_{2.5}$ (24-hour and annual), and PM_{10} (24-hour) exceed the corresponding SIL. For pollutants that are above the SIL, a cumulative modeling analysis was required. The cumulative analysis was completed for each pollutant and averaging period based on EPA rulemaking by combining background concentrations with the modeled results for the station and including nearby sources. These results are then compared to the NAAQS.

Background pollutant concentrations were estimated using existing ambient monitoring data for the region. Data were obtained for representative air quality monitoring stations to characterize the background air quality for the geographic area in proximity to the proposed BPCS and are presented in table 7 above. Nearby sources within 50 kilometers of the proposed BPCS were obtained from the LDEQ permit inventory and included in the NAAQS analysis.

Table 8 presents the results of the refined modeling analysis. These results indicate that the Project would not contribute to a violation of the corresponding NAAQS.

As also shown in table 8, results exceeded the NAAQS for 1-hour NO_2 and 24-hour $PM_{2.5}$. PAPL used the MAXDCONT setting in AERMOD to determine the contributions of the BPCS at each receptor with an exceedance. For NO_2 (1-hour), the maximum contribution of the BPCS to the maximum modeled concentration is 0.0026 $\mu g/m^3$. The maximum contribution to any exceedance modeled is 6.6 $\mu g/m^3$ which is below the SIL of 7.5 $\mu g/m^3$. For $PM_{2.5}$ (24-hour), the maximum contribution of the BPCS to the maximum modeled concentration is 0.012 $\mu g/m^3$. The maximum contribution to any exceedance modeled is 0.96 $\mu g/m^3$, which is below the SIL of 1.2 $\mu g/m^3$. Therefore, the BPCS would not significantly contribute to a violation of the 1-hour NO_2 or the 24-hour $PM_{2.5}$ NAAQS.

Table 8 Summary of NAAQS Full Impact Analysis of the BPCS					
Pollutant	**Averaging Period**	**Maximum Modeled Result [a, b] (ug/m³)**	**Background Value (ug/m³)**	**Modeled Result + Background Concentration (ug/m³)**	**NAAQS [b] (µg/m³)**
NO_2	1-hour	291.9	73.1	365	188
	Annual	24.8	12.4	37.2	100
$PM_{2.5}$	24-hour	29.7	21.2	50.9	35
	Annual	2.9	7.8	10.7	12
PM_{10}	24-hour	40.3	72.7	113	150

[a] Maximum Modeled Result includes stationary and mobile sources from the Project as well as nearby sources.

[b] The form for each pollutant/averaging period (i.e., H1H, H4H, and H8H) is based on EPA rulemaking. See: https://www.epa.gov/criteria-air-pollutants/naaqs-table

µg/m³ = microgram per cubic meter

Air quality impacts from operation of the BPCS would be minimized using equipment, emissions controls, and operating practices that meet or exceed best management practices. Compliance with federal and state air regulations and state permit requirements would ensure that air quality impacts would be minimized during installation and operation of the compressor units at the BPCS.

Commentors expressed concern over hydrogen sulfide (H_2S) emissions from the BPCS. A summary of the inlet gas analysis provided by PAPL indicates that the H_2S and total sulfur concentration of the pipeline gas are negligible. Therefore, we expect operation of the BPCS to result in negligible fugitive H_2S emissions. The turbine emissions in table 5 are calculated based on the conservative estimate of 0.5 grain sulfur per 100 standard cubic feet of gas.

The air dispersion modeling analysis for the operation of the BPCS demonstrates that the Project would follow the NAAQS. Based on our analysis above, we conclude that operation of the Project would not have a significant impact on local or regional air quality.

B.8.2. Noise and Vibration

We received several comments regarding the noise and vibration impacts of the Project, which are addressed in the following sections. The Project would result in temporary increases of noise through the short-term construction activities and permanent (ongoing) noise impacts associated with operation of the BPCS.

Regulations

Two measurements are used to relate the time-varying quality of environmental noise to its known effects on people including the equivalent sound level (L_{eq}) and the day-night sound level (L_{dn}). The L_{eq} is a sound level over a specific time period corresponding to the same sound energy as measured for an instantaneous sound level assuming it is a constant noise source. The L_{dn} considers the time of day and duration the noise is encountered since sound levels are perceived differently, depending on the length of exposure and time of day. The ambient sound level of a region is defined by the total noise generated within the specific environment and is comprised of natural and man-made sounds. At any location, both the magnitude and frequency

of environmental noise may vary considerably over the course of a day, as well as seasonally. This variation is caused in part by changing weather conditions and the effect of seasonal vegetation cover.

In 1974, the EPA published its Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. This document provides information for state and local governments to use in developing their own ambient noise standards. The EPA has indicated that a L_{dn} of 55 dBA protects the public from indoor and outdoor activity interference. The FERC has adopted this criterion and used it to evaluate the potential noise impacts from the Project at pre-existing NSAs such as schools, hospitals, and residences.

Specifically, in calculation of the L_{dn}, late night to early morning (10:00 p.m. to 7:00 a.m.) noise exposures are increased by 10 dBA to account for people's greater sensitivity to sound during nighttime hours. Due to the 10 dBA nighttime penalty added prior to calculation of the L_{dn}, for a facility to meet the 55 dBA L_{dn} limit established by the EPA to protect the public from indoor and outdoor activity interference, a facility must be designed such that the constant 24-hour noise level does not exceed a L_{eq} of 48.6 dBA at any NSA. The A-weighted scale is used because human hearing is less sensitive to low and high frequencies than mid-range frequencies. The human ear's threshold of perception for a noticeable change in loudness is about 3 dBA, whereas a 5 dBA change is clearly noticeable, and a 10 dBA change is perceived as either twice or half as loud.

There are no Louisiana state noise regulations that would apply and no local noise ordinances that are relevant to the Project.

Construction Noise Impacts and Mitigation

Noise would be generated during construction of the Project's facilities. Noise levels would be highest in the immediate vicinity of construction activities and would diminish with distance from the work areas. These impacts would be localized and temporary. The changing number and type of construction equipment at the construction site would result in varying levels of noise throughout the construction period. Construction activities associated with the Project would be performed with standard heavy equipment such as cranes, bulldozers, dump trucks, cement mixers, and loaders. Noise would also be generated by trucks and other light vehicles traveling in and near areas under construction. The Project's construction would generally not affect nighttime noise levels as most activity would be limited to 7:00 a.m. to 10:00 p.m. Monday through Saturday, except for specific, limited construction activities such as tie-ins and hydrostatic testing.

