Abstract: The staff of the Federal Energy Regulatory Commission (Commission) prepared a final environmental impact statement (EIS) for the MP66-69 Compression Relocation and Modification Amendment and the MP33 Compressor Station Modification Amendment Project, proposed by Golden Pass Pipeline, LLC (Golden Pass). Golden Pass proposes to relocate, modify, and eliminate certain pipeline facilities previously approved by the Commission, but not yet constructed, as part of the Pipeline Expansion Project (Docket No. CP14-518-000) in Calcasieu Parish, Louisiana and Orange County, Texas. The Amendments would include relocating the approved compressor station at Milepost (MP) 66 approximately 3 miles to MP 69 and increasing the authorized compression; eliminating the previously approved 3-mile Calcasieu Loop from MP66 – MP69; relocating the MP33 Compressor Station approximately 50 feet north-northwest and increasing the authorized compression; adding three new interconnects and appurtenant facilities adjacent to the MP33 Compressor Station; and eliminating receipt stations at the existing Texoma delivery interconnect. Golden Pass proposes the Amendments due to new supply arrangements and the resulting engineering design requirements. Commission staff conclude that construction and operation of the proposal would not result in significant environmental impacts, except for climate change impacts that are not characterized as significant or insignificant.

Contact: Office of External Affairs, (866) 208-FERC
Estimate of Staff’s Time Spent in the Preparation of this EIS: $22,818.78
There were no direct contract or travel costs and no cooperating agencies.
TO THE INTERESTED PARTIES:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared a final environmental impact statement (EIS) for the MP66-69 Compression Relocation and Modification Amendment and the MP33 Compressor Station Modification Amendment Project (Project), proposed by Golden Pass Pipeline Company, LLC (Golden Pass) in the above referenced dockets.

Golden Pass requests authorization to amend its certificate of public convenience and necessity for the Pipeline Expansion Project (Docket No. CP14-518-000) that was issued by the Commission on December 21, 2016. Golden Pass requests authorization to modify the previously authorized facilities in Calcasieu Parish, Louisiana and Orange County, Texas.

The final EIS assesses the potential environmental effects of the construction and operation of the Project in accordance with the requirements of the National Environmental Policy Act (NEPA). The FERC staff concludes that approval of the proposed Project, with the mitigation measures recommended in this EIS, would not result in significant environmental impacts, with the exception of climate change impacts. The EIS does not characterize the Project’s greenhouse gas emissions as significant or insignificant because the Commission is conducting a generic proceeding to determine whether and how the Commission will conduct climate change significance determinations going forward.1.

The final EIS incorporates by reference the Commission staff’s July 2016 Final Environmental Impact Statement (FEIS) issued in Docket Nos. CP14-517-000 and CP14-518-000 for the Golden Pass LNG Export Project (2016 FEIS) and the Commission’s findings and conclusions in its December 21, 2016 Order. The final EIS addresses the potential environmental effects of the construction and operation of the following Project facilities:

CP21-1-000 (Calcasieu Parish, Louisiana)

- relocate the approved Compressor Station at Milepost (MP) 66 approximately three miles, to MP69;
- increase the amount of compression at the relocated compressor station;
- eliminate approved modifications to interconnects at MP63 and MP66;
- minor changes to approved interconnect modifications at MP68; and
- eliminate the previously approved 3 miles of 24-inch diameter pipeline loop between MP66 and MP69.

CP21-458-000 (Orange County, Texas)

- relocate the MP33 Compressor Station approximately fifty feet north-northwest to avoid an existing pipeline right-of-way based on a landowner request;
- increase the authorized compression at the MP33 Compressor Station;
- construct three new interconnects and appurtenant facilities adjacent to the MP33 Compressor Station; and
- eliminate receipt stations at the existing Texoma delivery interconnect on Golden Pass’s existing system at MP33.

The Commission mailed a copy of the Notice of Availability of the Final Environmental Impact Statement for the MP66-69 Compression Relocation and Modification Amendment and the MP33 Compressor Station Modification Amendment Project to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners and other interested individuals and groups; and newspapers and libraries in the Project area. The final EIS is only available in electronic format. It may be viewed and downloaded from the FERC’s website (www.ferc.gov), on the natural gas environmental documents page (https://www.ferc.gov/industries-data/natural-gas/environment/environmental-documents). In addition, the final EIS may be accessed by using the eLibrary link on the FERC’s website. Click on the eLibrary link (https://elibrary.ferc.gov/eLibrary/search) select “General Search” and enter the docket number in the “Docket Number” field (i.e. CP21-1-000 or CP21-458-000). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659.

The final EIS is not a decision document. It presents Commission staff’s independent analysis of the environmental issues for the Commission to consider when addressing the merits of all issues in this proceeding.
Questions?

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 that 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 https://www.ferc.gov/ferc-online/overview to register for eSubscription.
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**TECHNICAL ABBREVIATIONS AND ACRONYMS**

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<tr>
<td>APE</td>
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<td>AQCRs</td>
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<td>Clean Air Act</td>
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<td>GHG</td>
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<tr>
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NOI  Notice of Intent to Prepare an Environmental Impact Statement for the Proposed MP66-69 Compression Relocation and Modification Amendment and the Proposed MP33 Compressor Station Modification Amendment and Request for Comments on Environmental Issues

NOS  Notice of Scoping Period Requesting Comments on Environmental Issues for the Proposed Compression Relocation and Modification Project

NOx  nitrogen oxides

NRCS  Natural Resources Conservation Service

NRHP  National Register of Historic Places

NSA  Noise sensitive area

OEP  Office of Energy Projects

O3  ozone

Plan  FERC’s Upland Erosion Control, Revegetation, and Maintenance Plan

Procedures  FERC’s Wetland and Waterbody Construction and Mitigation Procedures

Project  Compression Relocation and Modification Project

psig  pounds per square inch gauge

Secretary  Secretary of the Commission

SHPO  State Historic Preservation Officer

SILs  Significant Impact Levels

SO2  sulfur dioxide

SPCC Plan  Spill Prevention Control and Countermeasure Plan

U.S.  United States

USACE  U.S. Army Corps of Engineers

USC  United States Code

USDOT  U.S. Department of Transportation

USFWS  U.S. Fish and Wildlife Service

USGS  U.S. Geological Survey

VOC  volatile organic compound
EXECUTIVE SUMMARY

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared this final Environmental Impact Statement (EIS) to fulfill the requirements of the National Environmental Policy Act (NEPA), under Title 40 of the Code of Federal Regulations Parts 1500-1508 (40 CFR 1500-1508), and the Commission’s regulations at 18 CFR 380. On October 2, 2020 and May 19, 2021, Golden Pass Pipeline Company, LLC (Golden Pass), filed applications with the Federal Energy Regulatory Commission (FERC or Commission) in Docket Nos. CP21-1-000 and CP21-458-000. Golden Pass is requesting authorization to relocate, modify, and eliminate certain pipeline facilities in Calcasieu Parish, Louisiana and Orange County, Texas.

The FERC is the federal agency responsible for authorizing interstate natural gas transmission facilities under the Natural Gas Act (NGA), and is the lead federal agency for preparation of this EIS in compliance with the requirements of NEPA.1

PROPOSED ACTION

The Milepost (MP) 66-69 Compression Relocation and Modification Amendment and MP33 Compressor Station Modification Amendment Project (Project) would involve the relocation, modification, and elimination of certain pipeline facilities previously approved by the Commission, but not yet completed, as part of the Pipeline Expansion Project (Docket No. CP14-518-000).

The MP66-69 Compression Relocation and Modification Amendment would consist of the following facilities in Calcasieu Parish, Louisiana (CP21-1-000):

- relocating the approved compressor station at Milepost (MP) 66 approximately 3 miles, to MP69;
- increasing the authorized compression at the MP69 Compression Station from 92,590 horsepower to 102,623 horsepower;
- eliminating approved modifications to interconnects at MP63 and MP66;
- minor changes to approved interconnect modifications at MP68; and
- eliminating the previously approved 3 miles of 24-inch diameter pipeline loop between MP66 and MP69.

The MP33 Compressor Station Modification Amendment would consist of the following facilities in Orange County, Texas (CP21-458-000):

- relocating the Orange County, Texas approximately 50 feet north-northwest to avoid an existing pipeline right-of-way;

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1 40 CFR 1501.7.
increasing the authorized compression at the MP33 Compression Station from 17,994 horsepower to 37,101 horsepower;

• constructing three new interconnects and appurtenant facilities adjacent to the MP33 Compressor Station, one interconnect with Midcoast Pipelines L.P., an existing Texas intrastate pipeline that will expand its system to deliver gas on Golden Pass’s system, and two interconnects with Golden Triangle Storage, Inc., a jurisdictional storage provider, that would enable deliveries from and receipts into Golden Pass’s system; and

• eliminating receipt stations at the existing Texoma delivery interconnect on Golden Pass’s existing system at MP33.

In general, as described by Golden Pass, the Project is required due to new supply arrangements and the resulting engineering design, including pipeline hydraulics and delivery pressure requirements.

PUBLIC INVOLVEMENT

On November 19, 2020, the Commission issued in Docket No. CP21-1-000 a Notice of Scoping Period Requesting Comments on Environmental Issues for the Proposed Compression Relocation and Modification Project (NOS) requesting comments by December 19, 2020. The Commission received 2 comments in response to the NOS. A December 12, 2020 letter from the Louisiana Department of Fish and Wildlife stated they had no comments or recommendations on the Project, but intend to review our NEPA document. A December 14, 2020 letter from Healthy Gulf and South Wings stated that FERC should prepare a thorough review of the cumulative impacts of the natural gas facilities in the area in a Programmatic Environmental Impact Statement. Healthy Gulf and South Wings also expressed concerns regarding impacts to coastal wetlands and impacts associated with climate change. Section 4.1 of this EIS discusses other projects in the area and addresses cumulative impacts. Wetland impacts are discussed in section 4.2 and climate change is discussed in section 4.8.

On November 5, 2021, the Commission issued a Notice of Intent to Prepare an Environmental Impact Statement for the Proposed MP66-69 Compression Relocation and Modification Amendment, and the MP33 Compressor Station Modification Amendment Project and Request for Comments on Environmental Issues, and Schedule for Environmental Review (NOI). The NOI was issued in the Commission’s public docket for CP21-1-000 and CP21-458-000 and published in the Federal Register on November 9, 2021. The NOI was mailed to the parties on our environmental mailing list, which included federal and state resource agencies; elected officials; environmental groups and non-governmental organizations; Native Americans tribes; potentially affected landowners; local libraries and newspapers; and other stakeholders who had

2 All written comments are part of the FERC’s public record for the Project and are available for viewing in e-library under docket number CP21-1.
indicated an interest in the Project. Issuance of the NOI opened a 30-day formal scoping period which expired on December 6, 2021. On December 13, 2021, the Choctaw Nation of Oklahoma noted that the Project is within their area of historic interest and requested additional project information. On February 11, 2022, Choctaw Nation of Oklahoma advised that (1) with respect to the MP69 Amendment, they concur with the finding of “no historic properties affected,” subject to a request that work be stopped, and their office contacted immediately, in the event that Native American artifacts or human remains are encountered; and (2) the MP 33 Amendment in Orange County, Texas lies outside of their area of historic interest. We received no other comments on the NOI. All comments received prior to issuance of the EIS are included in Appendix A and addressed in the EIS.

On February 11, 2022, the FERC issued a Notice of Availability of the Draft Environmental Impact Statement for the Proposed MP66-69 Compression Relocation and Modification Amendment, and the MP33 Compressor Station Modification Amendment Project, which was published in the Federal Register on February 27, 2022, and established a 45-day comment period on the draft EIS ending on April 4, 2022. In response to the draft EIS we received comments from the U.S. Environmental Protection Agency (EPA), the Louisiana Department of Wildlife and Fisheries (LDWF), Golden Pass, Healthy Gulf, and RESTORE. Comments concerned air emissions, noise, alternatives, tribal consultation, erosion control, environmental justice, impacts on the red-cockaded woodpecker, groundwater, and wetlands. We provide responses to those comments below in sections 3 and 4 of this EIS and in Appendix A.

PROJECT IMPACTS AND MITIGATION

Construction and operation of the Project could result in impacts on environmental resources, including geology, soils, groundwater, surface water, wetlands, vegetation, wildlife, fisheries, special-status species, land use, visual resources, socioeconomics, environmental justice, cultural resources, air quality, noise, and safety. In section 3 of this EIS, we include a discussion of potential alternatives to the Project and evaluate the no-action alternative.

We evaluate the impacts of the Project, taking into consideration Golden Pass’s proposed avoidance, minimization, and mitigation measures. Our analysis of impacts on environmental resources is summarized below and is discussed in detail in section 4 of this final EIS. Where necessary, we recommend additional mitigation measures to reduce impacts on specific resources. Section 5.2 of this final EIS contains a compilation of our recommended mitigation measures.

Geology and Soils
The overall effects of Project construction and operation on topography and existing geologic conditions would be minor. Primary impacts would be limited to construction activities and would include temporary disturbance resulting from grading and trenching operations. After completion of construction activities, topography and associated drainages in areas of temporary disturbance would be returned to pre-construction contours and elevations to the extent practicable.

The Project would be within the West Gulf Coastal Plain section of the Coastal Plain physiographic province and would cross the Pleistocene-aged Coastal Prairie and Intermediate terraces formations in Orange County, Texas, which consist of clay, silt, sand, and minor gravel (U.S. Geological Survey [USGS], 2003). Within Calcasieu Parish, Louisiana, the Project facilities would cross the Pleistocene-aged Prairie and Montgomery terraces of the West Gulf Coastal Plain, which consists of alluvial Holocene sediments as well as sand, silt, and clay of the Beaumont and Lissie Formations (USGS, 2003). Effects to geology and soil resources are not likely to extend beyond the immediate vicinity of the Project area boundaries. The Project facilities in Orange County, Texas would lie within two formations. The Holocene Deweyville Formation consists of sand, silt, clay, and gravel and is locally inundated with calcium carbonate. The Pleistocene Beaumont Formation contains clay and silt mixed with beds of sand. No oil and gas wells or production areas, borrow pits, or mines are within 0.25 mile of the Project area.

**Groundwater, Surface Waterbody Crossings, and Wetlands**

The Project is underlain by the upper portion of the Coastal Lowlands Aquifer System (known as the Chicot Aquifer), an EPA-designated sole-source aquifer; however, we do not anticipate any long-term or significant impacts on the aquifer from construction or operation of the Project.

The Project would result in a reduction in water requirements during hydrostatic testing from the 647,000 gallons listed in Table 4.3-1 of the Commission staff’s July 2016 Final Environmental Impact Statement (FEIS) issued in Docket No. CP14-517-000 and CP14-518-000 for the Golden Pass LNG Export Project (2016 FEIS). An update to the construction water requirements for hydrostatic testing is provided in tables 4.3.3-1 and 4.3.3-2. Water for construction would be obtained from municipal potable sources and test-water discharge would adhere to Louisiana Department of Environmental Quality general permit requirements. Golden Pass would use municipal water or purchased raw water for hydrostatic testing and dust control. Because no groundwater would be used, groundwater would not be affected by hydrostatic testing.

There are no waterbodies identified within the Project facilities. The non-jurisdictional powerline serving the MP69 Compressor Station would cross one waterbody approximately 10 to 14 feet wide. Although equipment may need to pass through the waterbody during construction of the powerline, power pole placement would
occur outside of the waterbody. At the proposed MP33 Compressor Station modifications in Orange County, Texas, Golden Pass would construct one permanent and two temporary retention ponds to settle suspended sediments and other solids from stormwater runoff and mitigate potential sedimentation and turbidity. Since waterbodies would not be crossed by the Project and best management practices would be employed to reduce impacts to adjacent areas, we conclude that construction and operation of the Project would not result in significant impacts on waterbodies.

Golden Pass performed wetland surveys of the proposed Project area and did not identify any wetlands within the Project facilities for the MP69 Compressor Station Modifications. As certificated, about 1.2 acres of wetlands were planned to be affected by pipeline facility construction and 0.6 acre by pipeline operations in the Project area, but now would not be affected. In Orange County, Texas, construction and operation of the MP33 Compressor Station Amendment would result in an overall reduction of wetland impacts by about 0.1 acre compared to the certificated facilities.

The Project would result in an overall reduction in wetland impacts and permanent wetland loss. Further, best management practices in FERC’s *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan), *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures), and Golden Pass’s *Spill Prevention Control and Countermeasure Plan* (SPCC Plan) would be followed to avoid and minimize potential impacts. Temporarily disturbed wetland areas would be returned to preconstruction contours and allowed to revegetate in accordance with the Project’s approved *Wetland Restoration Plan for Temporarily Disturbed Areas*. Post-construction monitoring will also be performed consistent with the FERC Procedures and the *Wetland Restoration Plan for Temporarily Disturbed Areas*. With the proposed modifications, we conclude that construction and operation of the Project would not result in significant impacts on wetlands.

**Vegetation, Fisheries, Wildlife, and Special Status Species**

Only minor locational changes are being proposed as part of the Project. No impacts to fisheries resources are anticipated as waterbodies would not be crossed. Potential impacts to vegetation and wildlife are anticipated to be less than those described in the 2016 FEIS due to a reduction in the overall footprint, as discussed below.

The Project facilities would primarily impact upland areas used for silviculture (pine plantations) or maintained right-of-way. No vegetative communities of special concern were identified in the Project area. The Project would eliminate the construction of about 3 miles of previously authorized pipeline looping, which would lessen impacts on vegetation. After construction, temporarily disturbed areas which are currently pine plantations (silviculture) would be available for replanting and use in timber production. However, impacts would be long-term due to the relatively long growth period required for marketable timber. In addition, Golden Pass would prohibit timber production within
the fenced area of the aboveground facilities, resulting in the permanent removal of about 20.1 acres of timber production. Given the limited area of vegetation disturbance and the abundance of similar vegetation adjacent to the Project area, we conclude that impacts on vegetation would be temporary and not significant.

Short-term impacts on wildlife resources and habitat would result from Project construction activities, including vegetation removal, ground disturbance, increased human activity, and noise levels. Mobile wildlife would be temporarily displaced to nearby habitats due to construction activities. Less mobile species, including small mammals, may suffer mortality from construction activities. There would be a temporary impact on wildlife habitat due to tree clearing. However, the Project area includes adjacent forested areas, which allows for migration. No critical or sensitive habitats have been identified. Further, sufficient similar habitat is located adjacent to the Project area which would allow for displaced wildlife to avoid the area during construction activities. Therefore, we conclude that any impacts on local wildlife would not be significant due to the temporary nature of Project construction activities, and the abundance of similar habitat adjacent to the Project area.

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) and Executive Order 13186. Bald and golden eagles also are protected under the Bald and Golden Eagle Protection Act. The Project would not affect any known important bird areas, bald eagle nests, or any other sensitive areas of conservation. However, migratory birds may be present in the Project area during construction. Golden Pass would implement the measures that were developed in consultation with the U.S. Fish and Wildlife Service (USFWS), the Louisiana Department of Wildlife and Fisheries, and Texas Parks and Wildlife Department (TPWD) and presented in the 2016 FEIS. Given the relatively small area of disturbance, and the availability of similar adjacent habitats, we conclude that construction activities would not adversely impact migratory bird populations in the Project area.

No listed species under the Endangered Species Act (ESA) were identified as potentially occurring in the vicinity of the pipeline expansion facilities in the 2016 FEIS. To assess if additional listed species beyond those previously analyzed may now be potentially present in the area of the proposed modifications, Golden Pass generated an updated list of ESA protected species using the USFWS’s Information for Planning and Conservation (IPaC) System. The species identified by the USFWS IPaC in Calcasieu Parish, Louisiana, include the West Indian manatee and red-cockaded woodpecker; the species identified in Orange County, Texas, include the least tern, piping plover, red knot, and West Indian manatee.

Operation and construction of the Project is anticipated to have “no effect” on ESA species. Both the Louisiana Ecological Services Field Office and Texas Coastal Ecological Services Field Office of the USFWS have previously stated that consultation under Section 7 of the ESA is not required for projects that are anticipated to have “no
effect” on listed species. We have made a “no effect” determination, and therefore, consultation for ESA listed species is complete.

**Land Use**

The land required to accommodate the proposed Project modifications in Calcasieu Parish, Louisiana would affect the same general land use types as previously evaluated in the 2016 FEIS and include silviculture (forestry), existing right-of-way, and industrial land. Impacts to specific land use types would remain as described in the 2016 FEIS. If the proposed amendment is approved, the overall footprint of the Pipeline Expansion Project, as assessed in the 2016 FEIS and approved in the December 21, 2016 Order, would be reduced by 7.6 acres in Calcasieu Parish, Louisiana.

As currently authorized, land requirements in Orange County, Texas include 3.2 acres for construction and an additional 10.2 acres for operations, as detailed in Tables 2.3-1 and 4.8.1-1 of the 2016 FEIS. Land requirements for the proposed Project amendment total 20.1 acres. This total includes 8.6 acres for the MP33 Compressor Station, 2.9 acres for the meter stations, and 2.5 acres for access roads, stormwater ponds and conveyances, and interconnects. The remaining 6.1 acres of the total land required for the modifications would be utilized as temporary workspace.

**Environmental Justice**

According to the U.S. Census Bureau information, the Project would impact two block groups: one in Orange County, Texas and one in Calcasieu Parish, Louisiana. Neither of the block groups affected have a minority population greater than 50 percent or a minority population meaningfully greater than the reference populations, in this case, Orange County and Calcasieu Parish. The block group affected by the MP69 Compression Station in Calcasieu Parish (Census Tract 36, Block group 1) has 21.9 percent of its population below the poverty level, which exceeds the percentage of the low-income population in the reference group, and therefore an environmental justice community is present.

Potential impacts on area residents may include socioeconomic factors, such as demand for community services and traffic; changes in the existing viewsheds during construction and operation; air emissions and noise during construction of the pipeline interconnects and compressor stations; and permanent noise and air quality effects from compressor station operations. These effects would be experienced by residents living in close proximity to the proposed facilities, with the effects diminishing with further distances from the proposed facilities.

The Project would result in a minor and temporary influx of workers/contractors into the environmental justice community that we conclude would have no significant impact on demands for community services, such as housing, police enforcement, and medical care, and other community infrastructure. The movement of construction
personnel, equipment, and materials would result in short-term impacts on roadways, and Golden Pass would employ traffic control measures and schedule deliveries to minimize impacts on local traffic.

The surrounding landscape is land within rural settings and consistent with the existing viewsheds. Forested lands within Golden Pass’s compressor station tract combined with planted-pine surrounding the tract would act as a natural visual screening, blocking area residences (approximately 2,332 ft to the northeast and 2,454 ft. to the east) from view of the aboveground facilities during both construction and operation. Impacts on visual and/or aesthetic resources from the presence of construction equipment are anticipated to be minor and temporary during construction, and operation of the Project would not be significant.

With respect to air emissions, exhaust emissions and fugitive dust would result in short-term, localized impacts in the immediate vicinity of construction work areas. Golden Pass would minimize exhaust emissions by limiting idling time of equipment, maintaining and tuning engines per manufacturer’s specifications. Golden Pass completed an air quality dispersion modeling analysis for the MP69 Compressor Station, which is located within an environmental justice community, to assess air quality impacts and show compliance with the applicable National Ambient Air Quality Standards (NAAQS). Modeling of the operational air emissions at the MP 69 Compressor Station identified that Project contributions would not exceed National Ambient Air Quality Standards (NAAQS). In addition, the distance where project emissions drop below the significant impact levels (SIL) (for NO₂ 1-hour) is 1.3 mile. All other pollutants and averaging periods are below the SIL at all off-site receptors. Based on the modeling results and the mitigation measures proposed by Golden Pass, we conclude that air quality impacts from construction and operation of the Project would not result in a significant impact on local or regional air quality for environmental justice communities.

We determined that the temporary nature of construction activities and the minor increase in noise levels over ambient would not result in significant noise impacts during construction. During operations, the MP 69 Compressor Station would result in a permanent perceptible noise increase in the Project area. Noise modeling indicates that levels would be below FERC criterion of 55 dBA day-night sound level (L_{dn}) which protects the public from indoor and outdoor activity interference, and therefore would not result in significant noise impacts on local residents and the surrounding environmental justice community.