Surface topography, vegetation cover, wind, and weather conditions also affect the distance that construction-related noise extends from a work area. Tall, dense vegetation and rolling topography typically attenuates noise when compared to less vegetated, open land. For the Project, the most prevalent sound source during construction would typically be the internal combustion engines used to power the construction equipment. Construction of the aboveground facilities would consist of earth work (e.g., site grading, clearing, grubbing, trenching operations) and construction of the site foundations and equipment. It is assumed that the highest level of

construction noise would occur during earth work when the largest amount of construction equipment is operating. Construction of the BPCS is anticipated to last about 21 months. Construction noise generated by the Project would be short-term and temporary. To reduce construction noise, PAPL has committed to maintain mufflers on all construction equipment. Based on PAPL's proposed mitigation measures, the distance of Project construction workspaces and access roads from the nearest NSAs, and Project construction activities that would take place primarily during daylight hours, we conclude that noise produced by Project construction activities would not result in significant impacts.

Operational Noise Impacts and Mitigation

Operational noise from the BPCS would be associated with the turbines/compressors, associated auxiliary equipment, and meter stations. PAPL conducted an ambient sound survey and acoustical analysis at the nearest NSAs to these facilities. The NSAs analyzed have been chosen as a representation of the residences near the BPCS, as shown on figure 2. The acoustical analysis, summarized in table 9, also includes the estimated full-load noise contribution of the Ragley Compressor Station, located adjacent to the proposed BPCS.

Table 9 Estimated Noise Impacts from Operation of the BPCS

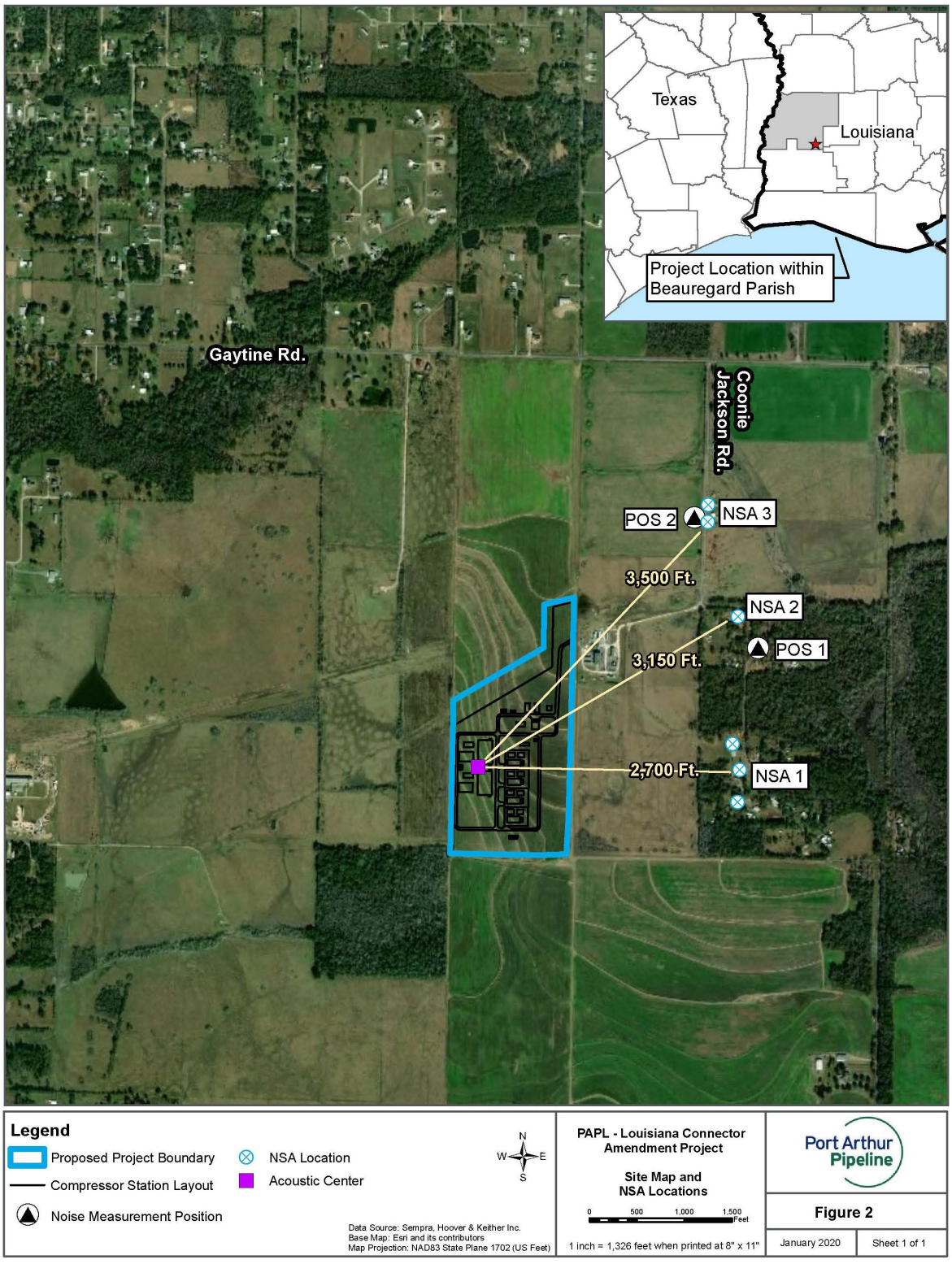
Nearest NSAs to BPCS	Distance and Direction from BPCS (feet)	Acoustic Impact (dBA)				
		Measured Ambient (L_{dn}) [a]	Estimated BPCS Impact (L_{dn})	Estimated Ragley Compressor Station Impacts (L_{dn}) [b]	Total Cumulative Ambient + Ragley CS + BPCS (L_{dn})	Increase Above Existing Sound Level
NSA #1 (Residence)	2,700 ft E	51.3	43.2	47.4	53.3	1.9
NSA #2 (Residence)	3,150 ft ENE	51.3	40.4	49.2	53.6	2.3
NSA #3 (Residence)	3,500 ft NE	53.0	39.1	41.8	53.5	0.5

[a] Measured ambient sound data and estimated noise impacts based on Hoover & Keith Inc. report prepared January 20, 2020 and included with PAPL's application. Does not include the existing Ragley Compressor Station; see footnote b.

[b] The estimated sound level at each NSA from the nearby Ragley Compressor Station while operating at 85 percent load is based on estimated noise impacts in a report prepared by Hoover & Keith on March 19, 2010. These results were interpolated to estimate the sound level of the Ragley Compressor Station at 100 percent load.

As shown in table 9, the potential increase in noise levels above ambient conditions would be less than the detectable threshold for the human ear, which is 3 dB; 5 dB is a clearly noticeable increase in noise, and an increase of 10 dB is perceived to be a doubling of noise. The noise mitigation measures PAPL commits to employ for the BPCS would include the use of acoustically insulated compressor buildings; air inlet and exhaust silencers; a unit blowdown silencer; and insulated, self-closing, and well-sealed access doors. PAPL may also opt to install acoustical pipe insulation on aboveground outdoor piping.

Figure 2 **Noise-Sensitive Areas Relative to the Proposed Beauregard Parish Compressor Station**



However, to ensure that noise levels due to operation of PAPL's BPCS does not significantly impact nearby NSAs, **we recommend that:**

- **PAPL should make all reasonable efforts to ensure its predicted noise levels from the BPCS are not exceeded at nearby NSAs and file a noise survey with the Secretary no later than 60 days after placing the BPCS into service. If full load condition noise surveys are not possible, PAPL should provide an interim survey at the maximum possible horsepower load and provide the full load survey within 6 months. If the noise attributable to the operation of the BPCS at any load exceeds a L_{dn} of 55 dBA at any nearby NSAs, PAPL should file a report on what changes are needed and install additional noise controls to meet that level within 1 year of the facility's in-service date. PAPL should 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.**

Commenters expressed concern about the possible health and nuisance impacts of vibration emanating from the BPCS while it is in operation. Vibration could be caused by direct vibration or by low-frequency noise emitted from a compressor station. PAPL commits to keeping combustion turbines and cooling fans highly balanced to mitigate vibration. Perceptible vibrations would be further mitigated by utilizing a two-stage silencer system for each turbine exhaust system and installing "low-noise" gas coolers. With mitigation, we do not expect the operation of the BPCS to result in an increase in noise-induced perceptible vibrations, or airborne vibrations, at nearby NSAs.

Based on PAPL's proposed mitigation measures and our recommendation above, we conclude that the noise and vibration attributable to operation of the BPCS would not cause a significant impact at any nearby NSA.

B.9 Reliability and Safety

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

The BPCS 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 facility accidents and failures. Under a Memorandum of Understanding on Natural Gas Transportation Facilities (Memorandum) dated January 15, 1993, between the DOT and the FERC, the DOT has the exclusive authority to promulgate federal safety standards used in the transportation of natural gas. Section 157.14(a)(9)(vi) of the FERC's regulations require that an applicant certify that the pipeline and

aboveground facilities will be designed, installed, inspected, tested, constructed, operated, replaced, and maintained in accordance with federal safety standards and plans for maintenance and inspection.

The DOT's regulations in 49 CFR Part 192.163 – 192.173 specifically addresses design criteria for compressor stations, 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 an emergency. Part 192.163 requires the location of each main compressor building at a compressor station to be on property under control of the operator. The station must also be far enough away from adjacent property, not under control of the operator, to minimize the possibility of fire spreading to the compressor station building from structures on adjacent properties. Compressor station sites must be made of specific building materials and be in an enclosed fenced area. The compressor station safety systems would be engineered with automated control systems to ensure the station and pipeline pressures are maintained within safe limits, and would include several additional over-pressure protection systems that provide an additional layer of safety to back-up the primary controls. The station would also have an automated emergency system that would shut down the station to prevent an incident should an abnormal operating condition occur, and, if appropriate, would evacuate the gas from the station piping at a safe location.

Part 192 also requires a pipeline operator to establish a written emergency plan that includes procedures to minimize the hazards in an emergency. The USDOT-PHMSA requires that each operator establish and maintain liaison with appropriate fire, police, and public officials to learn the resources and responsibilities of each organization that may respond to a natural gas pipeline or facility emergency, and to coordinate mutual assistance. As part of these requirements, the operator must establish a continuing education program to enable the public, government officials, and others to recognize an emergency at the facility and report it to appropriate public officials. PAPL would provide the appropriate training to local emergency service personnel before the facilities are placed in service.

PAPL's construction and operation of the BPCS would represent a minimum increase in risk to the nearby public and we are confident that with implementation of the required design criteria for the design of the BPCS, that the station would be constructed and operated safely.

B.10 Cumulative Impacts

In accordance with NEPA and FERC policy, we evaluated the potential for cumulative impacts of the Project when combined with other projects or actions in the area. Cumulative impacts represent the incremental effects of a proposed action when added to impacts associated with past, present, or reasonably foreseeable future projects, regardless of what agency or person undertakes such other actions. Although the individual impact of each separate project may be minor, the additive or synergistic effects of multiple projects could be significant. Consistent with the Council on Environmental Quality's guidelines, we have aggregated past actions that helped shape today's environment into our discussion of the affected environment described in section B. Therefore, present and reasonably foreseeable future actions are discussed in this section.

This cumulative impacts analysis uses an approach consistent with the methodology set forth in relevant guidance (Council on Environmental Quality, 1997, 2005; EPA, 1999). Under these guidelines, the inclusion of actions within the analysis is based on identifying commonalities between the impacts that would result from the Project and the impacts likely to be associated with other potential projects in a geographic scope area defined by resource.

Determinations of the geographic scopes used in this cumulative impact analysis for the Project vary depending on the resources being discussed. The factors considered in these determinations include the following:

- Projects with impacts on resources such as geology, soils, and sediments; water resources; vegetation and wildlife; cultural resources; socioeconomics; land use; infrastructure and public services; and air and noise were considered as described in table 10. We also considered the 12-digit hydrologic unit (HUC) watershed that would be crossed by the Project.

- Because the Project compressor station would result in long-term impacts on air quality in the vicinity, other projects with the potential to result in long-term impacts on air quality (e.g., natural gas compressor stations) within a 50-kilometer (31-mile) radius of the Project were considered.

- Because long-term noise impacts from the Project compressor station would be localized, other projects with the potential to result in long-term noise impacts within 1 mile of the Project were considered.

- Only resources impacted by the Project are considered. Therefore, no cumulative impacts would occur on waterbodies, wetlands, cultural resources, or recreational land.

Table 10 Geographic Scope for Cumulative Impact Analysis

Environmental Resource	Geographic Scope
Soils and Geology	Limits of Project disturbance/construction workspaces
Groundwater, Vegetation, Wildlife	Watershed boundary (HUC-12 watershed)
Land Use and Recreation	1-mile radius
Visual	0.25 mile and existing visual access points (e.g., road crossings)
Socioeconomics	Beauregard Parish
Noise—Operations	1-mile radius
Noise—Construction	0.25 mile from pipeline or aboveground facilities
Air Quality—Construction	0.25 mile from pipeline or aboveground facilities
Air Quality—Operation	50 kilometers (31 miles) of the Project

Other Projects Considered

The contributions of past actions to the cumulative impacts of the proposed action are captured in the current environmental conditions by proxy. In general, the affected environment

(environmental baseline), which is described under the specific resources throughout Section B of this EA, reflects the aggregate impact of all prior human actions and natural events that have affected the environment and might contribute to cumulative effects.