We conclude that impacts on environmental justice communities may be disproportionately high and adverse as impacts in the Project area would be predominantly borne by environmental justice populations; however, we conclude those impacts would not be significant.

**Cultural Resources**
Golden Pass submitted archaeological survey reports to the Louisiana State Historic Preservation Office (SHPO), the Texas SHPO, and FERC. On October 7, 2020, the Louisiana SHPO commented on the survey reports and agreed with Golden Pass that no historic properties are affected by the proposed Project. We agree with the Louisiana SHPO and have determined that the Project would have no effect on historic properties. On September 19 and September 23, 2021, the Texas SHPO commented on the survey reports and agreed with Golden Pass that no historic properties are affected by the proposed Project. Accordingly, FERC has completed its compliance requirements with Section 106 of the National Historic Preservation Act for the Project.

Golden Pass contacted the following federally-recognized Native American tribes (Tribes) regarding the Project: Chitimacha Tribe of Louisiana, Coushatta Tribe of Louisiana, Jena Band of Choctaw Indians, Tunica-Biloxi Indian Tribe of Louisiana, Alabama-Coushatta Tribe of Texas, Caddo Nation, Choctaw Nation of Oklahoma, Mississippi Band of Choctaw Indians, and the Quapaw Nation. Golden Pass provided to the Tribes a Project information package, a cultural resources assessment, and a draft unanticipated discoveries plan. On November 5, 2021, we sent our NOI to those same Tribes listed above, as well as the following Louisiana and Texas state-recognized tribes: Adai Caddo Indians of Louisiana, Choctaw-Apache Tribe of Ebarb, Four Winds Cherokee, Isle de Jean Charles Band of BCCM, Natchitoches Tribe of Louisiana, United Houma Nation, Bayou LaFourche Band of BCCM, Clifton Choctaw Tribe of Louisiana, Grand Caillou/Dulac Band of BCCM, Louisiana Band of Choctaw, Pointe au Chien Tribe, Lipan Apache Tribe of Texas, Mount Tabor Indian Community, and Texas Band of Yaqui Indians. We received comments regarding the Project modification in Calcasieu Parish, Louisiana from the Quapaw Nation and the Choctaw Nation, as detailed further in section 4.5.3.

Golden Pass provided plans to address the unanticipated discovery of cultural resources and human remains which we find acceptable.

**Air Quality and Climate Change**

Constructing the Project would result in temporary and localized dust and emissions that would last the duration of construction activities and at points where construction is actively occurring for the Golden Pass LNG Export Project. With the mitigation measures proposed by Golden Pass, we conclude that air quality impacts from construction, including impacts on visibility within the regional airshed, would be temporary and would not result in a significant impact on local or regional air quality.

Operating the Project’s facilities would generate air emissions mostly from operation of the new compressor units and also result in fugitive emissions from minor leaks associated with piping components and valves. The combined total of existing background and maximum modeled concentrations are less than the applicable National Ambient Air Quality Standards (NAAQS) for all pollutants outside the Project boundary.
Therefore, operation of the Project would not cause or significantly contribute to a degradation of ambient air quality. The Project would result in continued compliance with the NAAQS, which are established to be protective of human health.

Construction and operation of the Project would increase the atmospheric concentration of greenhouse gases (GHGs) in combination with past, current, and future emissions from all other sources globally and contribute incrementally to future climate change impacts. Construction of the facilities is estimated to increase emissions from the 2016 FEIS up to about 413 tons (375 metric tons) of carbon dioxide equivalent (CO2e) over the duration of construction. Operation of the new emission sources would result in emissions in excess of the 2016 FEIS of up to 144,973 tons (131,491 metric tpy) of CO2e. The Project modifications would increase compression at the MP33 and MP69 Compressor Stations as compared to the 2016 FEIS, but not the output volume of the facilities; no additional capacity was added due to the Amendments. Ultimately, this EIS is not characterizing the Project’s GHG emissions as significant or insignificant because the Commission is conducting a generic proceeding to determine whether and how the Commission will conduct significance determinations going forward.3

Noise

If design modifications in Orange County, Texas are approved, there would be a minor increase in noise levels relative to levels evaluated in the 2016 FEIS. Noise levels during operation would continue to meet FERC threshold requirements, and are not expected to exceed acceptable environmental noise criterion of a day-night average sound level (Ldn).

In Calcasieu Parish, Louisiana, temporary construction impacts on residents in proximity to construction work areas could include noise. Noise levels resulting from construction would vary over time and would depend upon the number and type of equipment operating, the level of operation, and the distance between sources and receptors. Alternatively, operational noise associated with the new MP69 Compressor Station would be ongoing; however, Golden Pass would be required to meet FERC’s sound level requirements and would implement noise controls, if necessary. Based on Golden Pass’s proposed mitigation measures, and FERC’s recommendations, the Project would not result in significant noise impacts in the Project vicinity.

Reliability and Safety

There are no anticipated changes to reliability and safety that would result from the proposed modifications. Reliability and safety of the Project in Orange County, Texas and Calcasieu Parish, Louisiana remain as described in the 2016 FEIS.

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Alternatives

There are no environmental concerns (e.g., listed species, cultural resources) which have been identified which require the need to evaluate alternative locations for any Project locations. An alternative location to the proposed relocation of the MP33 Compressor Station and MP69 Compressor Station sites would be to retain the currently authorized site configurations. Modifications to the MP33 Compressor Station would better meet the needs of the landowner with the minimal increase on land use, while the modifications to the MP69 Compressor Station would reduced impacts on land use types compared to the currently authorized site. Therefore, we find the proposed Project is the preferred alternative.

CONCLUSIONS

For most resources, the construction and operation of the Project would result in limited adverse environmental impacts. Most adverse environmental impacts would be temporary or short-term during construction, but some long-term and permanent environmental impacts would occur on some forest and rangelands. This determination is based on our review of the information provided by Golden Pass and further developed from environmental information requests; scoping; literature research; a consideration of potential alternatives; and contacts with federal, state, and local agencies, and other stakeholders. With regard to climate change impacts, the EIS does not characterize the Project’s GHG emissions as significant or insignificant. For the remainder of resources assessed in this EIS, we conclude that impacts would be reduced to less-than-significant levels through implementation of our recommendations presented in section 5.2 and Golden Pass’s proposed avoidance, minimization, and mitigation measures.

We recommend that the Project-specific recommendations that we have developed (noted in bulleted bold type throughout this EIS and presented in section 5.2 of the EIS) be attached as conditions to any Certificate of Public Convenience and Necessity issued by the Commission.
1 INTRODUCTION

In accordance with the Natural Gas Act (NGA), Title 15 United States Code § 717 (15 U.S.C. 717), the FERC is responsible for deciding whether to authorize the construction and operation of interstate natural gas transmission facilities. The National Environmental Policy Act (NEPA, 42 U.S.C. 4321 et seq.) requires that the Commission consider the environmental impacts of a proposed project prior to making a decision.

The Commission’s environmental staff has prepared this final Environmental Impact Statement (EIS) to comply with NEPA, and to assess the potential environmental impacts that could result from the construction and operation of the MP66-69 Compression Relocation and Modification Amendment and MP33 Compressor Station Modification Amendment Project (Project), as proposed by Golden Pass Pipeline Company, LLC (Golden Pass) in Docket Nos. CP21-1-000 and CP21-458-000. On October 2, 2020 and May 19, 2021, Golden Pass filed applications with FERC pursuant to Section 7(c) of the NGA, as amended. Golden Pass is seeking to amend its Certificate of Public Convenience and Necessity (Certificate) for the Pipeline Expansion Project (Docket No. CP14-518-000) in order to relocate, modify, and eliminate certain pipeline facilities previously approved by the Commission.

The vertical line in the margin identifies text that is new or modified in the final EIS and differs materially from corresponding text in the draft EIS. Changes were made to address comments from stakeholders on the draft EIS.

The Project would include relocating two approved compressor stations, increasing authorized compression, adding three new interconnects, and eliminating a previously approved 3-mile pipeline loop and certain interconnect modifications, in Calcasieu Parish, Louisiana and Orange County, Texas. The Project would be designed to meet new supply arrangements and the resulting engineering design, including pipeline hydraulics and delivery pressure requirements.

1.1 Purpose and Need

The Council on Environmental Quality’s (CEQ) regulations for implementing NEPA at Title 40 of the Code of Federal Regulations § 1502.13 (40 CFR 1502.13) state that an EIS should briefly address the underlying purpose and need for a project. In general, Golden Pass states that the Project is required due to new supply arrangements and the resulting engineering design, including pipeline hydraulics and delivery pressure requirements.

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 Commission bases its decisions on both economic issues, including need, and environmental impacts. The Commission
has developed a “Certificate Policy Statement” that established criteria for determining whether there is a need for a proposed project and whether the proposed project would serve the public interest. The Commission decision, in its Order, would review the need for Golden Pass’s proposed Project.

1.2 Purpose and Scope of this EIS

Our principal purposes in preparing this EIS are to:

- identify and assess the potential impacts on the natural and human environment that would result from the construction and operation of the proposed Project;
- describe and evaluate reasonable alternatives to the proposed Project that would avoid or minimize adverse impacts on environmental resources;
- recommend mitigation measures, as necessary, that could be implemented by Golden Pass to reduce impacts on specific environmental resources; and
- encourage and facilitate involvement by the public and interested agencies in the environmental review process.

This EIS addresses topics including Project alternatives; geology; soils; water resources; wetlands; vegetation; wildlife and aquatic resources; special status species; land use, recreation, special interest areas, and visual resources; socioeconomics and environmental justice; cultural resources; air quality and noise; GHG emissions and climate change; and reliability and safety. This EIS describes the affected environment as it currently exists and analyzes the environmental consequences of the proposed Project. This EIS also presents our conclusions and recommended mitigation measures.

Our description of the affected environment is based on a combination of data sources, including desktop resources such as scientific literature and regulatory agency reports, information from resource and permitting agencies, scoping comments, and field data collected by Golden Pass and its consultants.

1.2.1 Federal Energy Regulatory Commission

The FERC is an independent federal regulatory agency that regulates the interstate transportation of natural gas, among other industries, in accordance with the NGA. Pursuant to the Energy Policy Act of 2005 (EPAct) Section 313(b)(1), the FERC is the lead federal agency for the coordination of all applicable federal authorizations. Thus, the FERC is the lead federal agency for preparation of this EIS to comply with NEPA, as

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described in the CEQ’s regulations at 40 CFR 1501.7, and in keeping with the May 2002 Interagency Agreement with other federal agencies.⁶

As the lead federal agency, we prepared this EIS to assess the environmental impacts that could result from constructing and operating the Project. This document was prepared in compliance with the requirements of the CEQ’s regulations at 40 CFR 1500-1508, and the FERC’s regulations for implementing NEPA at 18 CFR 380. As applicable, this EIS is also intended to fulfill the cooperating federal agencies obligations under NEPA and to support subsequent conclusions and decisions made by the Commission and the cooperating agencies. The Commission will consider the analysis and conclusions of the EIS, as well as non-environmental issues, in its decision on whether to issue a Certificate of Public Convenience and Necessity to Golden Pass.

1.3 Public Review

Golden Pass filed its formal FERC applications for the Project on October 2, 2020 and May 19, 2021 in Docket Nos. CP21-1-000 and CP21-458-000, respectively. Prior to and during the filing process, Golden Pass contacted federal, state, and local governmental agencies to inform them about the Project and discuss Project-specific issues. Golden Pass also contacted affected landowners to inform them about the Project and to obtain permission to perform environmental surveys. On October 19, 2020 the FERC issued a Notice of Application (NOA) for CP21-1-000, and June 23, 2021 for CP21-458-000. The NOAs stated there are two ways to become involved in the Commission’s review of the Project. One way is to become an intervenor, or party to the proceeding. This is a legal position that carries certain rights and responsibilities, and gives parties legal standing to request a rehearing and challenge a Commission decision in court. The second way to participate is to file comments with the Secretary of the Commission (Secretary). The comment period to respond to the NOA for CP21-1-000 closed on November 9, 2020. The comment period to respond to the NOA for CP21-458-000 closed on July 14, 2021. We received no comments on the NOAs.

On November 19, 2020, the Commission issued in CP21-1-000 a Notice of Scoping Period Requesting Comments on Environmental Issues for the Proposed Compression Relocation and Modification Project (NOS) requesting comments by December 19, 2020. The Commission received 2 comments to the NOS.⁷ In a December 12, 2020 letter, the Louisiana Department of Wildlife and Fisheries (LDWF) stated it had no comments or recommendations on the Project, but intends to review our NEPA document. On December 14, 2020, Healthy Gulf and South Wings filed a comment letter stating that FERC should prepare a thorough review of the cumulative impacts of the natural gas.

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⁶ May 2002 Interagency Agreement on Early Coordination of Required Environmental and Historic Preservation Reviews Conducted in Conjunction With the Issuance of Authorizations to Construct and Operate Interstate Natural Gas Pipelines.

⁷ All written comments are part of the FERC’s public record for the Project and are available for viewing in e-library under docket number CP21-1.
facilities in the area in a Programmatic Environmental Impact Statement. Healthy Gulf and South Wings also expressed concerns regarding impacts to coastal wetlands and impacts associated with climate change. Section 4.1 of this EIS discusses other projects in the area. Wetland impacts are discussed in section 4.3 and climate change is discussed in section 4.8.

On November 5, 2021, FERC issued a Notice of Intent to Prepare an Environmental Impact Statement for the Proposed MP66-69 Compression Relocation and Modification Amendment, and the MP33 Compressor Station Modification Amendment Project and Request for Comments on Environmental Issues, and Schedule for Environmental Review (NOI) which was issued in Commission’s public record for Docket Nos. CP21-1-000 and CP21-458-000 and published in the Federal Register on November 9, 2021. The NOI was mailed to the parties on our environmental mailing list, which included federal and state resource agencies; elected officials; environmental groups and non-governmental organizations; Native Americans tribes; potentially affected landowners; local libraries and newspapers; and other stakeholders who had indicated an interest in the Project. Issuance of the NOI opened a 30-day formal scoping period which expired on December 6, 2021. On December 13, 2021, the Choctaw Nation noted that the Project is within their area of historic interest and requested additional project information. We received no other comments on the NOI.

On February 11, 2022, the FERC issued a Notice of Availability of the Draft Environmental Impact Statement for the Proposed MP66-69 Compression Relocation and Modification Amendment, and the MP33 Compressor Station Modification Amendment Project, which was published in the Federal Register on February 27, 2022, and established a 45-day comment period on the draft EIS ending on April 4, 2022. In response to the draft EIS we received comments from the EPA, the LDWF, Healthy Gulf, Golden Pass, and RESTORE.

All substantive comments received in response to the NOS, NOI, and draft EIS are included in Appendix A and addressed in the EIS.

1.4 Summary of Submitted Alternatives, Information, and Analyses

NEPA regulations at 40 CFR 1502.17 state that a final EIS shall include a summary that identifies all alternatives, information, and analyses submitted by State, Tribal, and local governments and other public commenters during the scoping process for consideration by the lead and cooperating agencies in developing the EIS. Section 4.0 of this EIS addresses comments filed regarding alternatives.

Scoping comments were filed by the LDWF and the Choctaw Nation of Oklahoma, who each filed two comments and two organizations (Healthy Gulf and South Wings) who jointly filed a comment. The December 12, 2020 letter from the LDWF
stated they had no comments or recommendations on the Project, but intend to review our NEPA document. A December 14, 2020 letter from Healthy Gulf and South Wings stated that FERC should prepare a thorough review of the cumulative impacts of the natural gas facilities in the area in a Programmatic Environmental Impact Statement.

CEQ regulations do not require broad or “programmatic” NEPA reviews. CEQ's guidance provides that such a review may be appropriate where an agency is: (1) adopting official policy; (2) adopting a formal plan; (3) adopting an agency program; or (4) proceeding with multiple projects that are temporally and spatially connected. The Supreme Court has held that a NEPA review covering an entire region (that is, programmatic review) is required only if there has been a report or recommendation on a proposal for major federal action with respect to the region. We note the Commission does not have a program to direct the development of the natural gas industry’s infrastructure, either on a broad regional basis or in the design of specific projects, and does not engage in regional planning exercises. Natural gas infrastructure projects subject to the Commission’s jurisdiction do not share sufficient elements in common to narrow future alternatives or expedite the current detailed assessment of each particular project. As the Commission acts on individual applications, we provide a project-specific analysis here. However, section 4.1 of this EIS (Baseline Environmental Trends and Cumulative Effects) describes several reasonably foreseeable planned activities that were identified that may influence the environmental baseline in which the Project would be constructed, including the CJ Express Project proposed by Midcoast Energy, LLC., the GTS Lateral Project by Golden Triangle Storage, Incorporated, and Entergy Texas, Inc.'s planned powerline to the MP33 Compressor Station. There have been multiple comment opportunities for the Project, as detailed below. This EIS describes the applicant’s stated purpose and need, and the need for the Project will be addressed by the Commission in the Order and is outside the scope of this document. Socioeconomic impacts of the Project are discussed in detail in section 4.7, and Project alternatives are discussed in section 3.0.

Healthy Gulf and South Wings also expressed concerns regarding impacts to coastal wetlands and impacts associated with climate change. Section 4.1 of this EIS discusses other projects in the area. Wetland impacts are discussed in section 4.2 and climate change is discussed in section 4.8.

In response to the draft EIS, we received comments from the EPA, the LDWF, Healthy Gulf, Golden Pass, and RESTORE (Appendix A-2).

RESTORE suggested the Project replace the gas-fired compressor units with electric compressor units to minimize air pollution and noise. Commission staff

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8 Memorandum from CEQ to Heads of Federal Departments and Agencies, Effective Use of Programmatic NEPA Reviews 13-15 (Dec. 24, 2014) (citing 40 CFR § 1508.18(b))
9 Kleppe v. Sierra Club, 427 U.S. 390 (1976) (holding that a broad-based environmental document is not required regarding decisions by federal agencies to allow future private activity within a region).
10 Atlantic Coast Pipeline, LLC, 161 FERC ¶ 61,042 at P284 (2017).
previously analyzed electric-powered compressors and purchased power as an alternative to the proposed gas-fired compressors in the 2016 FEIS. We provide additional discussion in section 3.2 of the EIS.

RESTORE questioned the disparity between emission data supplied to FERC and the data announced in the Louisiana Department of Environmental Quality’s (LDEQ) Public Notice, suggesting the discrepancies be resolved before the issuance of permits. Updates to the emissions for the MP69 Compressor Station were revised from the earlier data reflected in the draft EIS based on the final design used for the air permit application submitted to the LDEQ for MP69. These changes were filed April 18, 2022. The relevant updates have been incorporated to Table 4.8.1-5. RESTORE also questioned why the Louisiana Cherokee-Choctaw Tribe were not contacted. Although section 106 of the National Historic Preservation Act (NHPA) only requires consultation with federally recognized tribes, FERC did expand its contact list to include Tribes with state recognition in Texas and Louisiana. The Louisiana Cherokee-Choctaw Tribe are not recognized by either Texas nor Louisiana state governments. See section 4.4.3 of the final EIS for a discussion of Tribal Outreach. Finally, RESTORE expressed concerns that the red-cockaded woodpecker could be impacted by Project implementation, and noted a colony documented “less than 10 miles away.” Project surveys did not encounter suitable habitat within the Project area, and the USFWS concluded consultation unnecessary. Red-cockaded woodpeckers require pines that are at least 60 years old but prefer 80 to 100-year old pines infected with red heart fungus. Field survey results indicate that old growth pine trees required by the red-cockaded woodpecker are not present in the Project area. Therefore, we have determined that the Project would have “no effect” on the red-cockaded woodpecker. Golden Pass would continue to consult with the USFWS, the Texas Parks and Wildlife Department, and the LDWF regarding potential impacts on migratory birds in the Project area and would implement any additional measures determined through agency coordination.

The LDWF reminded Golden Pass to implement best management practices for erosion control during construction, and directed that “control techniques be installed prior to the commencement of earthwork activities and maintained until the project is complete and/or the subject areas are stabilized.” Golden Pass is also reminded to provide adequate and appropriate mitigation for impacts to wetland functions. Golden Pass has committed to implement FERC’s *Upland Erosion Control, Revegetation, and Maintenance Plan* (FERC Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (FERC Procedures) FERC’s Plan and Procedures, which are construction and mitigation measures developed in collaboration with other federal and state agencies to minimize the potential environmental impacts of the construction of pipeline projects in general. See section 2.2 (“Construction Procedures”) for an expanded
list of the procedures Golden Pass would implement during construction and restoration of the Project.

Healthy Gulf reiterated and broadened its previous scoping comments regarding groundwater, wetlands, and environmental justice and maintains that the “No-Action Alternative” is the preferred alternative to Project approval. The “No-Action Alternative” is addressed in section 3.2.

We received comments on the draft EIS from Golden Pass, requesting edits and additions to the EIS, including a request for clarification of the initial date of submission for the CP21-1-000 (MP66-69 Compression Relocation and Modification Project) and updated comments from the Choctaw Nation of Oklahoma. Because CP21-1-000 and CP21-458-000 were submitted individually by Golden Pass on October 2, 2020 and May 19, 2021, respectively, Golden Pass also requested that the Commission promptly issue an Environmental Assessment and an Order authorizing the construction and operation of the MP69 Project. In the alternative, Golden Pass requests expedited issuance of a Final EIS in Docket Nos. CP21-1-000 and CP21-458-000, to allow Golden Pass to proceed with construction of the facilities necessary to receive gas delivered from the Gulf Run Project facilities currently under construction. We issued the Final EIS in Docket Nos. CP21-1-000 and CP21-458-000 consistent with the publically issued schedule for the Amendments, and therefore consider this comment resolved.

### 1.5 Permits, Approvals, and Regulatory Requirements

Golden Pass is responsible for obtaining all federal permits and approvals required for construction and operation of the Project. Examples of permits and consultations include the Clean Air Act (CAA), Clean Water Act (CWA), Endangered Species Act, Migratory Bird Treaty Act (MBTA), and the National Historic Preservation Act (NHPA). Each of these statutes has been taken into account in the preparation of this EIS.

A list of major federal and state environmental permits, approvals, and consultations for the Project is provided in table 1.4-1. Golden Pass would be responsible for obtaining all permits and approvals required to construct and operate the Project, regardless of whether or not they appear in this table.