Potential cumulative impacts associated with recently completed, current, proposed, or reasonably foreseeable future actions within the Project vicinity are described in table 11. The projects identified for analysis are within the resource-specific geographic scopes. These projects include seven FERC-jurisdictional projects, four industrial/commercial projects, one commercial mitigation bank, and one residential project. We note that no projects fall within the geographic scope for soils and geology, so these resources are also not discussed further.

Groundwater

Of the projects listed in table 11, the proposed Kingrey Estates and Marsh Bayou Mitigation Bank project were identified within the geographic scope for groundwater associated with the amendment Project.

The Project involves surficial and shallow earthwork; therefore, we assume that Project effects on groundwater would be confined to the local water tables within the HUC-12 watershed crossed by the Project and shared with other projects in the area. With the exception of the establishment of new impervious surfaces, which would represent a permanent impact, Project effects on groundwater would be limited to the duration of construction or shortly thereafter and, as such, this is the same timeframe we considered for cumulative impacts on groundwater.

The Marsh Bayou Mitigation Bank project is anticipated to have beneficial impacts on groundwater based on the creation of a wetlands and planting wetland vegetation on a 1,300-acre site. New impervious surfaces created as part of construction of the proposed Project and the Kingrey Estates project could also potentially affect groundwater resources by reducing infiltration and groundwater recharge. The impervious features (houses and driveways) would not occupy the entirety of each plot, nor do we anticipate activities that would impact groundwater to an extent that would result in more than localized and minor impacts from building of residential structures. Because the impacts on groundwater are anticipated to be localized, and the housing development, which consists of 18 plots that are 0.9 acre in size, is approximately 1 mile away, we do not anticipate cumulative groundwater impacts.

While the construction timeframe of the residential development is unknown, even if we were to assume construction would occur during the same timeframe as the Project, the cumulative effects on groundwater resulting from converting up to 76 acres of land to impervious surfaces in relation to the total area of undeveloped land available in the area of geographic scope (HUC-12 watershed), combined with the distance between projects and their localized effects, would not result in significant cumulative impacts on groundwater function.

Table 11 Proposed Projects with Potential Cumulative Impacts in the Geographic Scope [a]					
Project and Proponent	**Parish**	**Description**	**Distance to Project (miles)**	**Status**	**Resource(s) Potentially Cumulatively Affected**
FERC Jurisdictional Projects					
Creole Trail Expansion Project, Gillis Compressor Station—Cheniere Creole Trail Pipeline LP	Beauregard	Gillis Compressor Station began operation in 2015; modification application in 2018 to add another emergency generator; modification application submitted in October 2019 to upgrade one turbine, add one metering station, add condensate storage tanks, and other reconciliations	4.0	Operational; modifications planned	Socioeconomics, Air Quality
Gillis Compressor Station—Texas Eastern Transmission Company	Beauregard	Modification application submitted in 2019 to install CEMS, which allows for additional hours of operation for the turbines. Permit issued October 8, 2019.	4.2	Operational; modifications planned	Socioeconomics, Air Quality
Driftwood Project, Gillis Compressor Station—Driftwood Pipeline LLC	Jefferson Davis	Driftwood LNG LLC and DWPL propose to construct and operate liquefied natural gas (LNG) export facilities on the west bank of the Calcasieu River near Carlyss, Louisiana; and a new 96-mile-long pipeline system in Evangeline, Acadia, Jefferson Davis, and Calcasieu Parishes, Louisiana. As part of this project, the Gillis Compressor Station is within the geographic scope for the amendment Project.	10.3	Certificated in April 2019. As of April 2020, construction has not begun.	Air Quality
Driftwood LNG Facility—Driftwood LNG LLC	Calcasieu	See above. As part of this project, the liquefaction terminal is also within the geographic scope for the amendment Project.	24.6	Certificated in April 2019. As of April 2020, Driftwood has been authorized to commence the installation of test piles at the LNG terminal site, and to commence site preparation activities (vegetation clearing and grading, demolition and removal of existing site buildings, preparation of the pioneer docks and marine offloading facility, dredging of the marine berths, etc.).	Air Quality
Westlake Expansion Project, Westlake Compressor Station—Gulf South Pipeline Company, LP	Calcasieu	Gulf South constructed a new 10,000 hp compressor station (Westlake Compressor Station), about 0.3 mile of 16-inch-diameter natural gas pipeline, a new delivery meter and regulator station, and a new receipt meter and regulator station in Calcasieu Parish, Louisiana. As part of this project, the Westlake Compressor Station is within the geographic scope associated with the amendment Project.	13.2	Placed into service in 2019.	Air Quality

Table 11 Proposed Projects with Potential Cumulative Impacts in the Geographic Scope [a]					
Project and Proponent	**Parish**	**Description**	**Distance to Project (miles)**	**Status**	**Resource(s) Potentially Cumulatively Affected**
Lake Charles Liquefaction Project, Compressor Station 203-A—Trunkline Gas Co LLC	Calcasieu	Trunkline Gas Company, LLC, Lake Charles LNG Company, LLC, and Lake Charles LNG Export Company, LLC propose to construct and operate a new liquefaction facility and modify the existing Trunkline LNG Terminal in Calcasieu Parish, Louisiana and construct and operate new pipelines and associated facilities in Jefferson Davis, Jefferson, and Calcasieu parishes; a new compressor station in Calcasieu Parish, five new meter stations, and modify existing pipeline facilities in Beauregard and Calcasieu Parishes. As part of this project, the Compressor Station 203-A is within the geographic scope for the amendment Project.	14.0	In August 2019, an extension of time request to construct the Project and place them into service until December 16, 2025 was filed. FERC granted the extension on December 5, 2019. On February 23, 2016, pre-construction clearing commenced. On February 26, 2016, drilling of test piles was authorized.	Air Quality
Magnolia LNG Terminal	Calcasieu	Magnolia LNG, LLC and Kinder Morgan Louisiana Pipeline LLC (KMLP) proposed to construct and operate various liquefaction facilities, LNG storage tanks, LNG distribution facilities, LNG vessel berthing area, a meter station, and appurtenant facilities near Lake Charles, Louisiana and reconfigure KMLP's existing pipeline system to accommodate Magnolia LNG, LLC's request for natural gas service at the LNG terminal site.	23.7	As of April 2020, construction of the liquefaction terminal has not yet begun, and are currently planned to be operational in 2023 or 2024. Construction of the KMLP facilities was completed.	Air Quality
Commercial Projects					
Marsh Bayou Mitigation Bank	Beauregard	The Mitigation Group L.L.C. proposes to remove agricultural levees, fill man-made drainage conveyances, and plant desirable wetland vegetation for the establishment of the Marsh Bayou Mitigation Bank. The 1,300-acre site would be established as a bottomland hardwood restoration project. The site is about 5.4 miles south of Ragley.	2.0	The project has applied for a joint permit from USACE and LDEQ. However, a construction timeframe has not been determined.	Groundwater, Vegetation, Wildlife, Socioeconomics, Air Quality
Sasol Lake Charles Chemical Project	Calcasieu	Sasol constructed a petrochemical complex near its existing site in Calcasieu Parish, Louisiana. The complex includes six chemical manufacturing plants and also produces derivatives of ethylene, including ethylene oxide, monoethylene glycol (MEG), and ethoxylates. The ethane cracker would produce 1.5 million tons of ethylene annually.	13.4	Construction was completed in 2019.	Air Quality
LACC LLC US—Ethylene & Derivatives Plant	Calcasieu	Lotte Chemical and Westlake Chemical opened a $3.1 billion project on a 250-acre site near Lake Charles, Louisiana. The Ethylene and Derivatives plant cracks ethane to produce ethylene and other derivatives. Up to 700,000 metric tons of MEG is also produced at the facility, which is now the largest MEG plant in the world. As part of this project, the Ethylene and Derivatives plant is about 16.3 miles from the Project.	16.3	Construction was completed in May 2019.	Air Quality
Lotte Chemical Louisiana LLC—New MEG Facility	Calcasieu	See above. As part of the above project, the MEG plant is about 16.5 miles from the Project.	16.5	Construction was completed in May 2019.	Air Quality

Table 11 Proposed Projects with Potential Cumulative Impacts in the Geographic Scope [a]					
Project and Proponent	**Parish**	**Description**	**Distance to Project (miles)**	**Status**	**Resource(s) Potentially Cumulatively Affected**
Ingevity Railspur—Ingevity	Beauregard	Ingevity proposes to install and maintain a rail spur near 400 Crosby Road in DeRidder, Louisiana, in Beauregard Parish. The new project would connect the existing facility's north rail spur to the existing Kansas City Southern rail line by installing a 95-foot-wide by 8,360-feet-long rail spur. The project would require clearing, excavation and fill placement. As part of this project, the rail spur is within the geographic scope for the amendment Project.	27.0	The project has applied for a joint permit from USACE and LDEQ. However, a construction timeframe has not been determined.	Socioeconomics, Air Quality
Kingrey Estates	Beauregard	Landowner plans to subdivide the property into 18 lots.	1.0	Proposed; construction schedule unknown.	Groundwater, Vegetation, Wildlife, Land Use, Recreation, Socioeconomics, Air Quality

Vegetation and Wildlife

Of the projects listed in table 11, the proposed Kingrey Estates and Marsh Bayou Mitigation Bank project were identified within the geographic scope for vegetation and wildlife associated with the amendment Project.

The sole vegetation type that would be affected by construction of the Project is agricultural land associated with the cultivation of rice. Construction of the Project facilities would directly affect agricultural rice communities by converting 59.9 acres of agricultural land to commercial/industrial land. The Marsh Bayou Mitigation Bank project would create wetlands and involve planting wetland vegetation on a 1,300-acre site. The Kingrey Estates project would affect a total of about 16 acres of forested land.

When projects are constructed at or near the same time, the combination of construction activities could have a cumulative impact on vegetation and wildlife in the immediate area. Clearing, grading, and other construction activities associated with the projects would result in the removal of vegetation, alteration of wildlife habitat, displacement of wildlife. Altering and converting agricultural and forest areas at these sites may displace some species of wildlife that prefer foraging in this type of habitat; however, other similar habitat occurs in the immediate vicinity of the projects would provide habitat for any displaced wildlife. Conversely, the Marsh Bayou Mitigation Bank project would result in the planting wetland vegetation and the creation of wetland habitat for wildlife species.

Vegetation and wildlife habitat near the Project and Kingrey Estates have been affected by past and ongoing agricultural processes and construction and maintenance of existing roads, railroads, natural gas and oil pipelines, utility lines, and electrical transmission line rights-of-way. The proposed Project would be required to implement mitigation measures identified in the FERC Plan, which are designed to minimize the potential for long-term erosion and resource loss, increase the stability of site conditions, and revegetate disturbed soils, thereby minimizing the degree and duration of the impacts of the Project. While of a different nature and under different regulatory oversight, it is anticipated that the Kingrey Estates project would be subject to similar measures. In addition, although a conversion from forest land, it is also anticipated that much of the area disturbed by the Kingrey Estates project would be revegetated by grasses, brushes, shrubs, new trees, and garden vegetation if not otherwise occupied by a residence and driveway.

In addition to the FERC Plan, we anticipate that state and/or local permit conditions and mitigation measures would be implemented to minimize the potential for erosion, such as revegetating disturbed areas to increase site stabilization. These mitigation measures would minimize the degree and duration of cumulative impacts on vegetation and wildlife from these projects. Both the Project and Kingrey Estates would permanently remove vegetation. However, this would be a minor impact compared to the agricultural and forest areas available in the geographic scope area. The Marsh Bayou Mitigation Bank project would result in a beneficial, long-term impact through the creation of wetland vegetation and habitat.

With the implementation of the mitigation measures identified in the FERC Plan, the existing habitat changes that have already occurred as a result of previous projects, and the

acquisition of federal, state, and local permits, construction and operation of the proposed Project, when considered with the other projects in the geographic scope area, would not contribute significantly to cumulative impacts on vegetation and wildlife.

Land Use

Of the projects listed in table 11, the proposed Kingrey Estates was identified within the geographic scope for land use associated with the amendment Project.

Similar to vegetation, cumulative impacts on land uses from the Project and Kingrey Estate project could occur from construction activities such as clearing and grading, tree removal, and construction of buildings, structures and/or impervious surfaces (e.g., concrete building pads, driveways). The duration of impacts on land use would depend on the type of land cover affected and the rate at which the land can be restored to its preconstruction use and condition after construction. Impacts on agricultural land at the proposed BPCS would be permanent due to the conversion to commercial/industrial. Although the general character of the vicinity is rural, an existing compressor station is located immediately adjacent to the proposed BPCS. Similarly, impacts on forest land resulting from the Kingrey Estate project would be permanent where residences and driveways would occur. However, it is anticipated that a degree of the forest land cleared would be revegetated with other land uses supporting residential areas (e.g., lawn grass, landscaping plants). These impacts would be short term to permanent and overall be minor (about 62 acres) given the amount of undeveloped land available in the geographic scope area. In general, the cumulative impacts of the Project, when combined with the Kingrey Estate project, would be similar to that described for vegetation.