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<thead>
<tr>
<th>Agency</th>
<th>Permit, Approval, or Consultation</th>
<th>Status</th>
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<tbody>
<tr>
<td>FEDERAL</td>
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<tr>
<td>Federal Energy Regulatory Commission</td>
<td>Natural Gas Act Section 7</td>
<td>Pending</td>
</tr>
<tr>
<td>Agency</td>
<td>Permit, Approval, or Consultation</td>
<td>Status</td>
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<tr>
<td>U.S. Army Corps of Engineers (USACE), New Orleans, Louisiana District</td>
<td>Clean Water Act Section 404 Permit</td>
<td>Receipt of USACE Permit No. SWG-2004-02118, November 16, 2016.</td>
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<tr>
<td>U.S. Fish &amp; Wildlife Service</td>
<td>Section 7 of the Endangered Species Act, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act</td>
<td>Consulted on the 2016 FEIS. No significant changes in habitat or species potential identified beyond those previously evaluated.</td>
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**STATE of LOUISIANA**

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</thead>
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<tr>
<td>Louisiana Department of Environmental Quality (LDEQ) – Air Quality Division</td>
<td>Minor New Source Review (NSR) permit for MP69 Compressor Station</td>
<td>Submitted April 1, 2021.</td>
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<tr>
<td>Louisiana Department of Environmental Quality – Water Quality Division</td>
<td>Section 401 Clean Water Act Water Quality Certification</td>
<td>N/A – No impacts to wetlands or waterbodies</td>
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<tr>
<td></td>
<td>Louisiana Pollutant Discharge Elimination System General Permit LAG670000 – Hydrostatic Test Water Discharge Permit</td>
<td>Anticipated submittal 30 days prior to testing</td>
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<tr>
<td>Louisiana Department of Wildlife and Fisheries</td>
<td>Threatened and Endangered Species Consultation</td>
<td>No significant changes in habitat or species potential identified beyond those previously evaluated. Amendment modifications reviewed concurrent with USACE NWP 12 Authorization.</td>
</tr>
<tr>
<td>Louisiana Department of Culture Recreation and Tourism/ State Historic Preservation Officer</td>
<td>Section 106 National Historic Preservation Act Consultation</td>
<td>Consultation concurrence received October 7, 2019 for proposed GPX Pipeline modifications.</td>
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**STATE of TEXAS**

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<th>Agency</th>
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<tr>
<td>Texas Commission on Environmental Quality</td>
<td>Minor New Source Review (NSR) Permit</td>
<td>Applicability to be determined</td>
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<td>Title V and Prevention of Significant Deterioration (PSD) Permit</td>
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<tr>
<td>Agency</td>
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<tr>
<td>Railroad Commission of Texas and Texas General Land office</td>
<td>Texas Natural Resource Code Section 91.101 and Texas Water Code Section 26.131 Water Quality Certification</td>
<td>Received August 22, 2016.</td>
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<td>Railroad Commission of Texas and Texas General Land office</td>
<td>Coastal Zone Management Act (CZMA) Section 307 Application for Determination of Consistency with the Texas Coastal Management Program</td>
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<tr>
<td>Railroad Commission of Texas and Texas General Land office</td>
<td>Hydrostatic Test Water Discharge Permit Anticipated submittal during</td>
<td>Hydrostatic Test Water Discharge Permit Anticipated submittal during</td>
</tr>
<tr>
<td>Texas Parks and Wildlife Department</td>
<td>Threatened and Endangered Species Consultation</td>
<td>Consulted on the 2016 FEIS. No significant changes in habitat or species potential identified beyond those previously evaluated.</td>
</tr>
</tbody>
</table>
2 DESCRIPTION OF THE PROPOSED ACTION

2.1 Proposed Facilities

The Project would involve the relocation, modification, and elimination of certain pipeline facilities previously approved by the Commission, but not yet completed, as part of the Pipeline Expansion Project (Docket No. CP14-518-000).

The MP66-69 Compression Relocation and Modification Amendment would consist of the following facilities in Calcasieu Parish, Louisiana (CP21-1-000):

- relocating the approved compressor station at MP66 approximately 3 miles, to MP69;
- increasing compression from 92,590 hp at the previously approved MP66 Compressor Station to 102,623 hp for the MP69 Compressor Station; and
- minor changes to approved interconnect modifications at MP68 (Transco Interconnection).

The MP33 Compressor Station Modification Amendment would consist of the following facilities in Orange County, Texas (CP21-458-000):

- relocating the MP33 Compressor Station approximately 50 feet north-northwest to avoid an existing pipeline right-of-way based on a landowner request;
- increasing the authorized compression at the MP33 Compression Station from 17,994 hp to 37,101 hp; and
- constructing three new interconnects and appurtenant facilities adjacent to the MP33 Compressor Station: one interconnect with Midcoast Pipelines L.P., an existing Texas intrastate pipeline that would expand its system to deliver gas on Golden Pass’s system, and two interconnects with Golden Triangle Storage, Inc., a jurisdictional storage provider, that would enable deliveries from and receipts into Golden Pass’s system.

Facilities that would be removed from the previously approved Pipeline Expansion Project include elimination of:

- approximately 3.0 miles of 24-inch-diameter looping facilities between MP66 and MP69 in Calcasieu Parish, Louisiana (Calcasieu Loop), to reflect the relocation of the MP63 Compressor Station;
- previously approved modifications to the existing Tennessee Gas Interconnect (MP63) and existing Texas Eastern Transmission LP Interconnect (MP66), as these facilities are no longer planned as receipt points;
- Tennessee Gas Pipeline Company, L.L.C. (Tennessee Gas) as an input source to Golden Pass Pipeline; and
- receipt stations at the existing Texoma delivery interconnect at MP33 on Golden Pass’s existing system.
Figures 2.1-1 and 2.1-2 provide overview maps of the Project.

### 2.1.3 Land Requirements

Land requirements for construction of the proposed MP69 Compressor Station modifications total about 43.8 acres, with operation requiring 25.4 acres. Temporary workspace would be needed adjacent to the MP69 Compressor Station. In addition, the minor piping changes at the Transco Interconnection would result in a minor footprint change. As such, the Project footprint would be limited to the areas immediately surrounding these facilities.

Golden Pass would use an existing road to access the Transco Interconnection in Calcasieu Parish, Louisiana. The existing road from Highway 12 to the existing Transco Interconnect facility is about 3,500 feet (0.7 mile) long. The existing road would need to be extended to reach the MP69 Compressor Station, requiring about 1,016 feet (0.2 mile) of new road. During construction, Golden Pass plans to use one temporary access road, an existing logging road, if there are activities blocking the main access road from Highway 12.

Table 2.1.3-1 identifies the land requirements for the Project in Calcasieu Parish, Louisiana.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Temporary Impact During Construction (acres)</th>
<th>Permanent Impact During Operation (acres)</th>
<th>Total Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transco Interconnection (MP68)</td>
<td>0.0</td>
<td>3.7</td>
<td>3.7</td>
</tr>
<tr>
<td>MP69 Compressor Station</td>
<td>16.0</td>
<td>18.4</td>
<td>34.4</td>
</tr>
<tr>
<td>Access Roads</td>
<td>2.4</td>
<td>2.0</td>
<td>4.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18.4</strong></td>
<td><strong>25.4</strong></td>
<td><strong>43.8</strong></td>
</tr>
</tbody>
</table>
FIGURE 2.1-1: PROJECT LOCATION IN CALCASIEU PARISH, LOUISIANA
FIGURE 2.1-2: PROJECT LOCATION IN ORANGE COUNTY, TEXAS
As currently authorized, land requirements of the facilities in Orange County, Texas include 13.4 acres for construction and an additional 10.2 acres for operations. The proposed MP33 Compressor Station modifications would result in a minor increase of the Project footprint, with construction requiring 20.1 acres, not including the pipe and contractor yard. Operation of the facilities would require 13.7 acres. Table 2.1.3-2 identifies the land requirements for the Project in Orange County, Texas.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Temporary Impact During Construction (acres)</th>
<th>Permanent Impact During Operation (acres)</th>
<th>Total Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP33 Compressor Station</td>
<td>0.0</td>
<td>8.6</td>
<td>8.6</td>
</tr>
<tr>
<td>GTS1 LP and HP2 Meter Stations</td>
<td>0.0</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Access Roads</td>
<td>0.3</td>
<td>0.8</td>
<td>1.1</td>
</tr>
<tr>
<td>Stormwater Ponds and Conveyances</td>
<td>0.0</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Interconnects (Pipeline Corridor)</td>
<td>0.0</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Temporary Workspace</td>
<td>6.1</td>
<td>0.0</td>
<td>6.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6.4</strong></td>
<td><strong>13.7</strong></td>
<td><strong>20.1</strong></td>
</tr>
</tbody>
</table>

1 Golden Triangle Storage, Inc. (GTS)  
2 Horsepower (HP)

Golden Pass proposes to use a 75-foot-wide right-of-way for construction of the facilities. All of the land on which the modification in Calcasieu Parish, Louisiana and Orange County, Texas would be located is owned by Golden Pass. Accordingly, the Project would not adversely affect landowners.

2.1.4 Non-Jurisdictional Facilities

Occasionally, proposed projects have associated facilities that do not come under the jurisdiction of the Commission. These non-jurisdictional facilities may be integral to the need for the proposed facilities (e.g., a 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 as a result of the proposed facilities. Under Section 7 of the NGA, the Commission is required to consider, as part of its decision to authorize jurisdictional facilities, all factors bearing on the public convenience and necessity.
There is one non-jurisdiction powerline associated with the Project in Calcasieu Parish, Louisiana. Electrical power for the MP69 Compressor Station’s high-pressure turbines and compressors, low pressure turbines and compressors, air-cooled heat exchangers, lights, offices, telecommunications, etc. would be powered by local grid-utilities from a third-party utility company. The powerline is an approximate 0.5-mile, new non-jurisdictional powerline extending from an existing line located approximately 0.5 mile south of the proposed MP69 Compressor Station location. The new powerline and associated transformer would be constructed by Cleco Power LLC. The construction of the powerline is under state and local jurisdiction. The power provider would obtain all necessary federal and state permits prior to the construction of the powerline.

There are two non-jurisdictional facilities associated with the proposed modifications in Orange County, Texas. Midcoast Pipelines would construct and operate its own meter station, the Midcoast Pipelines Meter Station, an intrastate non-jurisdictional facility. In an effort to reduce overall environmental impacts to the region, prior to construction of the Midcoast Pipelines Meter Station, Golden Pass would utilize its future location for temporary workspace in support of construction of the MP33 Compressor Station. The main electrical power source for the MP33 Compressor Station would be Entergy Texas, Inc. via a new non-jurisdictional powerline extension from an established service line.

2.2 Construction Procedures

The new Project facilities would be designed, constructed, tested, operated, and maintained to conform with or exceed federal, state, and local requirements, including the U.S. Department of Transportation’s (USDOT) regulations in 49 CFR 192, Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards; FERC’s Siting and Maintenance Requirements in 18 CFR 380.15; and other applicable federal and state safety regulations. During construction and restoration of the Project, Golden Pass would implement the measures contained in the following plans, in addition to other federal, state, and local permit requirements:

- FERC’s *Upland Erosion Control, Revegetation, and Maintenance Plan* (FERC Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (FERC Procedures);
- Hydrostatic Test Plan;
- Spill Prevention, Control, and Countermeasures Plan (SPCC Plan);
- Unanticipated Discovery Plan for Contaminated Media;
- Decommissioning Plan;
- Soil Sampling Plan;
- Stormwater Pollution Prevention Plan; and
- Plan for the Unanticipated Discovery of Historic Properties or Human Remains, during Construction (Unanticipated Discovery Plan).
Prior to initiating construction-related activities, Golden Pass would contact the “Louisiana 811” system of Louisiana, and “Texas 811” in Texas, and underground utilities would be located and flagged by their respective operators. Golden Pass would also perform utility locating at other areas suspected of containing underground features. Construction of the Project would involve operation of general construction equipment and noise would be generated during installation of the Project components. Construction activities would occur primarily during daytime hours but may extend until 10pm based on Golden Pass’s proposed work schedule.

2.3 Environmental Compliance and Monitoring

Golden Pass would have at least one environmental inspector (EI) assigned to each Project area during active construction and restoration. The EI would have peer status with all other activity inspectors and would report directly to the Chief Inspector. The EI’s duties would be consistent with those contained in FERC’s Plan and Procedures and would have the authority to stop activities that violate the environmental conditions of the FERC Certificate and other federal and state permits or landowner requirements, and to order corrective action. In addition, FERC staff would maintain compliance oversight of the Project throughout construction and restoration.

2.4 Operation and Maintenance

Following completion of construction of the Project, operation of the new Project facilities would be conducted by existing Golden Pass employees. Facilities would be maintained and inspected in accordance with applicable pipeline safety regulations. The Project facilities would be designed, constructed, tested, operated, and maintained in the same manner as previously approved by the Commission and discussed in the 2016 FEIS.

Golden Pass would not begin construction of the Project until the receipt of all necessary approvals and authorizations, including those under the December 21, 2016 Order that are applicable. The proposed modifications for the Project would not result in changes to the construction and restoration procedures described in the 2016 FEIS. As detailed in the 2016 FEIS, Best Management Practices (BMPs) in the FERC Plan, FERC Procedures, and the Project’s SPCC Plan would be followed to avoid and minimize potential impacts. Following construction, Golden Pass would follow U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS) recommendations for revegetation of temporarily disturbed areas.
3 ALTERNATIVES

3.1 Introduction

In accordance with NEPA and Commission policy, we identified and evaluated alternatives to the specific natural gas transmission facilities proposed by the applicant. Specifically, we evaluated the no action and compressor site alternatives.

Alternatives were evaluated using a specific set of criteria. The evaluation criteria applied to each alternative include a determination whether the alternative:

- ability to meet the objectives of the proposed project;
- technical and economic feasibility and practicality; and
- offers a significant environmental advantage over the proposed project.

3.2 No-Action Alternative

Under the no-action alternative, the Project would not be completed. It is reasonable to expect that if the Project is not constructed (the no-action alternative), Golden Pass could instead construct the Pipeline Expansion Project as authorized by the December 21, 2016 Order in Docket No. CP14-518-000. Thus, although the environmental impacts associated with constructing and operating the proposed Project would not occur under the no-action alternative, similar impacts could occur as described in the 2016 FEIS. Such actions would likely result in the transference of impacts from one location to another but would not eliminate or significantly reduce impacts.

In Calcasieu Parish, Louisiana, implementation of Project modifications would result in reduced effects on land use types as compared to the analysis of the certificate pipeline facilities as presented in the 2016 FEIS. Construction and operation of the Project in Calcasieu Parish, Louisiana would reduce impacts to forested lands by 2.0 acres and to open land by 3.3 acres. Agricultural lands would see a reduction in impacts by 9.8 acres, while industrial/commercial lands would see a reduction of 8.1 acres. In total, the no-action alternative would avoid the 23.2 acres of reduced impacts on these land use types as proposed by the Project in Louisiana. The 2016 FEIS analyzed the impacts of building the Calcasieu Loop. As noted earlier, the Project modifications eliminates the Calcasieu Loop, which would have consisted of approximately three miles of pipeline looping along the route of the current Golden Pass’s system. It was determined that 22 acres would be impacted by construction and 11 acres for final operation. Additionally, siting for the Calcasieu Loop would require crossing one intermediate and two minor waterbodies. As part of the Project modifications, the Calcasieu Loop would be eliminated, reducing impacts on the three waterbodies as well as 22 acres of land. With the lower impacts on land use, the Project would be more environmentally preferable to the no-action alternative, which would include construction of the approved facilities it would be replacing.
In Orange County, Texas, implementation of Project modifications would result in a slight increase in effects on land use types as compared to the analysis of the certificate pipeline facilities as presented in the 2016 FEIS (i.e., the no-action alternative). The proposed MP33 Compressor Station modifications would result in a minor increase of the Project footprint. For the no action alternative, as currently authorized, land requirements of the facilities in Orange County, Texas include 3.2 acres for construction and an additional 10.2 acres for operations as detailed in tables 2.3-1 and 4.8.1-1 of the 2016 FEIS. Approximately 6.4 acres of temporary land would be required during construction and 13.7 acres would be required during operations of the proposed facilities in Orange County, Texas. While the no-action alternative would have less environmental effects than the proposed project, the stated objectives of the MP 33 amendment proposal would not be met. Further, the natural gas shippers could seek alternative transportation infrastructure that would impact similar resources as the Project. Modifications to the MP33 Compressor Station would better meet the needs of the landowner with the minimal increase on land use. Therefore, we find the proposed facility location preferable to the approved facilities it would be replacing.

Under the no-action alternative, Golden Pass would not construct or operate the MP66-69 Compression Relocation and Modification Amendment and MP33 Compressor Station Modification Amendment Project, and none of the reductions to environmental impacts associated with the modifications would occur. In addition, the no-action alternative does not meet the new supply arrangements and the resulting engineering design, including pipeline hydraulics and delivery pressure requirements. Implementing the no-action alternative would result in greater impacts on the environment and would not allow Golden Pass to meet the objectives of the Project. Therefore, we do not recommend the no-action alternative.

3.2 Compressor Site Alternatives

In the consideration of alternative locations for the MP69 Compressor Station, our review of the Project found that environmental impacts associated with the compressor station construction and operation have been minimized. In the consideration of alternative locations for the MP33 Compressor Station, we found that the proposed site would better meet the needs of the landowner with the minimal increase on land use. Based on the limited environmental impact associated with this Project, we did not identify any unresolved resource conflicts that would present a need to examine further site or system alternatives. Additionally, no comments were received regarding resources that would be impacted by the Project that would drive further evaluation of siting alternatives. Because the impacts associated with the Project are not significant, we did not evaluate additional alternative compressor station sites.

We received a comment suggesting the Project replace the gas-fired compressor units with electric compressor units to minimize air pollution and noise. Commission staff previously analyzed the use of electric-powered compressors and purchased power
as an alternative to the proposed gas-fired compressors in the 2016 FEIS. As detailed in the 2016 FEIS, to ensure power reliability, Golden Pass states that two electrical transmission lines from separate electrical power subsystems would be required for each compressor station (in case one subsystem were to shut down) or one electrical transmission line paired with an emergency generator and storage facilities for diesel fuel. Additional infrastructure at the compressor station locations could include a substation and/or switching station to reduce the high-voltage power from the electrical lines to a level usable by the compressor stations. The additional facilities would increase land affected by the Project and add to visual impacts.

Replacing the gas-fired compressor units with electric-driven compression would eliminate most of the localized emissions from the compressor stations and may also reduce noise emissions, but it would increase the power demand from the regional electric transmission grid which could result in similar emissions from power generating stations. We note that comparisons between gas-fired compressor emissions and electric grid-sourced emissions are complicated because there would be differences in the contributing fossil fuel-fired generating stations: they may use gas, oil, or coal for fuel; they would have different plant configurations (simple cycle or combined cycle power generation); and the power plants would likely have different emission control and scrubber systems. Furthermore, power that is supplied to the electric grid could be sourced to some degree from solar or wind facilities which would reduce the carbon footprint in power generation. Considering these factors, we cannot with certainty determine whether replacing gas-fired compressors with electric-driven compressors would achieve a reduction in GHG emissions in the near-term. As provided in the 2016 FEIS, Golden Pass estimated that emissions associated with purchased power would average about 4 percent higher than those of the proposed gas-driven compressors. However, with the large number of variables in the estimates, we anticipate that there would not be a substantial difference in the GHG and other emissions between the two alternative methods of providing power to the compressor stations. Therefore, we cannot conclude that the use of purchased electric power for operating the compressor stations would offer a significant environmental advantage over the proposed natural gas-fired compressors.

3.3 Alternative Conclusions

We considered alternatives to Golden Pass’s proposal and conclude that no compressor site alternatives would provide a significant environmental advantage over the Project as proposed. Therefore, we conclude that the Project, with our recommended mitigation measures, is the preferred alternative to meet the Project objectives.
4 Environmental Analysis

This section of the final EIS provides our analysis of impacts on the affected environment as it currently exists and the environmental consequences of construction and operation of the Project. The section is organized by the following major resource topics: geology and soils; water resources and wetlands; vegetation, wildlife and threatened and endangered species; cultural resources; land use, special interest areas, and visual resources; socioeconomics and environmental justice; air quality and noise; and reliability and safety.

When considering the environmental consequences of the Project, the duration and significance of any potential impacts are described below according to the following four levels: temporary, short-term, long-term, and permanent. Temporary impacts generally occur during construction, with the resources returning to pre-construction conditions almost immediately. Short-term impacts could continue for up to three years following construction. Long-term impacts would require more than three years to recover, but eventually would recover to pre-construction conditions. Permanent impacts could result because of activities that modify resources to the extent that they would not return to preconstruction conditions during 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.

The analysis contained in this final EIS is based upon Golden Pass’s applications and supplemental filings, our experience with the construction and operation of natural gas transmission infrastructure. Additionally, if the Project is approved and proceeds, it is not uncommon for a project proponent to request minor modifications (e.g., minor changes in workspace configurations). These changes are often identified by a project proponent once on-the-ground implementation of work is initiated. Any Project modifications would be subject to review and approval by FERC and any other applicable permitting/authorizing agencies with jurisdiction.

As part of its proposal, Golden Pass developed certain mitigation measures to reduce the environmental impact of the Project. In some cases, we determined that additional mitigation measures could further reduce the Project’s impacts. Our additional mitigation measures appear as bulleted, boldfaced paragraphs in the text of this section and are also included in section 5.2. We will recommend to the Commission that these measures be included as specific conditions in any Order the Commission may issue authorizing this Project. The conclusions in the EIS are based on our analysis of the environmental impact and the following assumptions:

- the proposed facilities would be constructed and operated as described in section 2.0 of the EIS;
- Golden Pass would implement the mitigation measures included in its application and supplemental submittals to the FERC; and
Golden Pass would comply with our recommended mitigation measures, listed in section 5.2.

4.1 Baseline Environmental Trends and Cumulative Effects

The Project is in subtropical southwest Louisiana and southeast Texas, a result of its location on the Gulf of Mexico. As it also lies at the mouth of the vast Mississippi-Missouri river valley, the climate in the Project region is characterized as having hot, humid summers with mild winters. The Project area is subject to tropical storms, with a hurricane season extending for six months, from June through November. Over the course of a year, the temperature typically varies from an average high in July of 91° F to an average low in January of 42° F. The majority of the precipitation occurs in summer, with approximately 57.5 inches of precipitation per year.

The Project area is located in Calcasieu Parish, Louisiana and Orange County, Texas. The Sabine River serves as part of the border between this area of Louisiana and Texas, and flows through the pine forests along the border, emptying into Sabine Lake, an estuary of the Gulf of Mexico. The marshlands along the Louisiana and Texas coasts provide breeding grounds and nurseries for ocean life that drive the fishing and shrimping industries. The affected environment, as defined in NEPA (40 CFR 1502.15), includes a succinct description of the environment of the area to be affected or created by the alternatives under consideration, including the reasonably foreseeable environmental trends and planned actions in the area. The traditional industries of southeastern Texas and southwestern Louisiana include agriculture, petroleum, and tourism. Oil industry development in the 20th century resulted in improving access by roads and waterways, causing damage to the region by dredging and straightening of waterways. The damage to the wetlands that used to absorb water and storms have left the region more vulnerable to flooding and erosion (Brasseaux 2011).

The over-all environment surrounding the Project consists of industrial land or maintained right-of-way, upland areas used for silviculture (pine plantations), and interspersed wetlands. General activities on the lands in the vicinity of the Project have included construction of the existing Golden Pass Pipeline; construction and maintenance of existing roads, railroads, and natural gas and oil pipelines; and agricultural and commercial forestry processes. Healthy Gulf and South Wings commented that the EIS should include a cumulative analysis of the natural gas facilities in the area. Table 4.13.1-1 of the 2016 FEIS provides the present and reasonably foreseeable future actions in the greater area surrounding the Project, including near the terminal and pipeline lateral. An additional discussion is presented below.

4.1.1 Cumulative Effects

In accordance with NEPA and with FERC policy, we identified other actions in the vicinity of the proposed Project facilities and evaluated the potential for a cumulative
impact on the environment. As defined by the Council on Environmental Quality (CEQ), a cumulative effect is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of the agency or party undertaking such other actions. Cumulative impacts can result from individually minor, but collectively significant actions, taking place over time. The CEQ guidance states that an adequate cumulative effects analysis may be conducted by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions.

In this analysis, we consider the impacts of past projects within defined geographic scopes as part of the affected environment (environmental baseline) which were described and evaluated in the preceding environmental analysis. However, present effects of past actions that are relevant and useful are also considered. Our cumulative effects analysis focuses on potential impacts from the proposed project on resource areas or issues where the incremental contribution could result in cumulative impacts when added to the potential impacts of other actions. To avoid unnecessary discussions of insignificant impacts and projects and to adequately address and accomplish the purposes of this analysis, an action must first meet the following three criteria to be included in the cumulative analysis:

- affects a resource also potentially affected by the Project;
- causes this impact within all, or part of, the Project area defined by the resource specific geographic scope; and
- causes this impact within all, or part of, the time span of the Project’s estimated impacts.

As described in section 4 of this final EIS, constructing and operating the Project would temporarily and permanently affect the environment. However, with the exceptions noted below, we concluded that most of the Project-related impacts would be contained within or adjacent to the temporary construction workspaces, existing pipeline and roadway corridors, or utility easements. Based on this, along with the proposed minimization and mitigation measures described in Golden Pass’s construction procedures, we have concluded that most of the Project impacts would be limited to workspaces and adjacent areas.