With the implementation of the mitigation measures identified in the FERC's Plan, the existing land use changes that have already occurred as a result of previous projects, and the existing, surrounding developed areas, construction and operation of the proposed Project, when considered with the other project in the geographic scope area, would not contribute significantly to cumulative impacts on land use.

Socioeconomics

The proposed Project and the other projects within the geographic scope include those listed in table 11 in Beauregard Parish. For each activity that has yet to be constructed, they would generate temporary construction jobs in the parish. The local supply of construction workers needed for these projects may be derived from workers employed in the area and, while the total number for each project is not available, they would overall provide a direct economic benefit to those individuals and the communities in which they reside. Positive cumulative economic benefits would be generated from these projects, including an increase in annual tax revenue from project operations and an increase in temporary and permanent employment with the cumulative benefit of potentially lowering local unemployment rates. Non-local laborers could increase the total population in the Project area; however, the potentially vacant rental units available in the Project area would provide adequate housing opportunities for non-local workers. In addition, Beauregard Parish has the necessary infrastructure to provide public services and utilities to support the projects. For these reasons, we do not anticipate significant cumulative impacts on local populations, employment, housing, or public services.

The Project is not expected to result in disproportionate impacts on the health, social conditions, or economic conditions of minority or low-income communities. Construction of the Project would result in temporary noise, dust, and traffic impacts, and operation of the Project would result in long-term increases in noise and air emissions. These impacts are not considered to be significant. The Project would be designed and operated in compliance with the NAAQS and FERC's noise standards, and as further discussed in section B.9 above, would be designed, constructed, operated, and maintained in accordance with or exceeding the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration minimum federal safety standards.

Air Quality

Construction

Construction equipment and vehicles would emit air pollutants in the immediate vicinity of the Project, and soil excavation and other construction activities would generate fugitive dust emissions. Construction equipment emissions would be released at or near ground level and result in short-term fugitive dust and tailpipe emissions that would be highly localized, temporary, and intermittent.

Other projects within 0.25 mile could contribute to cumulative impacts on air quality if they occurred at the same time as construction of the Project. However, no other projects have been identified that are anticipated to occur at the same time within the geographic scope for air quality during construction.

Operation

The Project would result in air emissions during operation, as described in section B.8.1. As shown in table 11, 13 other projects have been identified within the 50-kilometer geographic scope for air quality. The Marsh Bayou Mitigation Bank, the Ingevity Railspur, and Kingrey Estates would not contribute air emissions during operation. The 10 other projects would contribute air pollutants during operation. The combined emissions of these projects would contribute to cumulative impacts on the air quality within the airshed. All the projects would be subject to federal and state regulations designed to protect ambient air quality (thereby protecting public health and welfare) and prevent significant cumulative impacts. Prior to issuance of air quality permits, the authorities must make a determination that the cumulative effect of these projects will not cause or contribute to an exceedance of a NAAQS, that the appropriate level of control of new air emissions will be installed, and that the compressor stations will be in compliance with all applicable federal and state air quality regulations and permit conditions.

It is noted that the existing Ragley Compressor Station is adjacent to the proposed BPCS. As discussed in section B.8.1, air emissions from this facility are considered as part of the ambient (existing) environmental conditions. Modeling of potential air emissions from the BPCS indicates that the Project would comply with the NAAQS for all regulated pollutants. Further, modeling indicates that the cumulative emissions from the BPCS, when combined with ambient background concentrations contributed by other air emission sources within the 50-mile

geographic scope including the adjacent Ragley Compressor Station, would not result in an exceedance of the NAAQS for any regulated pollutant.

PAPL performed single-source air dispersion modeling to evaluate the ambient air quality incremental impacts of operating the new BPCS within the airshed, including other existing (e.g., Ragley Compressor Station) and reasonably foreseeable projects. The modeling identified emission sources within 50 kilometers of the facility using the general EPA modeling protocol, LDEQ databases, and potential FERC-jurisdictional projects listed on the FERC website. The modeling analyzed PM_{10}, $PM_{2.5}$, and annual NO_2 emissions and compared them to the NAAQS. Using existing air monitoring data and the identified emissions sources, the modeling found that when combined with other emissions in the airshed, the emissions from the proposed BPCS would comply with the NAAQS for PM_{10}, $PM_{2.5}$, and annual NO_2 emissions. Therefore, the emissions from the Project facilities would not be significant and would not contribute substantial cumulative impacts on air quality.

Noise

Construction activities would have the potential to produce noise levels that may disturb nearby residents, as described in section B.8.2. The noise associated with construction of the Project is not expected to exceed FERC's sound level requirements. No applicable state or local noise ordinances were identified. Other projects within 0.25 mile could contribute to cumulative impacts on noise if they occurred at the same time as construction of the Project. However, no other projects have been identified that are anticipated to occur at the same time within the geographic scope for construction noise.

Operation of the Project facilities would result in long-term increases in noise over existing ambient background noise levels in the vicinity of the BPCS as well as nearby NSAs. It is noted that the existing Ragley Compressor Station is adjacent to the proposed BPCS site. As discussed in section B.8.2, noise resulting from the operation of this facility is considered as part of the total calculated noise levels for the project. The noise modeling analysis indicates that the calculated noise levels at nearby NSAs would continue to be below the FERC-required L_{dn} limit of 55 dBA. The highest calculated L_{dn} is 53.6 dBA at NSA 2, about 3,150 feet east northeast of the center of the BPCS site. The expected increases in noise levels at the NSAs around the site are anticipated to range from 0.5 dBA to 2.3 dBA. Low frequency noise from the Project is not expected to result in noise-induced vibration at any NSA. No other reasonably foreseeable noise-producing projects within 1 mile of the Project were identified.

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 and aboveground facility site alternatives. The evaluation criteria used for developing and reviewing alternatives were:

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

Our evaluation of alternatives is based on Project-specific information provided by the applicant; input from stakeholders; publicly available information; our consultations with federal and state resource agencies; and our expertise and experience regarding the siting, construction, and operation of natural gas transmission facilities and their potential impact on the environment.

One of the goals of an alternatives analysis is to identify alternatives that avoid significant impacts. In section B, we evaluated each environmental resource potentially affected by the Project and concluded that constructing and operating the Project would not significantly impact these resources. Consistent with our conclusions, the value gained by further reducing the (not significant) impacts of the Project when considered against the cost of relocating the route/facility to a new site, potentially affecting a new set of landowners, was also factored into our evaluation.

No-action Alternative

If the Commission were to deny PAPL's application, the Louisiana Connector Project would be constructed as certificated. The compressor station site would not be moved from MP 96.1 to MP 72.3, and three new interconnects from the CIP, Transco, and LAS systems would not be constructed. The currently certificated compressor station would be constructed at MP 96.1 and the site at MP 72.3 would be used as the previously certificated Beauregard Parish Contractor Yard (LY-BEA-01).

The no-action alternative would be feasible from a construction standpoint, as PAPL in effect proposed it in the Louisiana Connector Project (i.e., the approved site at MP 96.1). The no-action alternative would also be environmentally acceptable, as the Commission already determined that in its approval of the original site as a part of the Louisiana Connector Project. However, the no-action alternative would not meet the purpose of the proposed Louisiana Connector Amendment Project, which is to increase supply of natural gas to the Liquefaction Project and add diversification of gas sources. Further, in this EA we have concluded that the proposed action would not result in significant environmental impacts. For these reasons we are not recommending the no-action alternative.

Aboveground Facility Site Alternatives

We received comments about the proposed location for the BPCS, with landowners recommending various options in proximity to the proposed site. Some of these comments were

regarding Port Arthur's initially proposed site for the amendment (here, termed "Alternative Site 3"), and additional comments were filed after Port Arthur relocated the BPCS to the current proposed site. We also considered two other alternative sites ("Alternative Site 1" and "Alternative Site 2"). These are shown on figure 3 and discussed further below.

Based on the location, facilities, and capacity of the approved Louisiana Connector Project, PAPL identified that the optimal hydraulic range for the BPCS would be between about MP 65 and MP 72.2 along the authorized pipeline, and that its specific location as presented in the amendment application was chosen based on the approved interconnect locations. A site outside of this milepost range would require the installation of additional interconnect pipeline to the BPCS, which would result in additional impacts on land use and other resources as compared to the proposed site. FERC staff's hydraulic review confirmed the optimal hydraulic range indicated by PAPL. Alternative Sites 1, 2, and 3 all fall within this range.

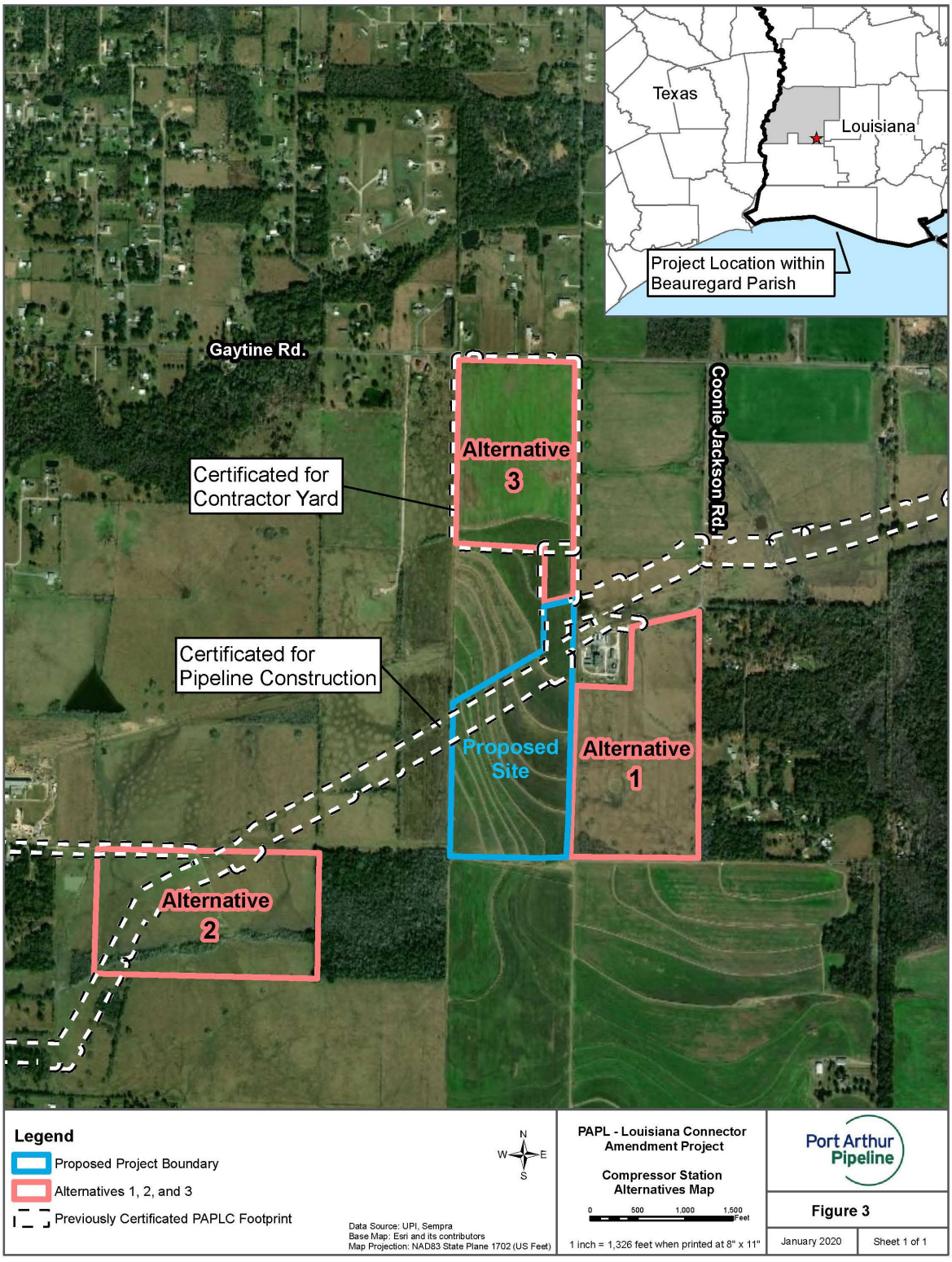
Determining if an alternative provides a significant environmental advantage requires a comparison of the impacts on each resource as well as an analysis of impacts on resources that are not common to the alternatives being considered. The determination must then balance the overall impacts and all other relevant considerations. In comparing the impacts between resources, we also consider the degree of impact anticipated on each resource. Ultimately, an alternative that results in equal or minor advantages in terms of environmental impact would not compel us to shift the impacts from the current set of landowners to a new set of landowners.

Table 12 provides a comparison of relevant factors considered for the proposed and each alternative site for the BPCS. Most resource areas would not differ appreciably from site to site, and thus were not included in the comparison analysis.