Resources that could be affected outside the immediate Project area and are subject to our cumulative impacts review include groundwater, surface water, wildlife, visual resources, wetlands, vegetation, noise, and air quality. However, for some resources, the contribution to regional cumulative impacts is lessened by the expected recovery of ecosystem function. For example, erosion control measures included in FERC’s Plan would keep disturbed soils within the work areas and would therefore not contribute to cumulative impacts on soil or geological resources. Additionally, we determined that the temporary nature of construction activities and the minor increase in noise levels over ambient would not result in significant noise impacts during construction of the Project. Although the MP 69 Compressor Station would result in a
permanent perceptible noise increase in the Project area during operations, noise modeling indicates that levels would be below FERC criterion of 55 dBA day-night sound level (L_{dn}), which protects the public from indoor and outdoor activity interference, and therefore would not result in significant noise impacts on local residents and the surrounding environmental justice community. There would be no impact to cultural resources, as no cultural resources were identified within the modified footprint. There would be a negligible socioeconomic benefit including employment and taxes. Due to the short construction timeframe, it is anticipated that the need for additional non-local works would be minimal and any tax increases temporary.

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

- impacts on groundwater, surface water, wetlands, vegetation and wildlife were assessed within the watershed boundary [Hydrologic Unit Code (HUC) 12];
- impacts on air quality were assessed within 50 km of the Project for operations, and for construction emissions, during construction, including fugitive dust, would be largely limited to areas immediately around active construction. We searched for other projects and actions that overlap in time and are located within 0.25 mile of construction activities; and
- impacts to land use were assessed within 1 mile of the Project;
- impacts to visual resources were assessed based upon the proximity of Project facilities to visually sensitive areas and residential areas; and,
- impacts to noise were assessed within 0.5 mile of the Project based upon construction noise impacts and operational noise from aboveground facilities.

**Planned Activities**

The actions considered in our cumulative impact analysis may vary from the Project in nature, magnitude, and duration. These actions are included based on the likelihood of their impacts coinciding with the Project, meaning the other actions have current or ongoing impacts or are “reasonably foreseeable.” The actions we considered are those that could affect similar resources during the same timeframe as the Project. Multiple projects were identified as possible contributors to cumulative impacts in the area, these are listed in table 4.13.1-1 of the 2016 FEIS.

Since the 2016 FEIS was issued, a third-party compressor station was constructed near MP69 Compressor Station and is currently in operation. Cumulative noise levels will meet FERC threshold requirements and cumulative air emissions will meet LDEQ permit limits. No significant cumulative impacts are anticipated.
Other than the Gulf Run Pipeline project, no planned projects have been identified in the area of the proposed modifications in Calcasieu Parish that could potentially result in cumulative effects. Enable Midstream Partners is proposing to build the Gulf Run Pipeline, a new 170-mile interstate natural gas transmission pipeline in Louisiana. The new, approximately 170-mile pipeline would run from Westdale, Louisiana to Starks, Louisiana and is anticipated to be in-service by late 2022. Any overlap in construction of the Gulf Run Pipeline would be short-term and limited to the area near the MP 69 Compressor Station and Gulf Run Interconnect and Meter Station. Since the Gulf Run Pipeline project will also be regulated by FERC, it will be required to adhere to similar BMPs and federal and state permitting requirements as the Project. No significant cumulative impacts are anticipated.

As discussed in section 2.1.4, an approximately 0.5-mile long, non-jurisdictional powerline will be constructed and owned by Cleco to power the proposed MP 69 Compressor Station site. Although construction of the powerline will likely overlap with construction of the pipeline facilities in Calcasieu Parish, BMPs would be implemented during construction and operations in accordance with all federal, state, and local requirements. Due to the short construction timeframe and routine nature of installation of powerlines, it is anticipated that potential cumulative impacts will be negligible; however, there would be resource impacts from the construction and operation of the powerline.

Planned projects which have been identified in the area of the proposed modifications at MP33 Compressor Station in Orange County, Texas that could potentially result in cumulative effects include the CJ Express Project proposed by Midcoast Energy, LLC., the GTS Lateral Project by Golden Triangle Storage (GTS), Incorporated, and Entergy Texas, Inc.‘s planned powerline to the MP33 Compressor Station, introduced in section 2.1.4.

Midcoast Energy, LLC, has entered into a commercial agreement to provide transportation of natural gas supplies from East Texas to the Texas Gulf Coast. Completed in April 2021 and known as the CJ Express Project, it includes construction of the Midcoast Pipelines Meter Station as a delivery point along an existing pipeline system. Any overlap in construction of the CJ Express facilities would be short-term and limited to the area near the MP33 Compressor Station where the Midcoast Pipelines Meter Station will be constructed. In an effort to reduce overall environmental impacts to the region, Golden Pass would use 1.6 acres of the Midcoast Pipelines Meter Station’s land use for temporary workspace, limiting potential cumulative impacts to vegetation and land use from construction. The CJ Expansion Project, including the Midcoast Pipelines Meter Station, consists of an intrastate pipeline system and is non-FERC jurisdictional. The Midcoast Pipelines Meter Station has been sited to avoid any sensitive resources (e.g., wetlands, waterbodies, cultural resources, protected species). No significant cumulative impacts are anticipated.
Construction of the GTS Lateral Project, proposed by Golden Triangle Storage, is anticipated to begin in the second or third quarter of 2023 and last approximately 18 weeks. Although construction of the GTS Lateral project would overlap with construction of the Golden Pass Pipeline, any potential cumulative impacts would be short-term and minor, limited to the area near the GTS Meter Stations. The GTS Lateral project would be required to adhere to the FERC Plan and Procedures and no significant cumulative impacts are anticipated.

The main electrical power source for the MP33 Compressor Station would be provided by Entergy Texas, Inc. via a new, 0.2 mile long, non-jurisdictional powerline extension from an established service line on Church House Road. The new powerline would require approximately 1.5 acres of land; however, of the 1.5 acres of land, 0.8 acres overlaps with the proposed footprint of the Project. Although construction of the powerline will likely overlap with construction of the facilities in Orange County, BMPs would be implemented during construction and operations in accordance with all federal, state, and local requirements. Due to the short construction timeframe, it is anticipated that potential cumulative impacts will be negligible to minor. No significant cumulative impacts are anticipated.

The anticipated cumulative impacts of the Project and these other actions are discussed below.

Groundwater

Construction of Project facilities would result in minor impacts on groundwater infiltration due to vegetation clearing. Groundwater wells would be installed at the MP33 and MP69 compressor stations; however, groundwater use would be minimal. BMPs in the SPCC Plan would be adhered to during construction for groundwater protection. Groundwater use would not be required to construct and operate the new powerlines, and no groundwater use would be required during operations of the planned pipelines and meter stations in proximity to the Project facilities; Midcoast Pipeline Meter Station. Therefore, cumulative impacts on groundwater would be limited to the construction of the MP33 and MP69 compressor stations, as well as the planned pipelines and meter stations, which would be temporary and minor. We conclude that through adherence to the FERC Plan, Golden Pass would prevent impacts from spills of fuels or other hazardous materials and conclude that any cumulative impact on groundwater would be negligible.

Surface Water and Wetlands

For the analysis of cumulative impacts on waterbodies and wetlands, we identified projects occurring within the HUC-12 watersheds crossed by the Project. Other projects identified within the geographic scope (HUC-12) that are could impact waterbodies or wetlands to some extent include the Gulf Run Pipeline and Meter Station, CJ Express
Project and Midcoast Pipelines Meter Station, the GTS Lateral Project, and the non-jurisdictional powerline facilities.

Golden Pass performed waterbody surveys of the Calcasieu Parish, Louisiana Project area and did not identify any waterbodies within the Project facilities. The non-jurisdictional powerline serving the MP69 Compressor Station would cross one waterbody approximately 10 to 14 feet wide. Although equipment may need to pass through the waterbody during construction of the powerline, power pole placement would occur outside of the waterbody. There are no waterbodies located within the footprint of the proposed modifications in Orange County, Texas. Golden Pass would construct one permanent and two temporary retention ponds to settle suspended sediments and other solids from stormwater runoff and mitigate potential sedimentation and turbidity. Since waterbodies would not be crossed by the Project and BMPs would be employed to reduce impacts to adjacent areas, we conclude that construction and operation of the Project would not result in significant cumulative impacts on waterbodies.

Golden Pass conducted wetland surveys of the proposed Project in Calcasieu Parish, Louisiana and did not identify any wetlands within the Project facilities. The non-jurisdictional powerline serving the MP69 Compressor Station would not affect any wetlands. The proposed amendment would result in a reduction in wetland impacts by 1.8 acres from those analyzed in the 2016 FEIS. Similarly, construction and operation of the proposed Project in Orange County, Texas would result in an overall reduction of wetland impacts by 0.1 acre from what was analyzed in the 2016 FEIS for the proposed MP33 compressor station modifications. There are palustrine emergent (PEM) and palustrine forested (PFO) wetlands located within the footprint of the certificated MP33 Compressor Station. The Interconnects, Meter Stations, and access road are all located outside of wetland areas (see section 4.3.4 and Table 4.3.4-1 for a detailed analysis of Wetlands within the Project area). Construction impacts on wetlands range from short-term to permanent depending on the type of wetlands impacted and the type of facility being constructed. Emergent wetlands would revert back to similar preconstruction community and functionality within about 1 to 3 years. Permanent impacts on forested wetlands would occur due to conversion to a different type of wetland; however, these wetlands would retain hydrologic function as a wetland.

There will be no impacts to wetlands by construction or operation of the Midcoast Pipelines Meter Station. All projects would be required to obtain permits for erosion and sediment control and water use and discharge, and would implement their various erosion control plans as mandated by permit requirements. In addition, BMPs would be in place during construction to avoid and minimize the potential for wetland impacts. Therefore, cumulative impacts on waterbodies would be temporary and mostly limited to construction activities associated with the projects.

Based on the reduction of wetland impacts from the 2016 FEIS analysis, minimal amount of wetland impact overall in the context of existing wetlands in the area, and the requirement for mitigation for impacts, we conclude that the temporary and limited
permanent impacts on wetlands from the Project would be minor. Therefore, we conclude that the Project would not contribute to adverse cumulative impacts on wetland resources.

**Vegetation and Wildlife**

We also used the HUC-12 watershed as the geographic scope for impacts on vegetation and wildlife. The construction activities associated with removal of vegetation and the potential for the establishment of invasive plant species occurring during the same timeframe and area can result in cumulative impacts. Changes in the vegetation can impact wildlife habitat and cause other secondary effects such as forest fragmentation.

The facilities associated with the Project involve construction adjacent to existing pipeline facilities, which minimizes the effects of vegetation clearing, particularly forest clearing and fragmentation. Similarly, construction and operation of the Gulf Run Pipeline and Meter Station, CJ Express Project, Midcoast Pipelines Meter Station, and GTS Lateral Project would be required to implement mitigation measures to minimize the potential for erosion, revegetate temporarily disturbed areas, and control the spread of noxious weeds. If federal or state-listed threatened and endangered species might be affected, these impacts would be addressed in permits or clearances issued for each project and appropriate mitigation to minimize these impacts would be implemented as needed. Given the minor, temporary impacts on vegetation and wildlife from the Project, we conclude that the Project would not contribute significant cumulative impacts on vegetation or wildlife.

**Land Use**

Projects with permanent aboveground components, such as buildings, residential projects, and roads, and aboveground electric transmission lines generally have greater impacts on land use than the operational impacts of a pipeline (including non-jurisdictional gathering lines for oil and gas development). Pipelines are generally buried and thus allow for most uses of the land following construction. The clearing of forest does have permanent land use and visual impacts, with land use conversion to herbaceous and shrub vegetation within the permanent operational easement of pipelines. Impacts on land use would be confined to the construction workspaces and surrounding areas. Land use impacts are negligible as all impacts for the Project would be within or collocated with existing Golden Pass-owned facilities and located in areas with existing oil and gas infrastructure.

The overall footprint of the Project would be reduced in Calcasieu Parish from that assessed in the 2016 FEIS. For properties along the Project that would have multiple pipelines crossing, the primary impact from the Project would be restriction on building overtop the easement. Additionally, Golden Pass would coordinate construction to minimize the total time a tract of land is disturbed. The new MP33 and MP69 meter stations would be located within view of residential areas, but they are on existing Golden Pass property and shielded by trees from the nearest residents.
The Midcoast Pipelines Meter Station would also be located within currently developed areas. It is anticipated that the Midcoast Pipelines Meter Station site would require the permanent conversion of approximately 1.4 acres of forested land. As highlighted above, in an effort to reduce the overall impacts to land use in the Project area, Golden Pass would use 1.6 acres of the Midcoast Pipelines Meter Station’s land use for temporary workspace, prior to construction of the Midcoast Pipelines Meter Station, limiting potential cumulative impacts to land use from construction.

The Project would not result in a significant change in the physical characteristics of the existing environment, and we conclude that there would not be cumulative impacts to land use due to the Project.

*Air Quality and Noise*

Based on the geographical scope of the 2016 FEIS cumulative impacts analysis, and the limited revisions proposed by the Project, cumulative impacts associated with construction and operation of the Project would remain consistent with those analyzed in the 2016 FEIS, for air quality and noise, with the exception of construction air quality, construction noise, and operational noise at the CSMP 69 Compressor Station. Based on the scope of Project activities, cumulative impacts to air quality associated with construction and operation of the MP33 Compressor Station would be consistent with those analyzed in the 2016 FEIS and are not discussed further.

The Gulf Run Pipeline project was identified beyond those analyzed in the 2016 FEIS for air quality and noise impacts. Enable Midstream Partners is proposing to build the Gulf Run Pipeline to provide a new interstate natural gas transmission pipeline in Louisiana and modify its existing assets to help meet growing global energy demand. The new, approximately 170-mile pipeline would run from Westdale to Starks, terminating at the Gulf Run Interconnect and Meter Station. The pipeline is anticipated to be in service by 2022; any overlap in construction of the Gulf Run Pipeline with the GPX Pipeline would be short-term and limited to the area near the MP 69 Compressor Station and Gulf Run Interconnect and Meter Station. Since the Gulf Run Pipeline project would also be regulated by FERC, it would be required to adhere to similar BMPs and federal and state permitting requirements as the GPX Project.

A powerline is to be constructed and owned by Cleco to the MP 69 Compressor Station site. The powerline would be approximately 0.5 mile and would be adjacent to the Transco Interconnect, initiating from an existing powerline. If construction of the powerline overlapped with construction of the GPX Pipeline facilities in Calcasieu Parish, BMPs would be implemented during construction and operations in accordance with all federal, state, and local requirements.
A third party compressor station owned by Transco has been constructed near the MP 69 compressor station site. Though not in operation at the time of the 2016 FEIS, it was in operation during Golden Pass’s updated air modeling analysis for the Project.

Construction of the Gulf Run Pipeline project and the non-jurisdictional powerline needed to power the facilities would require the use of heavy equipment that would generate emissions of air pollutants and fugitive dust and potentially contribute to cumulative impact to air quality. Fugitive dust emissions would settle quickly and dust suppression measures would be implemented at the Project site as necessary to ensure the Project-related effects from fugitive dust are intermittent and temporary and would occur within or very near the construction area. The potential cumulative impacts from the Project and recently completed, current, and reasonably foreseeable projects in the vicinity would be temporary and minor. Due to the timing of construction, minimization of fugitive dust as a result of the dust suppression measures, and the highly localized nature of construction emissions, we conclude there would be no significant cumulative impacts on air quality during construction.

Based on the modeling analysis, operational permits each facility would have to adhere to, we conclude that operation of the Project in conjunction with the 3rd party compressor station identified would not significantly effect cumulative air quality during operation.

Noise

Cumulative noise impacts during construction of the MP 69 Compressor Station could result if construction timelines of the Gulf Run project and minor powerline enhancement occur simultaneously; however, they would be short term and, temporary. The identified 3rd party compressor station was in operation at the time of the noise assessment for the Project, and included in ambient measurements in the Hoover and Keith report 4120 submitted with the application filing.

Based on the Project scope, temporary nature of construction activities, and limited operational updates, we conclude that the Project would not contribute significantly to cumulative impacts to noise during construction or operation of the Project. During operations, the cumulative noise impacts from the identified 3rd party compressor station, as well as the MP 69 compressor station would be within FERC criterion and would not significantly impact noise during operations.

Visual Resources

Oil industry development in the 20th century was a major change to the visual environment in the Project area. The addition of MP 69 and MP 33 compressor stations, along with several other planned development projects in the vicinity of the Project area, would further increase the visual prominence of oil and gas infrastructure. Visual impacts associated with the Project would be greatest during construction, with both heavy
equipment and disturbed soils present along the rights-of-way. Most of these impacts would be temporary, and would be remediated once post-construction restoration and revegetation efforts have been completed. Permanent visual changes would involve the construction of the aboveground facilities. In an effort to minimize permanent impacts on visual resources, Golden Pass sited the Project, where feasible, adjacent to existing pipeline and road rights-of-way. Additionally, the presence of pine plantations in the Project area would further obscure the above-ground facilities. As detailed in section 4.6, views of the MP33 Compressor Station and Interconnects (including Meter Stations) from existing residences along Church House Road to the east would be screened by trees. Similarly, the MP69 Compressor Station location is also surrounded by planted pine trees, and therefore, views would be screened. Further, the locations of both compressor stations would not be inconsistent with other natural gas facilities in the area. Due to the location of the proposed Project within an area with existing natural gas infrastructure, we conclude that there would be no significant cumulative impacts on visual resources as a result of construction.

Conclusion

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

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

The specific environmental resources and land uses affected by the Project activities are discussed below.

4.2 Geology and Soils

4.2.1 Geology

Project areas in Calcasieu Parish and Orange County would be within the West Gulf Coastal Plain section of the Coastal Plain physiographic province and would cross
Pleistocene-aged deposits consisting of clay, silt, sand, and minor gravel (U.S. Geological Survey [USGS], 2003).

Exploitable mineral resources in the Project vicinity include oil and gas, salt, sulfur, sand, gravel, and clay. A search of oil and natural gas production and non-fuel mineral resources in the Project vicinity in Calcasieu Parish utilizing the Louisiana Department of Natural Resources (LDNR) Strategic Online Natural Resource Information System (LDNR, 2020), the U.S. Environmental Protection Agency’s (EPA) EnviroMapper (EPA, 2020a), and the USGS Mineral Resource Data System (USGS, 2011) identified one historic (dry and plugged) oil/natural gas well approximately 819 feet from the Project area. No other active or historic surface or subsurface mines or oil/natural gas wells were identified within 0.25 mile of the Project area in Calcasieu Parish. No oil and gas wells or production areas, borrow pits, or mines were identified within 0.25 mile of the Project area in Orange County. (Texas Railroad Commission, 2020; USGS, 2011; University of Texas, 2020). Further, the closest salt dome to any Project area is 3 miles away (Beckman and Williamson, 1990). Based on this assessment, we conclude that the Project would not affect the availability of or access to mineral resources.

Golden Pass is required by its Order Granting Authorizations Under Sections 3 and 7 of the NGA for the Golden Pass LNG Export Project to file the results of geotechnical studies with the Secretary of the Commission (Secretary) prior to compressor station construction, which would also apply to this Project. Golden Pass states that it conducted a geotechnical investigation of the MP69 Compressor Station site in July 2020. Golden Pass conducted a geotechnical investigation of the MP33 Compressor Station site in January 2021 and filed the results with the FERC. The geotechnical investigation at the MP33 Compressor Station included the drilling of 14 soil borings to depths of 100 feet below existing grade, as well as downhole seismic and field resistivity tests. Golden Pass states that foundation designs for the MP33 and MP69 Compressor Station are being finalized based on the results of geotechnical studies; however, its geotechnical contractor determined that shallow foundations would be feasible for the planned structures at both sites.

Project areas would not be within the 100-year floodplain. Other geological resource impacts and hazards (e.g., seismicity, landslide, ground subsidence) remain as described in the 2016 FEIS. Further, BMPs in the FERC Plan and Procedures would be followed to avoid and minimize potential impacts. Therefore, the Project would not significantly affect or be affected by geological resources or hazards.

### 4.2.2 Soils

Soil characteristics in the Project area were assessed using the NRCS Soil Survey geographic database (2020). The NRCS Soil Survey database provides descriptions of
the soil series in the Project area. Soils were evaluated according to the characteristics that could affect construction or increase the potential for impacts.

Project area soils in Calcasieu Parish are poorly drained and are classified as prime farmland. Project area soils in Calcasieu Parish are considered highly wind erodible and compaction prone, but are not highly water erodible, stony/rocky, or underlain by shallow bedrock (bedrock within 60 inches of the ground surface). Approximately half (22.5 acres) of Project area soils in Calcasieu Parish are classified as prime farmland and are highly erodible by wind. The currently authorized aboveground facilities in Calcasieu Parish would result in the permanent removal of approximately 15.4 acres of prime farmland soil from agricultural use; the Project would result in a slight reduction (1.0 acre) of prime farmland soils removal, making the revised total 14.4 acres. Due to the amount of prime farmland in the vicinity of the Project, impacts on prime farmland soils would be reduced from those analyzed in the 2016 FEIS and would not be significant.

Project area soils in Orange County are generally classified as poorly drained silt loams. Project area soils in Orange County are not stony/rocky, do not have a shallow depth to bedrock, are not highly erodible by wind or water, and do not have poor revegetation potential. All Project area soils in Orange County are classified as being highly compaction prone and are classified as prime farmland or farmland of statewide importance. The Project would result in the conversion of 13.7 acres of prime farmland and farmland of statewide importance to industrial use in Orange County. Potential impacts on specific soil types would remain as described in the 2016 FEIS; however, the overall footprint of the Project would increase (by 3.2 acres for temporary impacts and by 3.5 acres for permanent impacts). Given the amount of prime farmland in the Project vicinity, impacts on prime farmland and farmland of statewide importance would not be significant. Golden Pass would implement erosion control measures and other BMPs in the FERC Plan and Procedures to otherwise avoid and minimize potential impacts on soil resources.

Golden Pass evaluated the EPA’s EnviroMapper and the Louisiana Department of Environmental Quality’s (LDEQ) leaking underground storage tank database to identify sites with environmental contamination within 0.25 mile of the Project area in Calcasieu Parish (EPA, 2020a; LDEQ, 2020a). Golden Pass evaluated the EPA’s EnviroMapper and the TCEQ’s groundwater contamination viewer, solid waste disposal sites facility viewer, and regulated underground storage tanks viewer to identify any sites of existing or potential soil and groundwater contamination within 0.25 mile of the Project area in Orange County (EPA, 2020a; TCEQ, 2020a; TCEQ, 2020b; TCEQ, 2020c). No contaminated sites were identified. If existing contaminated soils or groundwater are

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11 Approximately 480,000 acres are classified as prime farmland in Calcasieu Parish (NRCS, 2020).
12 Approximately 150,000 acres are classified as prime farmland and farmland of statewide importance in Orange County (NRCS, 2020).
discovered during construction, Golden Pass would immediately cease activities within that area and notify the EI and Project Environmental Manager. The EI would take appropriate steps to mark (flag) off the area to identify the exclusion zone. Golden Pass would perform a hazard assessment to determine appropriate control measures to be implemented at the specific site, including sampling and laboratory analysis of the impacted media. Work in the immediate area would not resume until an assessment of the discovery has been completed and Golden Pass has released the site. All identification/characterization, handling, labeling, storage, manifesting, transportation, record keeping, and disposal of potentially contaminated materials would be conducted in accordance with all applicable federal, state, and local regulations and guidance.

Contamination from spills or leaks of fuels, lubricants, and coolant from construction equipment could adversely affect soils. Golden Pass would implement its previously authorized SPCC Plan, which identifies measures to prevent and clean-up accidental spills or leaks. Based on the above assessment and Golden Pass’ implementation of the measures in its SPCC Plan and the FERC Plan and Procedures, we conclude that impacts on soils from Project construction and operation would not be significant.

4.3 Water Resources and Wetlands

Potential impacts to water use and quality are anticipated to be less than those described in the 2016 FEIS due to a reduction in the overall Project footprint, as discussed below.

4.3.1 Groundwater

The Project area is within the Coastal Lowlands Aquifer System. The Coastal Lowlands Aquifer System is a regional aquifer spanning from coastal Texas to Florida and is comprised of permeable zones typically consisting of sand and clay. Some of these permeable zones with water-yielding and confined spaces have been regionally identified and received local names. The Project area in Calcasieu Parish is within the locally named Chicot aquifer system (LDEQ, 2011; USGS, 1998), which has been designated by the EPA as a sole source aquifer. A layer of clay about 80 to 100 feet thick overlies the Chicot aquifer within the Project vicinity; this layer separates the Chicot aquifer from surficial groundwater resources.

Based on correspondence with the LDEQ, the nearest wellhead protection area boundary is over 5 miles from the Project area in Calcasieu Parish (LDEQ, 2020b). One private water supply well is located within 150 feet, but is located outside of the proposed workspace, about 70 feet east of the new access road to the MP69 Compressor Station. The well is registered to Williams Gas Pipeline and is classified as “cathodic.” No potable water supply wells were identified. There are no state-designated Groundwater Conservation Districts or Priority Groundwater Management Areas in Orange County.
(TCEQ, 2020d; TCEQ, 2020e) and water supply wells were not identified within 150 feet of the Project area in Orange County (TCEQ, 2020f; Texas Water Development Board, 2021).

As described in the 2016 FEIS, Golden Pass would monitor any active wells identified within 150 feet of the Project area during and after construction to ensure that water quality and yield are not affected. If it is determined that the Project negatively affected the well, Golden Pass would restore the well to its pre-construction condition and provide its users an alternative source of water until the well has been restored. Baseline conditions and the potential impacts on groundwater quality and quantity analyzed in the 2016 FEIS are similar to those of the Project.

Golden Pass’s geotechnical investigation completed at the MP69 Compressor Station site encountered shallow groundwater at depths from 12 to 21 feet below the ground surface. Golden Pass’ geotechnical investigation completed at the MP33 Compressor Station site encountered shallow groundwater at depths of approximately 15 feet below the ground surface. Project excavation could intersect the water table and require dewatering; however, because water would be discharged to nearby vegetated areas, potential dewatering impacts would be temporary and localized. Pilings could create conduits for contaminants to potentially affect groundwater. If the use of piles is necessary, Golden Pass would ensure that the length of piles is less than 80 feet to protect from penetrating the confining layers of the underlying aquifer.

During operation of the MP69 Compressor Station and MP33 Compressor Station, potable water would be supplied by a new water well at each site with design capacities of approximately 10 gallons per minute. The daily water demand for each compressor station is projected to be about 140 gallons per day. Golden Pass would also install underground septic systems at each compressor station in accordance with local and state permits to manage sanitary and sewage wastewater. Installation of the septic system could cause minor fluctuations or increase turbidity in shallow groundwater within the construction area, similar to trenching and pipeline installation. Seepage or other leaks from the septic system could contaminate groundwater, but proper maintenance reduces the likelihood of seepage or other leaks. In addition, the low permeability of sediments between surficial aquifers and deeper potable aquifers would avoid or minimize impacts on groundwater due to seepage or leaks from the septic tank. Should they occur, these impacts would be limited to the area immediately adjacent to the proposed tank and would not significantly affect groundwater quality in the vicinity.

Near-surface soil compaction caused by heavy construction vehicles and permanent aboveground structures could locally reduce the soil’s ability to absorb water, increasing surface runoff and the potential for ponding. In areas of vegetation clearing, water infiltration normally enhanced by the vegetation would reduce locally until the area is revegetated, which could affect water recharge to deeper aquifer layers. Golden Pass would adhere to measures in the FERC’s Plan and Procedures to minimize impacts on
groundwater during construction of the Project including restoring contours and revegetating disturbed areas, where practicable, to ensure restoration of pre-construction overland flow and recharge patterns. With implementation of these measures, impacts on groundwater would be highly localized and minor.

Spills of construction fuels, lubricants, and other potentially hazardous substances could affect shallow groundwater and unconsolidated aquifers. Healthy Gulf commented on the draft EIS that these spills could result in significant contamination of drinking water aquifers. Spills of this nature would be limited to minor volumes of materials and would not be expected to be able to reach the deeper aquifer system that is protected by a layer of clay over 80 feet thick. The proposed construction and mitigation procedures for the Project would be similar to those previously analyzed in the 2016 FEIS. Golden Pass would adhere to the BMPs outlined in FERC’s Plan and Procedures in addition to the guidelines stated in the Golden Pass SPCC Plan to minimize the potential for a spill. The SPCC Plan also provides measures to avoid or minimize impacts on groundwater and other resources, should a release occur.

Given the 80- to 100-foot thick layer of clay that overlies the Chicot aquifer within the Project vicinity in Calcasieu Parish, along with an absence of other groundwater users in the Project vicinity in Orange County, and implementation of measures in FERC’s Plan and Procedures and Golden Pass’ SPCC Plan we conclude that Project construction and operation impacts on groundwater resources would not be significant.

### 4.3.2 Surface Water

Golden Pass performed waterbody surveys of the Calcasieu Parish, Louisiana Project area and did not identify any waterbodies within the Project facilities. The non-jurisdictional powerline serving the MP69 Compressor Station would cross one waterbody approximately 10 to 14 feet wide. Although equipment may need to pass through the waterbody during construction of the powerline, power pole placement would occur outside of the waterbody.

There are no waterbodies located within the footprint of the proposed MP33 Compressor Station modifications in Orange County, Texas. Golden Pass would construct one permanent and two temporary retention ponds to settle suspended sediments and other solids from stormwater runoff and mitigate potential sedimentation and turbidity.

While waterbodies do not occur within the Project area, temporary impacts on waterbodies may include the release of sediment and increase in turbidity if eroded soils from the clearing of vegetation enter a waterbody outside of the Project area. Potential sedimentation and turbidity would be mitigated by implementing the BMPs in the FERC’s Plan and Procedures and SPCC Plan. Since waterbodies would not be crossed by the Project and BMPs would be employed to reduce impacts to adjacent areas, we
conclude that construction and operation of the Project would not result in significant impacts on waterbodies.

4.3.3 Water Use

In Calcasieu Parish, Louisiana, the Project would result in a reduction in water requirements during hydrostatic testing from the 647,000 gallons listed in Table 4.3-1 of the 2016 FEIS. An update to the construction water requirements for hydrostatic testing is provided in table 4.3.3-1. Water for construction would be obtained from municipal potable sources and test-water discharge would adhere to LDEQ general permit requirements.

<table>
<thead>
<tr>
<th>Description of Use</th>
<th>Approximate Volume (total gallons)</th>
<th>Water Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transco Interconnection (MP68)</td>
<td>117,719</td>
<td>Municipal</td>
</tr>
<tr>
<td>MP69 Compressor Station (MP69)</td>
<td>317,644</td>
<td>Municipal</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>435,363</strong></td>
<td>--</td>
</tr>
</tbody>
</table>

The proposed modifications in Orange County, Texas would result in a minor increase in water requirements during hydrostatic testing from those listed in Table 4.3-1 of the FEIS (35,000 gallons). An update to the construction water requirements for hydrostatic testing is provided in table 4.3.3-2. Water for construction is still planned to be obtained from municipal sources and test-water discharge would adhere to Texas Railroad Commission (RRC) general permit requirements.

<table>
<thead>
<tr>
<th>Description of Use</th>
<th>Approximate Volume (total gallons)</th>
<th>Water Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP33 Compressor Station and Interconnects(^a)</td>
<td>60,768</td>
<td>Municipal</td>
</tr>
<tr>
<td>GTS LP Meter Station(^b)</td>
<td>18,304</td>
<td>Municipal</td>
</tr>
<tr>
<td>GTS HP Meter Station(^b)</td>
<td>28,503</td>
<td>Municipal</td>
</tr>
</tbody>
</table>
The source of the water used for fugitive dust control would also be potable water from an available municipal supply. The total volume of water anticipated for dust control at the site of the MP69 Compressor Station during construction is 10,471,249 gallons. An additional 105,049 gallons is anticipated to be needed for dust control during construction at the Transco Interconnection. The total volume of water that is anticipated to be needed for dust control at the site of the MP33 Compressor Station, Interconnects, Meter Stations, and temporary workspace during construction is 2,180,000 gallons. A commercially available dust control agent, Top Seal White, is planned for use at both Project locations. Golden Pass would request Commission approval prior to using other additives.

### 4.3.4 Wetlands

In Calcasieu Parish, Louisiana, the general area consists of industrial land and planted pine plantations with interspersed palustrine emergent and forested wetlands. Golden Pass performed wetland surveys of the proposed Project area and did not identify any wetlands within the Project facilities for the MP69 Compressor Station Modifications. The non-jurisdictional powerline serving the MP69 Compressor Station would not affect any wetlands. The proposed amendment would result in a reduction in wetland impacts from those analyzed in the 2016 FEIS. Based on Table 4.4.2-1 of the 2016 FEIS, 1.2 acres of wetlands were planned to be affected by pipeline facility construction and 0.6 acre by pipeline operations in the Project area, but now would not be affected.

In Orange County, Texas, construction and operation of the Project would result in an overall reduction of wetland impacts for the proposed MP33 Compressor Station modifications. There are palustrine emergent (PEM) and palustrine forested (PFO) wetlands located within the footprint of the certificated MP33 Compressor Station. The Interconnects, Meter Stations, and access road are all located outside of wetland areas. The currently authorized wetland impacts\(^\text{13}\) and the proposed wetland impacts due to the Project are provided in Table 4.3.4.-1.

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\(^{13}\) Wetlands impacts were authorized under the U.S. Army Corps of Engineers Permit No. SWG-2004-02118; available in eLibrary at Accession No. 20161117-5175.
Healthy Gulf and South Wings expressed concerns regarding impacts to coastal wetlands and provided comments on the draft EIS regarding wetland fill. The Project would result in an overall reduction in wetland impacts by about 0.1 acre compared to the certificated facilities and would result in less permanent wetland impacts. Further, BMPs in the FERC Plan, FERC Procedures, and SPCC Plan would be followed to avoid and minimize potential impacts. Temporarily disturbed wetland areas would be returned to preconstruction contours and allowed to revegetate in accordance with the Project’s approved *Wetland Restoration Plan for Temporarily Disturbed Areas*. Post-construction monitoring would also be performed consistent with the FERC Procedures and the *Wetland Restoration Plan for Temporarily Disturbed Areas*.

In accordance with U.S. Army Corps of Engineers (USACE) Permit No. SWG-2004-0211 and Golden Pass’ approved mitigation plan for wetland impacts in Orange County, Golden Pass must purchase 0.11 functional capacity units for the Temporary Storage & Detention of Storage Water; 0.27 functional capacity units for Maintenance of

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The *Wetland Restoration Plan for Temporarily Disturbed Areas* is included in the USACE permit No. SWG-2004-02118; available in eLibrary at Accession No. 20161117-5175.
Plant & Animal Communities; and 0.13 functional capacity units for the Removal and Sequestration of Elements & Compounds. The functional credits must be purchased from the Piney Woods Mitigation Bank prior to the start of construction (i.e. fill or structures) in any jurisdictional area. Golden Pass would adhere to this requirement and purchase the credits prior to construction of the MP33 Compressor Station.

BMPs in the FERC Plan and Procedures would be followed to avoid and minimize the potential for any offsite effects on adjacent wetlands and to control erosion and restore the grade and hydrology after construction in wetlands. With the proposed modifications, we conclude that construction and operation of the Project would not result in significant impacts on wetlands.

4.4 Cultural Resources

In addition to accounting for impacts on cultural resources under NEPA, Section 106 of the National Historic Preservation Act, as amended, requires FERC to take into account the effects of its undertakings on historic properties listed, or eligible for listing on the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation an opportunity to comment. Golden Pass, as a non-federal party, is assisting FERC in meeting our obligations under Section 106 and its implementing regulations at 36 CFR 800.

4.4.1 Area of Potential Effects

The area of potential effects (APE) is the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16(d)).

In Calcasieu Parish, Louisiana, the total area surveyed for the Project was 120 acres, sufficient to account for all the potential direct and indirect effects to historic properties by the Project.

In Orange County Texas, the majority of design modifications requested by Golden Pass for the MP33 Compression Station would take place within the pre-approved right-of-way, with the exception of three new workspaces not covered by the previous investigation. To address the requested land requirements for Project modifications, Gold Pass conducted a survey on 30 additional acres, which included visual reconnaissance and intensive systematic subsurface examination.

4.4.2 Cultural Resources Investigations

In an effort to identify historic properties within the APE and to account for any effects to those properties by the Project, Golden Pass conducted a cultural resources investigation which included background research and a Phase I archaeological survey (Hilton and Hughey 2019a; Hilton and Hughey 2019b).
During field investigations for the Project area, no prehistoric, or historic period artifacts, or archaeological features, were observed in the Project areas of Calcasieu Parish or Orange County. Golden Pass conducted the historic architectural survey to identify architectural resources 45 years of age or older within the APE. The field survey included a visual assessment, site walkover, and photographic documentation of historic architectural resources in the APE. No aboveground features are within the viewshed. No other historic architectural resources were identified during the survey.

Prior to field surveys, Golden Pass reviewed the Texas Historic Sites Atlas, maintained by the Texas SHPO, determining that 12 cultural resource surveys have been conducted previously within a one-mile study radius surrounding the proposed project workspaces. This background research also revealed that two previously recorded archaeology sites were recorded within the same study radius but out the APE. There were no sites located within the APE.

In a letter to the Louisiana Office of Cultural Development, which serves as the Louisiana SHPO, dated August 29, 2020, Golden Pass recommended that no historic properties would be affected by Project implementation in Calcasieu Parish, Louisiana. On October 7, 2019, the Louisiana SHPO agreed that no historic properties would be affected by the Project. We agree.

Golden Pass submitted a letter report to the Texas Historical Commission, which serves as the Texas SHPO, on February 25, 2014, detailing the results of pedestrian surveys at compressor stations within the APE and recommending that there would be no Project effects in Orange County, Texas. On March 14, 2014, the Texas SHPO concurred that no historic properties would be affected by these facilities. For Project modifications not included in the 2014 surveys, including the additional 30 acres surveyed in 2019, in an email dated September 19, 2019, the Texas SHPO agreed that no historic properties were present or would be affected by the proposed modifications, but requested additional documentation for aboveground visual resources. On September 23, 2019, the Texas SHPO concurred with Golden Pass’s assessment for above-ground resources. We agree.

4.4.3 Tribal Outreach

Golden Pass contacted the following federally recognized tribes (Tribes) regarding the Project components in Calcasieu Parish, Louisiana and Orange County, Texas (Hilton and Hughey 2019a, 2016 FEIS): Chitimacha Tribe of Louisiana, Coushatta Tribe of Louisiana, Jena Band of Choctaw Indians, Tunica-Biloxi Indian Tribe of Louisiana, Alabama-Coushatta Tribe of Texas, Caddo Nation, Choctaw Nation of Oklahoma, Mississippi Band of Choctaw Indians, and the Quapaw Nation. Golden Pass provided to the tribes a Project information package, a cultural resources assessment, and a final unanticipated discoveries plan. On November 5, 2021, we sent our NOI to those same Tribes listed above, and included the following Louisiana and Texas state-recognized

For Project modifications in Calcasieu Parish, Louisiana, the Quapaw Nation responded on August 3, 2020, writing that “[t]his project is outside of the current area of interest for the Quapaw Nation; therefore, the Quapaw Nation does not desire to comment on this project at this time.” On December 22, 2020 and December 13, 2021, the Choctaw Nation of Oklahoma requested additional information, including GIS shapefiles of the project area, a map showing all archaeology sites within a 1-mile radius of the Project, and a copy of the cultural resources survey report. On January 4, 2021, Golden Pass emailed the requested materials to the Choctaw Nation of Oklahoma. On February 3, 2021, the Choctaw Nation of Oklahoma wrote that they concurred with the finding of “no historic properties affected.” On January 11, 2022, Golden Pass provided the Choctaw Nation of Oklahoma with GIS shapefiles of the project area in Orange County Texas, including a map showing all archaeology sites within a 1-mile radius of the Project, and a copy of the cultural resources survey report. On February 11, 2022, Choctaw Nation of Oklahoma advised that (1) with respect to the MP69 Amendment, they concur with the finding of “no historic properties affected,” subject to a request that work be stopped and their office contacted immediately in the event that Native American artifact or human remains are encountered; and (2) the MP 33 Amendment in Orange County, Texas lies outside of their atrea of historic interests.

There have been no additional comments to date for proposed Project amendments in Calcasieu Parish, Louisiana or Orange County, Texas.

4.4.4 Unanticipated Discoveries Plan

Golden Pass developed a Project-specific plan titled Plan and Procedures for the Unanticipated Discovery of Cultural Resources and Human Skeletal Remains, which outlines the procedures to follow, in accordance with state and federal laws, in the event that unanticipated cultural resources or human remains are discovered during construction of the Project, including consultation with FERC, Texas SHPO, Louisiana SHPO, and tribes regarding discoveries. The plan was submitted to FERC and the SHPOs. We find the plan acceptable.

4.4.5 Compliance with the National Historic Preservation Act

FERC has completed its compliance requirements with Section 106 for the Project.
4.5 Vegetation, Wildlife, and Threatened and Endangered Species

4.5.1 Vegetation

The Project facilities would primarily impact upland areas used for silviculture (pine plantations) or maintained right-of-way. During field surveys of the Project area, the dominant vegetation species observed within the pine plantation was loblolly pine. Other upland species observed in the understory and right-of-way include Bermuda grass, hog wort, Southern dewberry, St. Augustine grass, and yaupon holly.

The footprint of the MP33 Compressor Station would also affect PEM wetlands. Representative plant species include sand spikerush, Cherokee sedge, yellow nutsedge, jointed flatsedge, maidencane, tropic lalo, shortbristle horned beaksedge, anglestem beaksedge, and seaside goldenrod.

No vegetative communities of special concern were identified in the Project area.

The Project would eliminate the construction of about 3 miles of previously authorized pipeline looping, which would lessen impacts on vegetation. After construction, temporarily disturbed areas which are currently pine plantations (silviculture) would be available for replanting and use in timber production. However, impacts would be long-term due to the relatively long growth period required for marketable timber. In addition, Golden Pass would prohibit timber production within the fenced area of the aboveground facilities, resulting in the permanent removal of about 20.1 acres of timber production. Golden Pass would compensate the landowners for the loss of timber production in accordance with the terms of individual easement negotiations.

Given the limited area of vegetation disturbance and the abundance of similar vegetation adjacent to the Project area, we conclude that impacts on vegetation would be temporary and not significant.

4.5.2 Wildlife

Wildlife species in the Project area are characteristic of the communities that inhabit Loblolly pine stands, including white-tailed deer, northern bobwhite, wild turkey, grey squirrel, and fox squirrel. Common wildlife species found in PEM wetlands in eastern Texas include mallards, wood ducks, Eastern wild turkey, pine warbler, red-eyed vireo, swamp rabbit, grey squirrel, fox squirrel, raccoon, river otter, beaver, alligator, snapping turtle, and water moccasin.

Potential impacts to wildlife and wildlife habitat remain as described in the 2016 FEIS; however, the footprint has been reduced. Short-term impacts on wildlife resources and habitat would result from Project construction activities, including vegetation removal, ground disturbance, increased human activity, and noise levels. Mobile wildlife
would be temporarily displaced to nearby habitats due to construction activities. Less mobile species, including small mammals, may suffer mortality from construction activities. There would be a temporary impact on wildlife habitat due to tree clearing. However, the Project area includes adjacent forested areas, which allows for migration.

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) and Executive Order 13186. Bald and golden eagles also are protected under the Bald and Golden Eagle Protection Act. The Gulf Coast provides wintering and migration habitat for significant numbers of continental duck and goose populations that use both the Central and Mississippi Flyways. The Project would not affect any known important bird areas, bald eagle nests, or any other sensitive areas of conservation. However, migratory birds may be present in the Project area during construction. Golden Pass would implement the measures that were developed in consultation with the USFWS, the LDWF, and TPWD and presented in the 2016 FEIS. Given the relatively small area of disturbance, and the availability of similar adjacent habitats, we conclude that construction activities would not adversely impact migratory bird populations in the Project area.

No critical or sensitive habitats have been identified. Further, sufficient similar habitat is located adjacent to the Project area which would allow for displaced wildlife to avoid the area during construction activities. Therefore, we conclude that any impacts on local wildlife would not be significant due to the temporary nature of Project construction activities, and the abundance of similar habitat adjacent to the Project area.

### 4.5.3 Federal and State Threatened and Endangered Species

No listed species under the Endangered Species Act (ESA) were identified as potentially occurring in the vicinity of the pipeline expansion facilities in the 2016 FEIS. To assess if additional listed species beyond those previously analyzed may now be potentially present in the area of the proposed modifications, Golden Pass generated an updated list of ESA protected species using the USFWS’s Information for Planning and Conservation (IPaC) System. The species identified by the USFWS IPaC in Calcasieu Parish, Louisiana, include the West Indian manatee and red-cockaded woodpecker; the species identified in Orange County, Texas, include the least tern, piping plover, red knot, and West Indian manatee.

The West Indian manatee are found in warm coastal waters; however, the Project would not affect any surface water resources. Therefore, we have determined that the Project would have “no effect” on the West Indian Manatee. The red-cockaded woodpeckers excavate their roost and nest cavities exclusively in live pine trees. We received a comment on the draft EIS from RESTORE expressing concerns that the red-cockaded woodpecker could be impacted by Project implementation, and noted a colony documented “less than 10 miles away.” The comment suggests that surveys be performed for the red-cockaded woodpecker within 10 miles of the Project area. The red-cockaded
woodpeckers require pines at least 60 years old but prefer 80 to 100-year old pines infected with red heart fungus. Field survey results indicate that old growth pine trees required by the red-cockaded woodpecker are not present in the Project area. Therefore, we have determined that the Project would have “no effect” on the red-cockaded woodpecker.

The least tern nesting habitat includes bare or sparsely vegetated sand, shell, and gravel beaches, sandbars, islands, and salt flats associated with rivers and reservoirs. For feeding, the least tern prefers shallow water with an abundance of small fish. Shallow water areas of lakes, ponds, and rivers located close to nesting areas are preferred (TPWD, 2003). This habitat is not present in the Project area, therefore, we have determined that the Project would have “no effect” on the least tern. The piping plover breeds in northern U.S. and Canada and wintering individuals in Texas prefer bare or very sparsely vegetated tidal mudflats, sand flats, or algal flat. This habitat is not present in the Project area, therefore, we have determined that the Project would have “no effect” on the piping plover. The red knot breeds in the tundra of the central Canadian Arctic. Migration and wintering habitats include high energy ocean- or bay-front areas and tidal flats in more sheltered bays and lagoons and sparse vegetation to avoid predation. This habitat is not present in the Project area, therefore, we have determined that the Project would have “no effect” on the red knot.

During Project area site visits, no state-threatened, endangered or special concern species were observed in the Project area. Operation and construction of the Project is anticipated to have “no effect” on ESA species. Both the Louisiana Ecological Services Field Office and Texas Coastal Ecological Services Field Office of the USFWS have previously stated that consultation under Section 7 of the ESA is not required for projects that are anticipated to have “no effect” on listed species. We have made a “no effect” determination, and therefore, consultation for ESA listed species is complete.

4.6 Land Use, Special Interest Areas, and Visual Resources

All lands required for the Project are owned by Golden Pass.

In Calcasieu Parish, Louisiana, Golden Pass has purchased the 57-acre tract of land for the MP69 Compressor Station. Land use in the vicinity of the Project generally is classified into the following categories: forested, planted pine, open land, open water, agricultural, residential, and industrial/commercial lands. Land use within the proposed workspace is silvicultural and is entirely covered in planted pine forest. The proposed access road to the MP69 Compressor Station is situated along an existing logging road associated with the planted pine tract.

The overall footprint of the Project would be reduced in Calcasieu Parish from that assessed in the 2016 FEIS. Further, as highlighted in table 4.6-1, if the Project is approved, the land use types crossed would be reduced. The powerline extension to the
MP69 Compressor Station would cross 0.5 acre of industrial land, less than 0.1 acre of public land, 0.3 acre of silviculture, and would be located in 0.1 acre of existing right-of-way. Table 4.6-2 is a summary of land use acreages affected by construction and operation of the Project. Table 4.6-3 is a summary of the land use types affected by construction and operation of the Project in comparison to the 2016 FEIS.