Table 12 Comparison of Alternative Sites for the Beauregard Parish Compressor Station

Factor	Proposed Site	Alternative 1	Alternative 2	Alternative 3
Parcel Acreage	59.9	66.3	70.9	61.9
Interconnect Pipeline Length (feet)	0 (within compressor station boundary)	630	1,150	900
Land Use/Vegetation Type Impacts	Agricultural (used for rice production)	Agricultural (pasture) and emergent/farmed wetland	Agricultural (pasture)	Agricultural (rice/soybean)
Wetland Impact (acres)	0.0	54.9	24.2	0.0
Waterbody Impacts/Distance to Nearest Waterbody	None – 10 feet to nearest drainage ditch in southwest corner of property	0.2 acre pond onsite	Intermittent stream and riparian area bisects site	None – nearest intermittent stream is 10 feet to the east of the parcel
NSAs within 0.5 mile/ nearest NSA (approximate)	None / 2,700 feet	15 / 1,035 feet	7 / 1,930 feet	16 / 1,750 feet

Figure 3 Louisiana Connector Amendment Project Alternatives



Alternative Site 1

Based on comments PAPL received, PAPL identified Alternative Site 1, a 66.3-acre site directly south and east of the existing Ragley Compressor Station, as a potential location in order to site the compressor adjacent to existing infrastructure and move it further from Gaytine Road. This site had been considered by PAPL during preliminary design due to its proximity to the required interconnects and potential availability.

This site is currently used for agriculture/pasture. A man-made irrigation ditch runs along the west and southern boundaries. Based on review of aerial photography, a pond feature is in the central portion of the facility. Based on a recent site delineation conducted by PAPL, low topography, soil types, and signatures of land saturation in current and historical aerial photography, the site contains emergent wetland features.

An advantage of the site is that it borders an existing industrial land use (the Ragley Compressor Station) to the northwest. Site limitations could require noise-generating equipment to be located on the east portion of the site, resulting in noise and visual impacts near residences. The primary disadvantages of Alternative Site 1 are the potential for permanent impacts on about 54.9 acres of emergent wetland habitat (some of which is farmed) and a pond. Additionally, due to the limitation of the site, the compressors and other noise-generating equipment would require the facilities to be near residences east of the site, resulting in a potential increase in noise and visual impacts. Alternative Site 1 would have 15 NSAs within 0.5 mile of the compressor station, compared to none for the proposed BPCS site. Alternative Site 1 would also require 630 feet of interconnect pipeline to tie-in with existing natural gas pipelines from which to obtain feed gas, which would increase land disturbance impacts compared to the proposed location, as that interconnect pipeline would be able to be constructed within the BPCS parcel.

Because of potential for increased noise and visual impacts on residences in close proximity to Alternative Site 1, wetland and waterbody impacts, and the additional disturbance required for the interconnects, we did not find that Alternative Site 1 would convey a significant environmental advantage, and we eliminated it from further consideration.

Alternative Site 2

Various commenters recommended the parcel considered here as Alternative Site 2, as it would eliminate some visual impacts on the proposed Kingrey Estates (see discussion of residential land use in section B.5, above) and other residences to the north along Gaytine Road. The Alternative Site 2 location is a 70.9-acre parcel on pasture land about 0.7 mile southwest of the proposed facilities, and was one that PAPL considered during project development.

An existing Transco compressor station is about 0.1 mile northwest of Alternative Site 2. A intermittent tributary of Indian Bayou crosses the site. Indian Bayou is a perennial waterbody with a direct connection to the Houston River. Review of aerial photography shows riparian forest adjacent to the waterbody and potential emergent wetlands.

Use of Alternative Site 2 would result in direct impacts on the tributary and potential indirect impacts on Indian Bayou, and would impact riparian vegetation and 24.2 acres of wetlands. Although it would be further from Kingrey Estates and would result in reduced visual

impacts on residences on Gaytine Road because of existing forested areas, Alternative Site 2 would have seven NSAs within 0.5 mile, compared to none associated with the proposed site. Alternative Site 2 would also require 1,150 feet of interconnect pipeline to tie-in with existing natural gas pipelines from which to obtain feed gas, which would add additional land use impacts compared to the proposed site.

Although some concerns (primarily visual related) could be addressed with Alternative Site 2, the additional resource impacts anticipated at the site, including construction in proximity to a waterbody and in riparian areas, wetland impacts, and its proximity to more NSAs, do not convey a significant environmental advantage over the proposed site. Therefore, we eliminated Alternative Site 2 from further consideration.

Alternative Site 3

As indicated above, Alternative Site 3 was the location PAPL initially proposed for the BPCS in PAPL's amended application. However, based on preliminary feedback from stakeholders in the Project area, primarily related to noise and visual impacts, PAPL relocated the BPCS to its proposed location, which is immediately south of Alternative Site 3. As discussed above and shown on table 12, most resource impacts are similar to the proposed location (e.g., both sites are of similar size, are in agricultural land use, and would not impact wetlands or waterbodies). However, noise and visual impacts on nearby residences would be greater for Alternative Site 3, based on the number and proximity of NSAs. Specifically, there are 16 residences within 0.5 mile of Alternative Site 3 compared to none with the proposed site. Thus, we did not find a significant environmental advantage with Alternative Site 3, and we eliminated it from further consideration.

Conclusion

We reviewed and assessed alternatives to PAPL's proposal. Although all aboveground facility site alternatives we evaluated appear to be technically feasible, none provide a significant environmental advantage over the Project design. Therefore, we conclude that the proposed Project is the preferred alternative to meet the Project's objectives.

D. CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis contained within this EA, we have determined that if PAPL constructs and operates the proposed facilities in accordance with its application and supplements and our 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 Order contain a finding of no significant impact and include the following mitigation measures listed below as conditions to any Certificate the Commission may issue.

1. PAPL shall continue to comply with the environmental conditions set forth in Appendix A of the Commission's April 18, 2019 Order in Docket No. CP18-7-000.

2. PAPL 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. PAPL 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**.

3. The Director of the Office of Energy Projects, 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.

4. PAPL shall make all reasonable efforts to ensure its predicted noise levels from the BPCS are not exceeded at nearby NSAs and file a noise survey with the Secretary **no later than 60 days** after placing the BPCS into service. If full load condition noise surveys are not possible, PAPL shall provide an interim survey at the maximum possible horsepower load and provide the full load survey **within 6 months**. If the noise attributable to the

operation of the BPCS at any load exceeds a L_{dn} of 55 dBA at any nearby NSAs, PAPL shall file a report on what changes are needed and install additional noise controls to meet that level **within 1 year** of the facility's in-service date. PAPL shall 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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