No special or unique features or viewsheds are present in or near the Project area. Lands crossed by the Project are relatively flat with rural development, timber habitat, numerous roadways, and utility rights-of-way and facilities. The Project would not cross open or agricultural lands. There are two residences in the vicinity of the proposed MP69 Compressor Station. One residence is located 2,454 feet to the east, while the other is located 2,332 feet to the northeast. The MP69 Compressor Station location is surrounded by planted pine trees currently being used for silviculture, and views of the MP69 Compressor Station would be blocked by the presence of the trees. Further, the location would not be inconsistent with other natural gas facilities in the area.

Visual impacts associated with the Project would be greatest during construction, with both heavy equipment and disturbed soils present along the rights-of-way. Most impacts would be short-term and temporary, primarily limited to areas requiring extra workspaces, and would be remediated once post-construction restoration and revegetation have been completed. Permanent visual changes would involve the aboveground facilities. To minimize impacts on visual resources, Golden Pass sited the Project, where feasible, adjacent to existing pipeline and road rights-of-way. Therefore, construction of the aboveground facility would cause temporary and permanent visual impacts, however, impacts would not be significant.

Table 4.6-1
Summary of the Land Use Types Crossed by the Project in Calcasieu Parish, Louisiana (Acres)

<table>
<thead>
<tr>
<th>Project Facility</th>
<th>Pine Plantation (Silviculture)</th>
<th>Industrial/Commercial</th>
<th>Existing right-of-way</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transco Interconnection</td>
<td>0.0</td>
<td>0.2</td>
<td>0.0</td>
<td>3.7</td>
</tr>
<tr>
<td>MP69 Compressor Station</td>
<td>16.0</td>
<td>18.4</td>
<td>0.0</td>
<td>16.0</td>
</tr>
<tr>
<td>Access Roads</td>
<td>0.2</td>
<td>0.2</td>
<td>0.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Project Totals</td>
<td>16.2</td>
<td>18.8</td>
<td>0.0</td>
<td>18.4</td>
</tr>
</tbody>
</table>

1Construction = acreage temporarily impacted during construction
2Operations = acreage permanently impacted during operations

Table 4.6-2
Summary of the Land Use Types Crossed as Analyzed in the 2016 FEIS Compared to the Modifications in Calcasieu Parish, Louisiana (Acres)

<table>
<thead>
<tr>
<th>Project Facility</th>
<th>Forested</th>
<th>Pine Plantation</th>
<th>Open Land</th>
<th>Open Water</th>
<th>Agr.</th>
<th>Indust/Comm</th>
<th>Existing ROW</th>
<th>Total</th>
</tr>
</thead>
</table>

45
The parcel of land on which the MP33 Compressor Station and Interconnects would be located is adjacent to an existing pipeline right-of-way that contains numerous pipelines and is approximately 350 feet wide. Views of the MP33 Compressor Station and Interconnects (including Meter Stations) from existing residences along Church House Road to the east would be blocked by the presence of the trees. Further, the MP33 Compressor Station and Interconnects would not be inconsistent with other natural gas facilities in the area. Impacts to visual resources would be negligible.

Based on the reduced and limited scope associated with this Project, as well as Golden Pass’s implementation of its various construction plans (SPCC Plan and the FERC Plan and Procedures), and because the proposed Project would be located in an area with existing natural gas infrastructure, we conclude that potential impacts to land use would be minor.
4.7 Socioeconomics

The 2016 FEIS described socioeconomic conditions in the project area including population, unemployment rates, primary industries, per capita income, housing, public services, transportation and traffic, tax payments, and environmental justice communities. The 2016 FEIS also disclosed the effects of constructing and operating the aboveground facilities on these factors and concluded that constructing and operating the facilities would not have a significant effect on socioeconomics. The project area population base, employment levels, availability of temporary housing, and public services would experience only minor impacts from the Project. Golden Pass would use one new existing road to access the Transco Interconnection in Calcasieu Parish, Louisiana. The existing road would need to be extended to reach the MP 69 Compressor Station which would result in a minor footprint change. One new access road would be proposed for this Project. Further, no new or additional construction or permanent staff, beyond what was assessed in the 2016 FEIS, is being proposed. Accordingly, the effects of implementing the Project would continue to result in less than significant socioeconomic impacts, similar to those described in the 2016 FEIS. However, because there are environmental justice communities within 1-mile of the aboveground facilities where the relocated, modified and new aboveground facilities would occur, impacts on environmental justice communities are addressed below.

4.7.1 Environmental Justice

In conducting NEPA reviews of proposed natural gas projects, the Commission follows the instruction of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, which directs federal agencies to identify and address “disproportionately high and adverse human health or environmental effects” of their actions on minority and low-income populations (i.e., environmental justice communities). Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*, also directs agencies to develop “programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.” The term “environmental justice community” includes disadvantaged communities that have been historically marginalized and overburdened by...
pollution. Environmental justice communities include, but may not be limited to minority populations, low-income populations, or indigenous peoples.

The EPA’s environmental justice policies are directed, in part, by the recent EO 14008, *Tackling the Climate Crisis at Home and Abroad*, and EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, as amended, which require federal agencies to consider if impacts on human health or the environment would be disproportionately high and adverse for environmental justice communities in the surrounding community resulting from the programs, policies, or activities of federal agencies. The term “environmental justice community” could encompass (i) populations of color; (ii) communities of color; (iii) Native communities; and (iv) low-income rural and urban communities, who are exposed to a disproportionate burden of the negative human health and environmental impacts of pollution or other environmental hazards.

In this EAEIS, a disproportionately high and adverse effect on an environmental justice community means the adverse effect is predominately borne by such population or is appreciably more severe or greater in magnitude on the minority or low-income population than the adverse effect suffered by the non-minority or non-low-income population. The EPA’s Federal Interagency Working Group on Environmental Justice and NEPA Committee’s publication, *Promising Practices for EJ Methodologies in NEPA Reviews* (EPA 2016), provide methodologies for conducting environmental justice analyses. Issues considered in the evaluation of environmental justice include human health or environmental hazards; the natural physical environment; and associated social, economic, and cultural factors. Consistent with *Promising Practices* and Executive Order 12898, we reviewed the Project to determine if its resulting impacts would be disproportionately high and adverse on minority and low-income populations and also whether impacts would be significant.

According to CEQ’s environmental justice guidance under NEPA (CEQ 1997) and *Promising Practices for EJ Methodologies in NEPA Reviews*, minorities are those groups

18 Id.


21 See Promising Practices at 33 (stating that “an agency may determine that impacts are disproportionately high and adverse, but not significant within the meaning of NEPA” and in other circumstances “an agency may determine that an impact is both disproportionately high and adverse and significant within the meaning of NEPA”).
that include: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. Following the recommendations set forth in *Promising Practices for EJ Methodologies in NEPA Reviews*, minority populations are defined in this EA EIS where either: (a) the minority population of the affected area exceeds 50 percent; or (b) the aggregate minority population of the affected area is meaningfully greater (10 percent greater) than the aggregate 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 identified as census block groups where the low-income individuals (or households) is greater than or equal to that of the county or parish. Although the 2016 FEIS used census tract level data, we believe that using more granular data at the census block group data (the smallest geographic census unit), and comparing that to the county, is appropriate to properly identify the presence of environmental justice communities. Data at the census tract level could hide smaller environmental justice communities, thereby understating their presence (i.e., using a larger area could lower the percentage of low income or minority individuals). According to the current U.S. Census Bureau information, a low-income population exists within the Project area, as discussed further below.

Table 4.7.1-1 below identifies the minority populations (by race and ethnicity) and low-income populations within Texas and Louisiana, the county and parish affected by the Project (Orange County and Calcasieu Parish, respectively), and U.S. Census block groups intersected by a 12-mile radius around the proposed aboveground facilities. We have determined that a 12-mile radius around the proposed aboveground facilities is the appropriate unit of geographic analysis for assessing impacts on the environmental justice communities. A 12-mile radius for compressor stations and a 1-mile radius for meter stations is sufficiently broad considering the likely concentration of construction activities, noise, visual, air quality, and traffic impacts proximal to the aboveground facilities. To ensure we are using the most recent available data, we used the 2019 U.S. Census American Community Survey data from File# B17017 and File# B03002 as the source for race, ethnicity, and poverty data at the census block group level.

As identified in table 4.7.1-1, the Project would impact two four block groups, one three in Orange County and one in Calcasieu Parish. None of the block groups affected in Orange County, Texas have a minority population greater than 50 percent or a minority population meaningfully greater than the reference populations, in this case,

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22 Census block groups are statistical divisions of census tracts that generally contain between 600 and 3,000 people (U.S. Census Bureau, 2021).

23 The air emissions radius of impact, or the farthest distance where air emissions drop below the significant impact levels is 1.3 mile.

24 18 CFR § 380.12 Environmental reports for Natural Gas Act applications.
Orange County and Calcasieu Parish (Census Tract 220, Block Group 2). In its comments on the draft EIS, RESTORE suggests that the demographic information contained in table 4.7.1-1 is incorrect, noting that numerous members of the Louisiana Cherokee-Choctaw Tribe are present in the Project area. As noted above, we use 2019 U.S. census data, but we acknowledge that U.S. Census information may be incomplete, and accept that members of the Louisiana Cherokee-Choctaw Tribe and other Native Americans live in the Project area. However, it is not likely that this community would result in a total minority population greater than 50 percent or meaningfully greater than the reference community. Of these two four block groups, one two contains a low-income population (one in Calcasieu Parish and one in Orange County, Texas. The single block group affected in Calcasieu Parish (Census Tract 36, Block group 1) has 21.9 percent of its population below the poverty level, whereas the reference group (Calcasieu Parish) has a population of 16.0 percent below the poverty level. The block group in Orange County (Census Tract 220, Block Group 2) has 18.6 percent of its population below the poverty level, whereas the reference group (Orange County) has a population of 13.2 percent below poverty level. Because the percentage of the low-income population in the those block groups exceeds the percentage of the low-income population in the reference groups, an environmental justice community communities is are present.

Impacts on Environmental Justice Communities

Project facilities consist of relocating the originally approved compressor stations at MPs 33 and 66, increasing horsepower at the originally approved compressor station at MP 33, new meter stations, and other appurtenant facilities; therefore, the primary impacts on environmental justice communities could occur during construction, and may include traffic delays during the construction period, and construction-related air emissions, noise, and visual impacts, as well as permanent noise and air quality effects from the compressor stations and meter stations’ facility operations. These effects would be experienced by residents living in close proximity to the proposed facilities, with the effects diminishing with further distances from the proposed facilities. As shown below in table 4.7.1-1, the proposed project facilities located within Orange County, Texas are not located within an environmental justice community. However, there are two environmental justice communities located within 2 miles of the project facilities. Traffic, construction related air emissions, noise, and visual impacts associated with project facilities within Orange County are localized and would not extend to the environmental justice communities within the 2-mile radius of the projects facilities and the radius of impact for air emissions, or the distance where air emissions would drop below the significant impact levels, for MP 33 would not pass the facility fenceline; therefore, these facilities do not contain any identified minority or low-income populations within 1-mile; therefore, these meter stations are not discussed further in

25 A modeled result predicting that a proposed source’s maximum impact will be below the corresponding SIL value may generally be considered to be a sufficient demonstration that the proposed source will not cause or contribute to a violation of the applicable NAAQS or PSD increment.
regard to environmental justice impacts. Further, as part of the Project, the Calcasieu Loop is no longer being proposed. As no work has begun on this facility, impacts to environmental justice communities from this change are not discussed further.

Based on the scope of the Project and our analysis of the Project’s impacts on the environment as described throughout this EIS, we have determined Project-related impacts on socioeconomics, traffic, noise, visual resources, and air quality may adversely affect the identified environmental justice community. In general, the magnitude and intensity of the aforementioned impacts would be greater for individuals and residences closest to the Project’s facilities, particularly the MP 69 Compressor Station, and would diminish with distance. These impacts are addressed in greater detail in the associated sections of this EIS. Environmental justice concerns are not present for other resource areas such as geology, groundwater, wetlands, wildlife, or cultural resources due to the minimal overall impact the Project would have on these resources and the absence of any suggested connection between such resources and environmental justice communities.
Table 4.7.1-1
Minority Populations by Race\(^a\) and Ethnicity and Low-Income Populations in the Project Area

<table>
<thead>
<tr>
<th>State/ County or Parish</th>
<th>RACE AND ETHNICITY COLUMNS</th>
<th>LOW-INCOME COLUMN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White Alone Not Hispanic (%)</td>
<td>African American (%)</td>
</tr>
<tr>
<td>TEXAS</td>
<td>42.0</td>
<td>11.8</td>
</tr>
<tr>
<td>Orange County</td>
<td>80.7</td>
<td>8.7</td>
</tr>
<tr>
<td>Census Tract 219, Block Group 6</td>
<td>91.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Census Tract 220, Block Group 2</td>
<td>81.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Census Tract 222, Block 2</td>
<td>88.8</td>
<td>0.0</td>
</tr>
<tr>
<td>LOUISIANA</td>
<td>58.7</td>
<td>32.0</td>
</tr>
<tr>
<td>Calcasieu Parish</td>
<td>67.4</td>
<td>24.8</td>
</tr>
<tr>
<td>Census Tract 36 Block Group 1</td>
<td>90.2</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2019, File # B01017 and File # B03002.

a “Minority” refers to people who reported their ethnicity and race as something other than non-Hispanic White.
b Low-income or minority populations exceeding the established thresholds are indicated in red, bold, type and blue shading.
Due to rounding differences in the dataset, the totals may not reflect the sum of the addends.
Project impacts on environmental justice populations may include impacts on socioeconomic factors. The temporary influx of workers/contractors into the environmental justice community could increase the demand for community services, such as housing, police enforcement, and medical care. An influx of workers could also affect economic conditions, and other community infrastructure. As discussed above in section 4.7, the effects of implementing the Project would continue to result in less than significant socioeconomic impacts, similar to those described in the 2016 FEIS.

As discussed throughout this EIS, potentially adverse environmental effects associated with the Project would be minimized or mitigated, as applicable. Temporary visual impacts would occur during construction of the aboveground facilities, including vehicle and equipment movement, vegetation clearing and grading, foundation excavation, and spoil piles. Visual impacts would also occur due to the operation of the MP 69 Compressor Station. The MP 69 Compressor Station would be located within a 57-acre tract of land purchased by Golden Pass and surrounded by silviculture. As detailed in table 4.6-1, the Project would require approximately 43 of the 57 acres owned by Golden Pass, which is a reduction in the overall footprint and land use types assessed in the 2016 FEIS. The remaining 13 acres would continue to be forested. The remaining 13 acres of trees, combined with the planted-pine surrounding the tract, would act as a natural visual screening, blocking area residences (approximately 2,332 ft to the northeast and 2,454 ft to the east) from view of the aboveground facilities during both construction and operation. Although the MP 69 Compressor Station would result in a permanent change to the viewshed, the Project would be consistent the industrial nature of the Project area. As such, we conclude the Project would not result in significant visual impacts on local residents, including environmental justice communities.

Potential impacts on the environmental justice communities during construction of the Project may also include traffic delays. There would be a temporary increase in use of area roads by heavy construction equipment and associated trucks and vehicles. Increased use of these roads would result in a higher volume of traffic, increased commute times, and greater risk of vehicle accidents. These impacts would adversely affect local residents. However, these impacts would be limited and temporary, only lasting the duration of the Project construction activities. Further, our analysis determined that operating the Project would not increase traffic on local roads from what was assessed in the 2016 FEIS. Traffic impacts on the environmental justice community would be less than significant.

Noise levels above ambient conditions attributable to construction activities would vary over time and would depend upon the nature of the construction activity, the number and type of equipment operating, and the distance between sources and receptors. The closest noise sensitive areas (NSA) (residences) are located approximately 2,332 ft to the northeast and 2,454 ft. to the east of proposed, relocated compressor station and new meter station. The human ear’s threshold of perception for noise change is considered to
be 3 decibels on the A-weighted scale (dBA). Construction noise related to Project activities would increase noise levels over ambient by 0.1 to 3.9 decibels at these NSAs, respectively, and would be temporary. Operating the compressor station with noise mitigation would increase noise levels over ambient by 9.5 decibels. This level exceeds the threshold of perception. Therefore, operation of the compressor station would result in a permanent perceptible noise increase in the Project area. Contribution of the station at full load would be below FERC criterion of 55 dBA day-night sound level ($L_{dn}$) at the affected NSAs. Based on the projected noise levels, and FERC’s recommendations, the Project would not result in significant noise impacts on local residents and the surrounding environmental justice community (see section 4.8.3 for a detailed noise discussion).

Construction air emissions from the Project, when considered with current background concentrations, would be below the NAAQS, which are designated to protect public health. Construction emissions would occur over the duration of construction activity and would be emitted at different times throughout the Project area. Construction emissions in the form of particulate matter (e.g. dust) would occur, and construction emissions from equipment exhaust would result in short-term, localized impacts in the immediate vicinity of construction work areas, particularly the MP 69 Compressor Station. Golden Pass would adhere to its Fugitive Dust Control Plan35 for control of to minimize fugitive particulate emissions. Golden Pass would use dust suppression techniques, such as spraying water or dust suppressants to dampen the surfaces of dry work areas, in addition to the requirements in Louisiana and Texas state regulations for fugitive dust control. Efforts to mitigate exhaust emissions during construction would include limiting idling time of equipment, maintaining and tuning engines per manufacturer’s specifications.

Golden Pass completed an air quality dispersion modeling analysis for the MP-69 Compressor Station, which is located within an environmental justice community, to assess air quality impacts and show compliance with the NAAQS. Modeling of the operational air emissions at the MP 69 Compressor identified that Project contributions would not exceed the NAAQS. In addition, the radius of impact for air emissions, or the furthest distance where project related air emissions drop below the SIL36 (for NO$_2$ 1-hour), is 1.3 mile.37 All other pollutants and averaging periods are below the SIL at all off-site receptors. See section 4.8.1 of this EIS for more detailed discussion. Therefore, we conclude that the Project would not cause or significantly contribute to an exceedance of the NAAQS and would not result in a significant impact on air quality in the region. Although the Project would be in compliance with the NAAQS and the NAAQS are

35 Accession No. 20170405-5155.
36 A modeled result predicting that a proposed source’s maximum impact will be below the corresponding SIL value may generally be considered to be a sufficient demonstration that the proposed source will not cause or contribute to a violation of the applicable NAAQS or PSD increment.
37 Accession No.: 20210416-5276.
designated to protect sensitive populations, we acknowledge that NAAQS attainment alone may not assure there is no localized harm to such populations due to project emissions of volatile organic compounds (VOC), hazardous air pollutants (HAP), as well as issues such as the presence of non-Project related pollution sources, local health risk factors, disease prevalence, and access (or lack thereof) to adequate care. During operation, Golden Pass would be required to meet Louisiana Department of Environmental Quality and Texas Commission on Environmental Quality permitted limits. Based on the temporary nature of construction emissions and our review of the proposed operational emissions, we conclude that construction and operation of the Project would not have significant adverse air quality impacts on local residents and the surrounding communities, including the environmental justice communities.

As described throughout this EIS, the proposed Project would not have a significant adverse impact on the environment or on individuals living in the vicinity of the Project facilities, including environmental justice populations. Based on our analysis, we conclude that impacts on environmental justice populations associated with MP-69 may be disproportionately high and adverse as impacts in the Project area would be predominantly borne by environmental justice populations. Although impacts associated with MP-69 may be predominately borne by environmental justice communities, aside from the previously described insignificant impacts, the project would not have disproportionately high and adverse impacts on environmental justice communities. Additionally, although only one of the two block groups affected by the Project (or 50 percent of the block groups) includes an environmental justice community (low income), a majority of the Project’s adverse impacts would be borne by this environmental justice community.

Public Involvement

FERC’s communication and involvement with the surrounding communities have occurred throughout the environmental review process and was initiated when Golden Pass filed their application on October 2, 2020 and May 19, 2021 in Docket Nos. CP21-1-000 and CP21-458-000. Throughout the application process we engaged with Golden Pass and interested federal and state agencies to identify Project-related issues, concerns, and environmental impacts. During the application process, we also solicited input from the public on the Project’s potential impacts. In our NOS, we encouraged the public’s participation in the application review process as well as the sharing of information by elected officials on behalf of their constituents. As part of its outreach efforts prior to and during the application review process, Golden Pass contacted federal, state, and local governmental agencies to inform them about the Project and discuss Project-specific issues.
On October 19, 2020 the FERC issued an NOA for CP21-1-000, and June 23, 2021, for CP21-458-000. The NOA’s were entered into the Commission’s publicly available administrative record and mailed to the service list. On November 19, 2020, the FERC issued an NOS for the Project. The NOS opened a 30-day formal scoping period which expired on December 19, 2020. The NOS was also entered into the Commission’s publicly available administrative record and mailed to the parties on our environmental mailing list, which included federal and state resource agencies; elected officials; environmental groups and non-governmental organizations; Native Americans Tribes; potentially affected landowners; local libraries and newspapers; and other stakeholders who had indicated an interest in the Project. On November 5, 2021, the FERC issued an NOI for the Project. The NOI was also entered into the Commission’s publicly available administrative record and mailed to the same parties listed above. The NOA’s stated that any person wishing to comment on the project could do so and comments may include statements of support or objections to the project as a whole or specific aspect of the project. That comment period extended 21 days and ended on November 9, 2020 and July 14, 2021, respectively. The NOI opened an additional 30-day formal scoping period which expired on December 6, 2021.

In its comments on the draft EIS, the EPA recommends that the final EIS: address impacts on environmental justice communities; include demographics of affected environmental justice communities; considers cumulative impacts on these communities; substantiate the need for the Project as determined by Golden Pass; considers how the Project could impact seasonal storms, hurricanes, livelihoods, community resiliency, and climate resiliency in communities with environmental justice concerns; and assesses impacts on nearby environmental justice communities. Lastly, the EPA recommends the Commission ensure the equitable treatment of minority and low-income populations when the government may need to invoke eminent domain for mitigation including buyout and relocation related to flooding or other impacts.

Project impacts on environmental justice communities have been included in the preceding discussion. Table 4.7.1-1 identifies the races and ethnicities of the environmental justice community potentially affected by the Project. Cumulative impacts are addressed in section 4.1.1. The only other projects that would occur in the vicinity of the proposed facilities are minor ancillary the Gulf Run gas transmission facilities and non-jurisdictional electrical power transmission lines. The impacts of these projects when added to the impacts of the Project (see section 4.1.1) would not result in a cumulative impact that would be substantially greater than the disproportionately high and adverse impacts previously disclosed. Substantiating the need for the Project as recommended by EPA is outside the scope of this EIS (see section 1.1). The purpose of this EIS is to identify and disclose to the public and decision makers the potential impacts on the natural and human environment resulting from construction and operation of the Project. The need for the Project may be addressed by the Commission in any order it may issue. Relocating compressor stations, increasing compression, and installing
additional piping would not impact the contours of the Project area with regard to seasonal storms, hurricanes, or other weather events. As stated in section 4.8.2, Golden Pass would comply with all applicable USDOT-Pipeline and Hazardous Materials Safety Administration (PHMSA) Minimum Federal Safety Standards specified in 49 CFR 192 for the proposed facilities designed to protect the infrastructure from weather impacts, and thus the safety of the community. These facilities are relatively small and would not affect flood attenuation or otherwise drastically affect the surrounding landscape resulting in increased impacts to the environment due to extreme weather events. Additionally, based on the locations of these facilities and the abundance of oil and natural gas facilities in the region, these facilities would not affect livelihoods or community resilience. As described above, we have determined that a 12-mile-radius around the proposed aboveground facilities is the appropriate unit of geographic analysis for assessing impacts on environmental justice communities. A 12-mile-radius is sufficiently broad considering the likely concentration of construction activities, noise, visual, air emissions, and traffic impacts proximal to the aboveground facilities, operational emissions, and is consistent with our regulations. Nearby environmental justice communities, if present, would not likely experience impacts associated with the Project; and should a community experience an impact it would be at a magnitude and intensity much lower than those communities within a 12-mile-radius of the proposed facilities. Although the issuance of a Certificate by the Commission under section 7 of the NGA permits the use of eminent domain to acquire lands necessary for a project, the Commission nor its staff are not directly involved in this acquisition process and further discussion of this process is outside the scope of this EIS.

In 2021, the Commission established the Office of Public Participation (OPP) to support meaningful public engagement and participation in Commission proceedings. OPP provides members of the public, including environmental justice communities, landowners, Tribal citizens, and consumer advocates, with assistance in FERC proceedings—including navigating Commission processes and activities relating to the Project. For assistance with interventions, comments, requests for rehearing, or other filings, and for information about any applicable deadlines for such filings, members of the public are encouraged to contact OPP directly at 202-502-6592 or OPP@ferc.gov for further information.

No non-English speaking landowners or groups have been identified within one mile of the MP 69 Compressor Station and Meter Station in Calcasieu Parish, Louisiana. However, Golden Pass committed to providing bilingual support should alternative language services be needed.
4.8 Air Quality, Climate Change, and Noise

4.8.1 Air Quality

Air quality would be affected by construction and operation of the Project. This section summarizes federal and state air quality regulations that are applicable to the proposed facilities. This section also characterizes the existing air quality and describes potential impacts the facilities may have on air quality regionally and locally. The term air quality refers to relative concentrations of pollutants in the ambient air. Combustion of fossil fuels, such as natural gas, produces criteria air pollutants, such as nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), and inhalable particulate matter (PM₂.₅ and PM₁₀). PM₂.₅ includes particles with an aerodynamic diameter less than or equal to 2.5 micrometers, and PM₁₀ includes particles with an aerodynamic diameter less than or equal to 10 micrometers. Combustion of fossil fuels also produces volatile organic compounds (VOC), a large group of organic chemicals that have a high vapor pressure at room temperature; and oxides of nitrogen (NOx). VOCs react with NOx, typically on warm summer days, to form ozone (O₃), which is another criteria air pollutant. Other byproducts of combustion are greenhouse gases (GHG) and hazardous air pollutants (HAP). HAPs are chemicals known to cause cancer and other serious health impacts. Other pollutants, not produced by combustion, are fugitive dust and fugitive emissions. Fugitive dust is a mix of PM₂.₅, PM₁₀, and larger particles released into the atmosphere by moving vehicles, construction equipment, earth movement, and/or wind erosion. Operational fugitive emissions, in the context of this document, would be fugitive emissions of methane and/or VOCs from operational pipelines and aboveground facilities.

Existing Air Quality

The EPA has established National Ambient Air Quality Standards (NAAQS) for six pollutants: SO₂, CO, O₃, NO₂, particulate matter (PM) including PM₁₀ and PM₂.₅, and lead.³⁸ There are two classifications of NAAQS, primary and secondary standards. Primary standards set limits the EPA believes are necessary to protect human health including sensitive populations such as children, the elderly, and asthmatics. Secondary standards are set to protect public welfare from detriments such as reduced visibility and damage to crops, vegetation, animals, and buildings. Air Quality Control Regions (AQCRs) are areas established for air quality planning purposes in which implementation plans describe how ambient air quality standards will be achieved and maintained. AQCRs were established by the EPA and local agencies, in accordance with Section 107 of the CAA and its amendments, as a means to implement the CAA and comply with the NAAQS through state implementation plans (SIPs). The AQCRs are intrastate and interstate regions such as large metropolitan areas where the improvement of the air quality in one portion of the AQCR requires emission reductions throughout the AQCR.

An AQCR, or portion thereof, is designated based on compliance with the NAAQS. AQCR designations fall under three general categories as follows: attainment (areas in compliance with the NAAQS); nonattainment (areas not in compliance with the NAAQS); or unclassifiable. AQCRs that were previously designated nonattainment but have since met the requirements to be classified as attainment are classified as maintenance areas. The Project is located in the Southern Louisiana Southeast Texas AQCR and would be constructed in Calcasieu Parish, Louisiana and Orange County, Texas, which are both listed as attainment/unclassified for all criteria pollutants.

**Greenhouse Gases**

The EPA has defined air pollution to include the mix of six long-lived and directly emitted GHGs (carbon dioxide [CO₂], methane [CH₄], nitrous oxide [N₂O], hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride). The EPA found that the current and projected concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations through climate change. GHG, including CO₂, CH₄, N₂O, hydrofluorocarbons, and perfluorocarbons, are naturally occurring pollutants in the atmosphere and products of human activities, including burning fossil fuels. These gases are the integral components of the atmosphere’s greenhouse effect that warms the earth’s surface and moderate day/night temperature variation. In general, the most abundant GHGs are water vapor, CO₂, CH₄, N₂O, and O₃. GHG produced by fossil-fuel combustion are CO₂, CH₄, and N₂O. GHGs are non-toxic and non-hazardous at normal ambient concentrations. As with any fossil fuel-fired project or activity, the Project would contribute to GHG emissions. Emissions of GHGs are quantified and regulated in units of carbon dioxide equivalents (CO₂e). The CO₂e unit of measure takes into account the global warming potential (GWP) of each GHG over a specified timeframe. The GWP is a ratio relative to CO₂ that is based on the particular GHG’s ability to absorb solar radiation as well its residence time within the atmosphere. Thus, CO₂ has a GWP of 1, CH₄ has a GWP of 25, and N₂O has a GWP of 298 on a 100-year timescale. To obtain the CO₂e quantity, the mass of the particular compound is multiplied by the corresponding GWP, the product of which is the CO₂e for that compound. The CO₂e value for each of the GHG compounds is summed to obtain the total CO₂e GHG emissions. There are no NAAQS or other significance thresholds for GHGs.

**Federal Air Quality Requirements**

*Prevention of Significant Deterioration and Nonattainment New Source Review*

The Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) air permit programs are designed to protect air quality when air pollutant emissions are increased either through the construction of new major stationary sources or major modifications to existing stationary sources. The LDEQ administers the PSD and NNSR permitting programs in their state. The Project is located within an
attainment area for all criteria pollutants. In attainment areas, the major source threshold levels for determining the need for PSD Permitting are 250 tpy of any criteria air pollutant. The MP33 and MP69 Compressor Stations are not considered a major stationary source under this program and no potential emissions would exceed the PSD thresholds, of 250 tons per year (tpy) of any criteria pollutant, therefore the program does not apply to the Project.

**Title V Permitting**

Title V is an operating air permit program run by each state for each facility that is considered a major source. The LDEQ regulates the Title V program in their state. Emissions would result from construction and operation of the Project. The EPA has delegated the authority to issue Title V Operating Permits to the LDEQ. In attainment areas, the major source threshold levels for determining the need for a Title V Operating Permit are 100 tpy of any criteria air pollutant, 10 tpy of any individual HAP, or 25 tpy of any combination of HAPs. The MP33 Compressor Station would not exceed Title V major source thresholds for any criteria pollutant and is not subject to title V permitting requirements. The MP69 Compressor Station would exceed Title V thresholds for NOx and CO and would be considered a major source under Title V. Golden Pass submitted its application on April 1, 2021, LDEQ Proposed Permit No. 0520-00515-V0. After review of the final proposed operational emission rate, LDEQ determined the PSD program was not applicable to the MP69 Compressor Station Project.

**New Source Performance Standards**

The EPA regulations at 40 CFR Part 60 establish New Source Performance Standards (NSPS) for criteria pollutant emissions from specific new, modified, or reconstructed emission sources. The LDEQ incorporates these emission standards by reference. The following NSPS requirements were identified as potentially applicable to sources at the MP33 and MP69 Compressor Stations specified in this amendment. Applicability will be determined during the permitting process with LDEQ.

Subpart JJJJ, Stationary Spark Ignition Combustion Engines, applies to owners and operators of emergency engines with a maximum engine power greater than 25 horsepower (hp). Applicable engines that commence construction after July 12, 2006, and are manufactured after January 1, 2009, are subject to this regulation.
Subpart KKKK, Standards of Performance for Stationary Combustion Turbines regulates emissions of NOx and SO2 and applies to owners and operators of stationary combustion turbines with a heat input peak load equal or greater than 10 MMBtu per hour that commenced construction, modification, or reconstruction after February 18, 2005.

Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015. EPA finalized amendments to Subpart OOOOa on September 14, 2020, by removing sources in the transmission and storage segment from the source category, rescinding the NSPS (including both the VOC and methane requirements) applicable to those sources, and separately rescinding the methane-specific requirements of the NSPS applicable to sources in the production and processing segments. The revised Subpart defines affected natural gas production and processing facilities as including the well and extending to, but not including, the point of custody transfer to the natural gas transmission and storage segment. Golden Pass would meet the requirements of Subpart OOOOa for the Project.

National Emission Standards for Hazardous Air Pollutants

The EPA regulations under 40 CFR Part 63 establish National Emission Standards for Hazardous Air Pollutants (NESHAP) emission standards for major and area sources of hazardous air pollutants (HAPS). The 1990 CAA Amendments established a list of 189 HAPs, resulting in the promulgation of NESHAP. The NESHAP regulate HAP emissions from specific source types located at major or area sources of HAPs by setting emission limits, monitoring, testing, record keeping, and notification requirements. The MP33 and MP69 Compressor Stations are not expected to be a major source of HAPs.

Subpart ZZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines, would apply to the emergency generators. By complying with NSPS Subpart JJJJ, the emergency generator would meet the requirements of NESHAP and no further requirements apply.

General Conformity

A general conformity analysis must be conducted by the lead federal agency if a federal action would result in the generation of emissions that would exceed the general conformity applicability threshold levels of the pollutants(s) for which an AQCR is in nonattainment. According to Section 176(c)(1) of the CAA (40 CFR §51.853), a federal agency cannot approve or support any activity that does not conform to an approved SIP. Conforming activities or actions should not, through additional air pollutant emissions:

- cause or contribute to any new violation of any standard in any area;
- increase the frequency or severity of any existing violation of any standard in any area; or
• delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

General Conformity does not apply to federal actions in attainment areas or unclassifiable/attainment areas, including counties designated attainment or unclassifiable/attainment that are within the Northeast Ozone Transport Region. The EPA amended the General Conformity Rule in 2010 (Federal Register, Volume 75, Number 64) to exclude emissions regulated by any permit issued under minor and major NSR from a General Conformity applicability analysis. As the Project is located in an area listed as in attainment/unclassified for all criteria pollutants, a General Conformity analysis does not apply.

**Applicable State Air Quality Requirements**

In addition to the federal regulations identified above, Louisiana has their own air quality regulations that may be applicable to the MP69 Compressor Station. The applicability of state regulations remains consistent with those identified in the 2016 FEIS, in addition to those identified pertaining to amendment activities. The MP33 Compressor Station would fall under Texas regulations, which were discussed in the 2016 FEIS, no new state regulations were identified as part of this Project.

**Louisiana**

*Chapter 2 – Rules and Regulations for the Fee System of the Air Quality Control Programs:*

*Chapter 5 – Permit Procedures:*

*Chapter 9 – General Regulations on Control of Emissions and Emission Standards:*

*Chapter 11 – Control of Air Pollution from Smoke:*

*Chapter 13 – Emission Standards for Particulate Matter (“PM”):*

*Chapter 15 – Emission Standards for Sulfur Dioxide*

*Chapter 21 – Control of Emission of Organic Compounds:*

*Chapter 56 – Prevention of Air Pollution Emergency Episodes:*

Golden Pass would comply with all applicable state requirements.

**Construction Emissions**

Construction of the Project components would result in short-term increases in emissions of some air pollutants due to the use of equipment powered by diesel fuel or gasoline engines and the generation of fugitive dust due to the disturbance of soil and
other dust-generating activities. Due to the scope of the Project, construction emissions would be reduced from the previous estimated construction emissions in the 2016 FEIS. To mitigate exhaust emissions, Golden Pass would utilize measures recommended in the 2016 FEIS, including limit idling time of equipment, maintaining and tuning engines per manufacturer’s specifications, consider using alternative fuel vehicles, and ensure use of Tier 2 or higher engines for construction diesel engines. Fugitive dust emissions generated by on-site construction equipment, and mitigation measures, would also remain consistent with those outlined in the 2016 FEIS and Fugitive Dust Control Plan\textsuperscript{39}.

Emissions during construction of the MP69 Compressor Station would increase pollutant concentrations in the vicinity of the facilities; however, their effect on ambient air quality would vary with time due to the construction schedule, the mobility of the sources, and the variety of emission sources. Construction emissions associated with construction of the MP69 Compressor Station would be considered temporary and cease at completion of construction. Golden Pass estimates that construction of the MP69 Compressor Station would take 15 months. Following construction, air quality would not revert back to previous conditions but would transition to permanent operational-phase emissions after commissioning and initial start-up. Estimated construction emissions for construction of the MP69 Compressor Station are presented in table 4.8.1-1.

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Year</th>
<th>Annual Pollutant Emissions (tpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NOx</td>
</tr>
<tr>
<td>FEIS-MP66 CS\textsuperscript{a}</td>
<td>Year-1 (2017)</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>Year-2 (2017)</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4.4</td>
</tr>
<tr>
<td>FEIS–Calcasieu Loop\textsuperscript{b} (Eliminated with modifications)</td>
<td>Total</td>
<td>-2.8</td>
</tr>
<tr>
<td>Proposed Modifications–MP69 Compressor Station\textsuperscript{b}</td>
<td>Year-1 (2021)</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Year-2 (2022)</td>
<td>5.5</td>
</tr>
</tbody>
</table>

\textsuperscript{39} Accession No. 20170405-5155.
Construction emissions associated with construction worker commuting would remain unchanged from the 2016 FEIS. Updated construction emissions associated with the proposed modifications at the MP33 Compressor Station are presented in table 4.8.1-2. There would be an increase in construction emissions over those analyzed in the 2016 FEIS.

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Year</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>PM10</th>
<th>PM2.5</th>
<th>VOC</th>
<th>HAPs</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor</td>
<td>FEIS</td>
<td>1.0</td>
<td>1.2</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.1</td>
<td>0.1</td>
<td>350</td>
</tr>
<tr>
<td>Station – MP33</td>
<td>Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compressor</td>
<td>(2017)</td>
<td>0.4</td>
<td>0.6</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
<td>0.1</td>
<td>164</td>
</tr>
<tr>
<td>Station¹</td>
<td>Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.4</td>
<td>1.8</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>514</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(tons)</td>
<td>2.4</td>
<td>2.7</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.4</td>
<td>0.4</td>
<td>770.1</td>
</tr>
</tbody>
</table>

Notes:

a. Based on FEIS Table 4.11.1-13.
b. Includes construction of the Gulf Run Interconnection (MP69).
Table 4.8.1-2
Estimated Construction Emissions for Modifications at MP33 Compressor Station (tpy)

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Year</th>
<th>NOx</th>
<th>CO</th>
<th>SO₂</th>
<th>PM₁₀</th>
<th>PM₂.₅</th>
<th>VOC</th>
<th>CO₂e</th>
</tr>
</thead>
<tbody>
<tr>
<td>8–MP33 Compressor Station&lt;sup&gt;b&lt;/sup&gt;</td>
<td>(2021)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>(2022)</td>
<td>1.0</td>
<td>1.5</td>
<td>0.0</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
<td>361.9</td>
</tr>
<tr>
<td>Total (tons)</td>
<td></td>
<td>3.4</td>
<td>4.2</td>
<td>0.0</td>
<td>0.3</td>
<td>0.3</td>
<td>0.6</td>
<td>1,132</td>
</tr>
<tr>
<td>Overall Difference (tons)</td>
<td></td>
<td>+2.0</td>
<td>+2.4</td>
<td>0.0</td>
<td>+0.2</td>
<td>+0.3</td>
<td>+0.4</td>
<td>+618</td>
</tr>
</tbody>
</table>

Notes:
<sup>a</sup> Based on FEIS Table 4.11.1-13.
<sup>b</sup> Includes construction of the new Interconnects (MP33).

Due to the temporary nature of construction activities, limited amount of construction emission increases due to the proposed modifications, and with the implementation of the mitigation measures discussed in the 2016 FEIS and approved Fugitive Dust Control Plan, we conclude that construction of the MP69 Compressor Station and modifications at the MP33 Compressor Station would not have a significant impact on air quality.

**Operating Emissions and Mitigation**

The previously approved MP66 Compressor Station was planned to include a low-pressure system with two 8,475-hp gas-driven turbines and a high-pressure system with five gas-driven, 15,128-hp turbines, for a total of 92,590-hp. With the proposed amendment, the station would be moved to MP69. The modified design would include a low-pressure system with two 3,479-hp gas-driven Solar Centaur 40 turbines, and a high-pressure system with five 19,133-hp gas-driven Solar Titan 130 turbines, for a total of 102,623-hp. Additional sources of fugitive emissions would include maintenance startup and shutdown emissions, generator and tank fugitives and blowdown operations.

An air quality analysis was completed to demonstrate that emissions of CO, SO₂, NO₂, PM₁₀, and PM₂.₅ from the Project would not cause or significantly contribute to a
modeled exceedance of the NAAQS. Air quality dispersion modeling\(^\text{40}\) for criteria pollutants was performed for the site to analyze ground level concentrations for exceedance of each pollutants respective Significant Impact Levels (SILs). For criteria pollutants greater to or equal to their respective SILs, further impacts analysis is performed to determine compliance with the applicable NAAQS.

Modeled concentrations of CO, SO\(_2\), PM\(_{10}\), and PM\(_{2.5}\) do not exceed their respective SIL for any averaging period, and do not contribute to a violation of applicable NAAQS\(^\text{41}\). Modeled concentrations for NO\(_2\) exceeded their SILs, and a full impacts analysis was performed. These results are in table 4.8.1-3. Full impact analysis for NO\(_2\) showed modeled concentrations for all averaging periods were less than their respective NAAQS standards\(^\text{42}\), as seen in table 4.8.1-4, and do not cause or contribute to a violation of NO\(_2\) NAAQS standards.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Period</th>
<th>Meteorological Year</th>
<th>GLC(_{\text{max}}) (µg/m(^3))</th>
<th>SIL(_{\text{1}}) (µg/m(^3))</th>
<th>GLC(_{\text{max}} &lt;) SIL (Yes/ No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO(_2)</td>
<td>1-hour</td>
<td>2015-2019</td>
<td>63.84</td>
<td>7.5</td>
<td>No</td>
</tr>
<tr>
<td>NO(_2)</td>
<td>Annual</td>
<td>2015</td>
<td>2.45</td>
<td>1.0</td>
<td>No</td>
</tr>
<tr>
<td>NO(_2)</td>
<td>Annual</td>
<td>2016</td>
<td>2.61</td>
<td>1.0</td>
<td>No</td>
</tr>
<tr>
<td>NO(_2)</td>
<td>Annual</td>
<td>2017</td>
<td>2.60</td>
<td>1.0</td>
<td>No</td>
</tr>
<tr>
<td>NO(_2)</td>
<td>Annual</td>
<td>2018</td>
<td>2.20</td>
<td>1.0</td>
<td>No</td>
</tr>
<tr>
<td>NO(_2)</td>
<td>Annual</td>
<td>2019</td>
<td>2.45</td>
<td>1.0</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>1-hour</td>
<td>2015</td>
<td>404.69</td>
<td>2,000.0</td>
<td>Yes</td>
</tr>
<tr>
<td>CO</td>
<td>1-hour</td>
<td>2016</td>
<td>408.27</td>
<td>2,000.0</td>
<td>Yes</td>
</tr>
<tr>
<td>CO</td>
<td>1-hour</td>
<td>2017</td>
<td>426.68</td>
<td>2,000.0</td>
<td>Yes</td>
</tr>
<tr>
<td>CO</td>
<td>1-hour</td>
<td>2018</td>
<td>415.39</td>
<td>2,000.0</td>
<td>Yes</td>
</tr>
<tr>
<td>CO</td>
<td>1-hour</td>
<td>2019</td>
<td>411.06</td>
<td>2,000.0</td>
<td>Yes</td>
</tr>
<tr>
<td>CO</td>
<td>8-hour</td>
<td>2015</td>
<td>56.84</td>
<td>500.0</td>
<td>Yes</td>
</tr>
<tr>
<td>CO</td>
<td>8-hour</td>
<td>2016</td>
<td>65.76</td>
<td>500.0</td>
<td>Yes</td>
</tr>
<tr>
<td>CO</td>
<td>8-hour</td>
<td>2017</td>
<td>60.23</td>
<td>500.0</td>
<td>Yes</td>
</tr>
</tbody>
</table>

\(^\text{40}\) Accession No.: 202104165276.

\(^\text{41}\) Table 4-1- of Air Dispersion Modeling Report- Accession No.: 202104165276.

\(^\text{42}\) Table 4-2 – of Air Dispersion Modeling Report- Accession No.: 202104165276.
<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Period</th>
<th>Meteorological Year</th>
<th>GLCmax (µg/m³)</th>
<th>SIL₁ (µg/m³)</th>
<th>GLCmax &lt; SIL₁ (Yes/ No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>8-hour</td>
<td>2018</td>
<td>54.39</td>
<td>500.0</td>
<td>Yes</td>
</tr>
<tr>
<td>CO</td>
<td>8-hour</td>
<td>2019</td>
<td>54.08</td>
<td>500.0</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>24-hour</td>
<td>2015</td>
<td>0.97</td>
<td>5.0</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>24-hour</td>
<td>2016</td>
<td>1.00</td>
<td>5.0</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>24-hour</td>
<td>2017</td>
<td>1.17</td>
<td>5.0</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>24-hour</td>
<td>2018</td>
<td>0.81</td>
<td>5.0</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>24-hour</td>
<td>2019</td>
<td>0.93</td>
<td>5.0</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>24-hour</td>
<td>2015-2019</td>
<td>1.03</td>
<td>1.17</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Annual</td>
<td>2015</td>
<td>0.14</td>
<td>0.2</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Annual</td>
<td>2016</td>
<td>0.15</td>
<td>0.2</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Annual</td>
<td>2017</td>
<td>0.15</td>
<td>0.2</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Annual</td>
<td>2018</td>
<td>0.12</td>
<td>0.2</td>
<td>Yes</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Annual</td>
<td>2019</td>
<td>0.14</td>
<td>0.2</td>
<td>Yes</td>
</tr>
<tr>
<td>SO₂</td>
<td>1-hour</td>
<td>2015</td>
<td>3.24</td>
<td>7.8</td>
<td>Yes</td>
</tr>
<tr>
<td>SO₂</td>
<td>1-hour</td>
<td>2016</td>
<td>3.19</td>
<td>7.8</td>
<td>Yes</td>
</tr>
<tr>
<td>SO₂</td>
<td>1-hour</td>
<td>2017</td>
<td>3.30</td>
<td>7.8</td>
<td>Yes</td>
</tr>
<tr>
<td>SO₂</td>
<td>1-hour</td>
<td>2018</td>
<td>3.31</td>
<td>7.8</td>
<td>Yes</td>
</tr>
<tr>
<td>SO₂</td>
<td>1-hour</td>
<td>2019</td>
<td>3.32</td>
<td>7.8</td>
<td>Yes</td>
</tr>
<tr>
<td>SO₂</td>
<td>3-hour</td>
<td>2015</td>
<td>3.04</td>
<td>25.0</td>
<td>Yes</td>
</tr>
<tr>
<td>SO₂</td>
<td>3-hour</td>
<td>2016</td>
<td>2.92</td>
<td>25.0</td>
<td>Yes</td>
</tr>
<tr>
<td>SO₂</td>
<td>3-hour</td>
<td>2017</td>
<td>2.96</td>
<td>25.0</td>
<td>Yes</td>
</tr>
<tr>
<td>SO₂</td>
<td>3-hour</td>
<td>2018</td>
<td>3.05</td>
<td>25.0</td>
<td>Yes</td>
</tr>
<tr>
<td>SO₂</td>
<td>3-hour</td>
<td>2019</td>
<td>2.73</td>
<td>25.0</td>
<td>Yes</td>
</tr>
</tbody>
</table>

1. The threshold used for comparison is determined as follows: the secondary PM₂.₅ impacts of 0.03 µg/m³ for the 24-hour averaging period and 0.001 µg/m³ for the annual averaging period are subtracted from the respective regulatory SILs of 1.2 µg/m³ and 0.2 µg/m³.
<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Period</th>
<th>Meteorological Year</th>
<th>GLCmax (H8H) (µg/m³)</th>
<th>GLCmax + Background (µg/m³)</th>
<th>NAAQS &lt; NAAQS (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO₂</td>
<td>1-hour</td>
<td>2015-2019</td>
<td>51.61</td>
<td>124.88</td>
<td>188</td>
</tr>
<tr>
<td>NO₂</td>
<td>Annual</td>
<td>2015</td>
<td>2.88</td>
<td>17.92</td>
<td>100</td>
</tr>
<tr>
<td>NO₂</td>
<td>Annual</td>
<td>2016</td>
<td>3.10</td>
<td>18.14</td>
<td>100</td>
</tr>
<tr>
<td>NO₂</td>
<td>Annual</td>
<td>2017</td>
<td>3.07</td>
<td>18.11</td>
<td>100</td>
</tr>
<tr>
<td>NO₂</td>
<td>Annual</td>
<td>2018</td>
<td>2.62</td>
<td>17.66</td>
<td>100</td>
</tr>
<tr>
<td>NO₂</td>
<td>Annual</td>
<td>2019</td>
<td>2.94</td>
<td>17.98</td>
<td>100</td>
</tr>
</tbody>
</table>

EPA recommends that the cumulative impact analysis discussion in the draft EIS be updated to identify and provide a justification for the appropriate use of the monitor date as representative of the local air quality. Monitoring dates were chosen at time of assessment request made by FERC on March 9, 2021, with a limited time frame for submittal; based on the ambient conditions described in the modeling report, conditions on measurement dates were representative of existing local air quality. The air dispersion modeling analyses was conducted in accordance with the U.S. EPA’s Guideline on Air Quality Models (the “Guideline”),43 LDEQ’s Air Quality Modeling Procedures, and use of monitoring dates for the air quality assessment is considered appropriate.44

EPA recommends that the final EIS not characterize the NO₂ impacts as ‘not significant,’ but rather, based on an updated analysis, consistent with EPA’s Guidelines, EPA recommends the final EIS indicate that the project emissions ‘do not cause or contribute to a NAAQS violation.’ We note this comment and made the requested change in the relevant text above.

The increase in compression at the MP69 Compressor Station, as compared to when it was to be located at MP66, would result in an increase in emissions during operations. These emissions are presented in table 4.8.1-5.

Based on the proposed operational emissions and supplemental air modeling analysis submitted April 16, 2021, the MP69 Compressor Station would exceed Title V

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44 Air Quality Modeling Procedures, Air Quality Assessment Division, LDEQ, August 2006.
thresholds for NOx and CO and would be considered a major source under Title V; Golden Pass is preparing the Permit application as part of Title V compliance. The Project would not be considered a major source under the PSD program. We conclude

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>VOC</th>
<th>HAPs</th>
<th>CO$_{2e}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEIS –MP66 Compressor Station</td>
<td>200.6</td>
<td>208.7</td>
<td>9.6</td>
<td>1.1</td>
<td>0.6</td>
<td>9.0</td>
<td>3.4</td>
<td>393,927</td>
</tr>
<tr>
<td>MP69 Compressor Station</td>
<td>168.92</td>
<td>222.90</td>
<td>11.1</td>
<td>1.63</td>
<td>1.108</td>
<td>36.23</td>
<td>4</td>
<td>456,579</td>
</tr>
<tr>
<td>Difference (tons)</td>
<td>+46.7</td>
<td>-7.4</td>
<td>+1.5</td>
<td>+0.2</td>
<td>+0.2</td>
<td>+24.4</td>
<td>0.6</td>
<td>-62,652</td>
</tr>
<tr>
<td>PSD Major Source Threshold</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>N/A</td>
<td>100,000</td>
</tr>
</tbody>
</table>

Notes:

a. Based on FEIS Table 4.1.1-7.
b. Including blowdown events and fugitive components from meter station.

that operation of the MP69 Compressor Station would not significantly impact air quality in the surrounding area.

The 2016 FEIS analyzed the MP33 Compressor Station to include two 8,997-hp gas-driven turbines. The proposed modifications to this new station include one new 19,325 hp gas turbine unit and two 8,888 hp gas turbine units. The increase in compression would result in an increase in emissions of most pollutants during operations. Modeled concentrations of criteria pollutants do not exceed their respective SIL for any averaging period, and do not contribute to a violation of applicable NAAQS. Updated operational emissions for the MP33 Compressor Station are presented in table 4.8.1-9.

Due to the temporary nature of construction emissions, and our review of the proposed operational emissions, we conclude that the construction and operation of the Amendment would not have a significant impact on air quality.
Table 4.8.1-9

MP33 Compressor Station Modified Operational Emissions (tpy)

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>NOx</th>
<th>CO</th>
<th>SO₂</th>
<th>PM₁₀/PM₂.₅</th>
<th>VOC</th>
<th>HAP</th>
<th>CO₂ₑ</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEIS – MP33 Compressor Station a</td>
<td>44.2</td>
<td>45.9</td>
<td>2.1</td>
<td>13.2</td>
<td>6.0</td>
<td>0.7</td>
<td>86,651</td>
</tr>
<tr>
<td>Updated MP33 Compressor Station</td>
<td>70.9</td>
<td>81.1</td>
<td>4.1</td>
<td>1.0</td>
<td>13.6</td>
<td>1.9</td>
<td>168,972</td>
</tr>
<tr>
<td>Difference (tons)</td>
<td>+26.7</td>
<td>+35.2</td>
<td>+2.0</td>
<td>-12.2</td>
<td>+7.6</td>
<td>+1.2</td>
<td>82,321</td>
</tr>
</tbody>
</table>

PSD Major Source Threshold

| PSD Major Source Threshold | 250 | 250 | 250 | 250 | N/A | N/A |

Title V Major Source Thresholds

| Title V Major Source Thresholds | 100 | 100 | 100 | 100 | N/A | 100,000 |

Notes:

* Based on FEIS Table 4.11.1-7.

Due to the temporary nature of construction emissions, and our review of the proposed operational emissions, we conclude that the construction and operation of the MP33 Compressor Station Modification Amendment would not have a significant impact on air quality.

Golden Pass commented stating the individual operational emissions for each facility is below the FERC significance threshold discussed in the FERC’s draft GHG Policy Statement for preparing an EIS. We note the Commission has stated that the draft GHG Policy Statement will not be applied to pending proceedings.⁴⁵

EPA recommends the final EIS discuss any applicable required leak detection, monitoring and controls for the proposed action. If there are not requirements that would currently apply, weEPA recommends developing a monitoring plan capable of identifying and committing to fixing leaks and including the plan as a recommended condition. PHMSA administers the national regulatory program to ensure the safe transportation of natural gas and other hazardous materials by pipeline. PHMSA’s safety mission is to ensure that people and the environment are protected from the risk of

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incidents. The natural gas pipeline and associated aboveground facilities would be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 C.F.R. Part 192 and other applicable state and federal requirements, including Section 192.12 of 49 C.F.R. Part 192.

RESTORE commented that since there are at least 8 residences within a mile of the possible Golden Pass Compressor site that electrically-driven alternative should have been considered. Electric driven compression was analyzed in the 2016 FEIS and is further discussed in section 3.3.

RESTORE lists discrepancies between emission data reported by FERC’s EIS and LDEQ’s. Public Notice. We note these concerns. Updates to the emissions for the MP69 Compressor Station were revised from the earlier data reflected in the Draft EIS based on the final design used for the air permit application submitted to the LDEQ for MP69. These changes were filed April 18, 2022,. The relevant updates have been incorporated to table 4.8.1-55-1.

RESTORE also comments on the increase in air pollutants due to the proposed MP 69 Compressor Station, commenting that a comparison to similar compressor stations may lead to more universal emission controls among various stations. Unless same model equipment and operating parameters are used, comparing multiple stations would not produce useful results as a wide range of factors may affect emissions, including but not limited to: approved capacity of each respective station, demand, age of equipment, maintenance, shipper contracts, etc. Additionally, there exists a wide range of equipment and vendors for applicants to consider when designing facilities, with varying specifications and controls. As our analysis is focused on emissions of proposed facilities and not their estimated performance compared to existing facilities, this comment is outside the scope of this EIS.

4.8.2 Climate Change

Climate change is the variation in the Earth’s climate (including temperature, precipitation, humidity, wind, and other meteorological variables) over time. Climate change is driven by accumulation of GHGs in the atmosphere due to the increased consumption of fossil fuels (e.g., coal, petroleum, and natural gas) since the early beginnings of the industrial age and accelerating in the mid- to late-20th century. The GHGs produced by fossil-fuel combustion are CO2, methane, and nitrous oxide.

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In 2017 and 2018, the U.S. Global Change Research Program (USGCRP)\(^{47}\) issued its Climate Science Special Report: Fourth National Climate Assessment, Volumes I and II.\(^{48}\) This report and the recently released report by the Intergovernmental Panel on Climate Change, Climate Change 2021: The Physical Science Basis, state that climate change has resulted in a wide range of impacts across every region of the country and the globe. Those impacts extend beyond atmospheric climate change alone and include changes to water resources, agriculture, ecosystems, human health, and ocean systems.\(^{49}\) According to the Fourth Assessment Report, the United States and the world are warming; global sea level is rising and oceans are acidifying; and certain weather events are becoming more frequent and more severe.\(^{50}\) These impacts have accelerated throughout the end of the 20th and into the 21st century.\(^{51}\)

GHG emissions do not result in proportional local and immediate impacts; it is the combined concentration in the atmosphere that affects the global climate system. These are fundamentally global impacts that feedback to local and regional climate change impacts. Thus, the geographic scope for analysis of GHG emissions is global, rather than local or regional. For example, a project 1 mile away emitting 1 ton of GHGs would contribute to climate change in a similar manner as a project 2,000 miles distant also emitting 1 ton of GHGs.

Healthy Gulf and South Wings expressed concerns regarding impacts associated with climate change. Climate change is a global phenomenon; however, for this analysis, we will focus on the existing and potential cumulative climate change impacts in the general Project area. The USGCRP’s Fourth Assessment Report notes the following observations of environmental impacts are attributed to climate change in the Southeast region of the United States (USGCRP 2017, USGCRP 2018):

- the decade of 2010 through 2017 has been warmer than any previous decade since 1920 for average daily maximum and average daily minimum temperature;
- since 1960, there have been lower numbers of days above 95°F compared to the pre-1960 period but during the 2010’s the number of nights above 75°F has been nearly double the average over 1901 – 1960. The length of the freeze free

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\(^{47}\) The U.S. Global Change Research Program is the leading U.S. scientific body on climate change. It comprises representatives from 13 federal departments and agencies and issues reports every 4 years that describe the state of the science relating to climate change and the effects of climate change on different regions of the United States and on various societal and environmental sectors, such as water resources, agriculture, energy use, and human health.


\(^{49}\) IPCC Report at SPM-5 to SPM-10.

\(^{50}\) USGCRP Report Volume II at 73-75.

\(^{51}\) See, e.g., USGCRP Report Volume II at 99 (describing accelerating flooding rates in Atlantic and Gulf Coast cities).
season was 1.5 weeks longer on average in the 2010s compared to any other historical period on record;

- number of days with 3 or more inches of rain has been historically high over the past 25 years. The 1990s, 2000s and 2010s rank first, third and second, respectively in number of events;
- summers have been either increasingly dry or extremely wet, depending on location;
- the number of strong (Category 4 and 5) hurricanes has increased since the early 1980s; and
- average global sea level rise over the past century averaged approximately 8 to 9 inches; in some low lying areas of the Southeast region, the combination of vertical land motion and changing currents has resulted in as much as 1 to 3 feet of local relative sea level rise. This recent rise in local relative sea level has caused normal high tides to reach critical levels that result in flooding in many coastal areas in the region.

The USGCRP’S Fourth Assessment Report notes the following projections of climate change impacts in the Project region (Southeast US) with a high or very high level of confidence (USGCRP, 2018):

- climate models project nighttime temperatures above 75°F and daytime maximum temperatures above 95°F become the summer norm. Nights above 80°F and days above 100°F, which are now relatively rare, would become common;
- lowland coastal areas are expected to receive less rainfall on average but experience more frequent intense rainfall events followed by longer drought periods;
- coastal areas along the Gulf of Mexico are flat, therefore, expected sea level rises may cause inundation in certain low lying areas;
- drought and sea level rise will create stressful conditions for coastal trees that are not adapted to higher salinity levels;
- other coastal species may also be stressed by sea level rise and warmer temperatures, prompting migration out of the area; and
- tropical storms and hurricanes may become more intense.

It should be noted that while the impacts described above taken individually may be manageable for certain communities, the impacts of compound events (such as

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52 The report authors assessed current scientific understanding of climate change based on available scientific literature. Each “Key Finding” listed in the report is accompanied by a confidence statement indicating the consistency of evidence or the consistency of model projections. A high level of confidence results from “moderate evidence (several sources, some consistency, methods vary and/or documentation limited, etc.), medium consensus.” A very high level of confidence results from “strong evidence (established theory, multiple sources, consistent results, well documented and accepted methods, etc.), high consensus.”

simultaneous heat and drought, wildfires associated with hot and dry conditions, or flooding associated with high precipitation on top of saturated soils) can be greater than the sum of the parts.\textsuperscript{53}

The GHG emissions associated with construction and operation of the Project were identified and quantified in section 4.8 of the EIS. This analysis focuses on the increase in carbon dioxide equivalent (CO2e) in excess of those approved in the 2016 FEIS. Construction of the facilities is estimated to increase emissions from the 2016 FEIS up to about 413 tons (375 metric tons) over the duration of construction. Operation of the new emission sources would result in emissions in excess of the 2016 FEIS of up to 144,973 tons (131,491 metric tpy) of CO2e. These estimates for operational emissions are based on the increased horsepower resulting from the Project modifications and assuming 100 percent utilization, where the modified turbines are operated at maximum capacity for 365 days/year, 24 hours/day and include fugitive emissions. Additionally, the estimate includes fugitive emissions from compressor station equipment, piping, and ancillary facilities. Regarding the downstream GHG emissions from the Project, we note the Project modifications would increase compression at the MP33 and MP69 Compressor Stations as compared to the 2016 FEIS, but not the output volume of the facilities; therefore, no additional capacity was added due to the Amendment. For informational purposes, the total capacity approved by the 2016 FEIS is 2.7 billion standard cubic feet per day (bscf/d) to the existing Golden Pass Pipeline, combustion of which would result in 54.18 million metric tpy of CO2e emissions.\textsuperscript{54} We note that this CO2e estimate represents an upper bound amount of end-use combustion that could result from the Project’s incremental throughput of natural gas.

Construction and operation of the Project would increase the atmospheric concentration of GHGs, in combination with past, current, and future emissions from all other sources globally and would contribute incrementally to future climate change impacts. To assess impacts on climate change associated with the Project, Commission staff considered whether it could identify discrete physical impacts resulting from the Project’s GHG emissions or compare the Project’s GHG emissions to established targets designed to combat climate change.

To date, Commission staff have not identified a methodology to attribute discrete, quantifiable, physical effects on the environment resulting from the Project’s incremental contribution to GHGs. Without the ability to determine discrete resource impacts, Commission staff are unable to assess the Project’s contribution to climate change through any objective analysis of physical impact attributable to the Project. Additionally, Commission staff have not been able to find an established threshold for determining the Project’s significance when compared to established GHG reduction targets at the state or federal level. Ultimately, this EIS is not characterizing the Project’s

\textsuperscript{53} USGCRP Report Volume II.
\textsuperscript{54} The downstream CO2e values are slightly different for cubic feet per day versus dekatherms per day. To ensure consistency between projects, dekatherms will be used in the analysis here.
GHG emissions as significant or insignificant because the Commission is conducting a
generic proceeding to determine whether and how the Commission will conduct
significance determinations going forward.\(^55\) However, as we have done in prior NEPA
analyses, we disclose the Project’s GHG emissions in comparison to national and state
GHG emission inventories.

In order to provide context of the Project emissions on a national level, we
compare the Project’s GHG emissions to the total GHG emissions of the United States as
a whole. At a national level, 5,222.4 million metric tons of CO2e were emitted in 2020
(inclusive of CO2e sources and sinks).\(^56\) The construction-related emissions of the
Project could potentially increase CO2e emissions based on the 2020 national levels by
0.00006 percent, which is an increase in construction emissions over the 2016 FEIS by
0.00003 percent. In subsequent years, the operational emissions associated with the
Project could potentially increase CO2e emissions based on the 2020 national levels by
0.01 percent, which is an increase in operational emissions over the 2016 FEIS by 0.003
percent.

In order to provide context of the Project emissions on a state level, we
compare the Project’s GHG emissions to the state GHG inventories. At the state level, energy
related CO₂ emissions in Louisiana and Texas were 194.9 million metric tons and 683.2
million metric tons of CO₂e in 2019, respectively.\(^57\) GHG emissions in Louisiana would
result from the Project’s construction and operational emissions for the MP69
Compressor Station. GHG emissions in Texas would result from the Project’s
construction and operational emissions for the MP33 Compressor Station. Construction
emissions from the Project could potentially increase CO₂e emissions based on the
Louisiana 2019 levels by 0.001 percent and Texas 2019 levels by 0.0002 percent, which
is an increase in constructions emissions over the 2016 FEIS of 0.0004 percent in
Louisiana and 0.00008 percent in Texas; in subsequent years, the Projects operational
emissions could increase CO₂e emissions in Louisiana and Texas by 0.2 percent and 0.02
percent, respectively, which is an increase in operational emissions over the 2016 FEIS of
0.029 percent in Louisiana and 0.01 in Texas.

The State of Louisiana, within which the MP69 Compressor Station operational
emissions would occur, enacted executive targets for reducing emissions 26-28% by 2025

\(^{55}\) Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews, 178 FERC ¶ 61,108
(2022); 178 FERC ¶ 61,197 (2022).

\(^{56}\) U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-
Main Text (epa.gov) accessed April 2022.

\(^{57}\) U.S. Energy Information Administration, Table I, State Energy-Related Carbon Dioxide Emissions by
Year, Unadjusted: Louisiana and Texas (April, 2022),
and 40-50% by 2030, compared to 2005 levels, and net-zero by 2050. The targets also aim for net-zero GHG emissions by 2050. As indicated in table 4.8.1-4 and table 4.8.1-5 above, direct GHG emissions from the operation of the Project equipment at the MP69 Compressor Station would result in an annual increase in CO2e emissions of about 456,579 tons (414,117 metric tons), which is 62,652 tons (56,825 metric tons) more than analyzed in the 2016 FEIS. This difference would represent 0.038 and 0.05 percent of Louisiana’s 2025 and 2030 GHG reduction targets, respectively, assuming the reductions from 2005 levels summarized above.

The State of Texas, which the MP33 CS Compressor Station operational emissions would occur, currently has set no statewide goals for GHG emission reduction targets.

**Response to Comments on Climate Change**

In its comments on the draft EIS, the EPA recommended omitting percentage comparisons to national and state goals and instead including a qualitative discussion disclosing the increasing conflict over time between continued GHG emissions and GHG emission reduction policies. The Commission has stated in recent orders that the comparisons provide additional context in considering a project’s potential impact on climate change. Accordingly, we have included those comparisons in our NEPA analysis.

EPA recommends that FERC address the GHG emissions not just as an incremental fraction but more explicitly discuss whether the project is consistent with and supports the Louisiana GHG targets. The analysis above illustrates what contribution the Project would make towards Louisiana’s GHG reduction targets. It is beyond the scope of this EIS to determine consistency with state level operational goals. That authority is more appropriately suited to state environmental agencies at the operational permitting level.

Finally, EPA recommends that the final EIS specifically discuss how climate resiliency has been considered in the design of the proposed action and consider any other appropriate measures to protect the compressor infrastructure from climate impacts.

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58 We reviewed the U.S. State Greenhouse Emission Targets site for individual state requirements at: [https://www.c2es.org/document/greenhouse-gas-emissions-targets/](https://www.c2es.org/document/greenhouse-gas-emissions-targets/)
59 A metric ton is approximately equal to 1.1 ton.
61 The U.S. Energy Information Administration, Energy-Related CO2 Emission Data Tables identify Louisiana’s 2005 CO2 emissions as 201.9 million metric tons. Therefore, we consider the 2025 GHG emission target to be 147.4 million metric tons and the 2030 GHG emission target to be 111.0 million metric tons.
62 See Order Issuing Certificates and Approving Abandonment, 178 FERC ¶ 61,199 (2022) at P89; and Order Issuing Certificate, 178 FERC ¶ 61,198 (2022) at P48.
As indicated above, regional impacts of climate change on critical infrastructure such as pipeline facilities would be more frequent intense rainfall events and flooding and more intense tropical storms and hurricanes. As stated above, Golden Pass would comply with all applicable USDOT-PHMSA Minimum Federal Safety Standards specified in 49 CFR 192 for the proposed facilities designed to protect the infrastructure from these impacts. Golden Pass would implement its operating procedures, including continually monitoring pipeline pressure and volume, and would inspect any facilities that may have sustained damage following a weatherrelated event and would repair or replace facilities as needed.

Response to Comments Upstream and Downstream Emissions

EPA recommends the final EIS quantify all upstream and downstream GHG emissions by activity associated with the Project.

As the Commission has previously concluded in numerous natural gas infrastructure proceedings, the environmental effects resulting from natural gas production are likely neither caused by a proposed project nor are they reasonably foreseeable consequences of its approval of a project. Regarding reasonable foreseeability, courts have found that an impact is reasonably foreseeable if it is “sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.”63 Although courts have held that NEPA requires “reasonable forecasting,”64 an agency “is not required to engage in speculative analysis”65 or “to do the impractical, if not enough information is available to permit meaningful consideration.”66

To date, the Commission has not found upstream emissions to be an effect of any proposed project, primarily because of the following unknown factors: the location of the supply source; whether transported gas will come from new or existing production; and whether there will be any potential associated development activities, and if so, its location. However, the Commission will continue to determine, on a case-by-case basis, whether GHG emissions from upstream production activities are a reasonably foreseeable and causally connected result of a proposed project.

In its comments on the draft EIS, the EPA recommended that the final EIS quantify all downstream GHG emissions by activity associated with the proposed project, as supported by CEQ’s preamble to the notice of proposed rulemaking. Overall downstream emissions are quantified above. Downstream use at the local distribution

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63 EarthReports, Inc. v. FERC, 828 F.3d 949, 955 (D.C. Cir. 2016) (citations omitted); see also Sierra Club v. Marsh, 976 F.2d 763, 767 (1st Cir. 1992).
64 N. Plains Res. Council, Inc. v. Surface Transp. Bd., 668 F.3d 1067, 1079 (9th Cir. 2011) (quoting Selkirk Conservation Alliance v. Forsgren, 336 F.3d 944, 962 (9th Cir. 2003)).
65 Id. at 1078.
66 Id. (quoting Envtl. Prot. Info. Ctr. v. U.S. Forest Serv., 451 F.3d 1005, 1014 (9th Cir. 2006)).
level is unknown; speculation on volumes allocated to specific uses would be arbitrary and not add value to the analysis.

**Response to Comments on Social Cost of Greenhouse Gas**

EPA commented that the EIS should use the social cost of GHGs (also referred to as the “social cost of carbon” [SCC]) to assess climate impacts generated by each additional ton of GHGs emitted or saved by the Project. We note there is pending litigation challenging federal agencies’ use of the Interagency Working Group (IWG) on Social Cost of Greenhouse Gases’ interim values for calculating the social cost of GHGs.67 In addition, the CEQ noted that it is working with representatives on the GHG IWG to develop additional guidance regarding the application of the SCC tool in federal decision-making processes, including in NEPA analyses.68 The Commission has not determined which, if any, modifications are needed to render the SCC tool useful for project-level analyses.69 However, in response to EPA’s comments, we are disclosing an estimate of the social cost of GHGs associated with construction of the Project using the calculations described below.

As both EPA and CEQ participate in the IWG, Commission staff used the methods and values contained in the IWG’s current draft guidance but note that different values will result from the use of other methods.70 The emissions estimate used to calculate the social cost of GHGs is based on full construction and direct operational emissions for the Project. As stated above, the Project modifications would increase compression at the MP33 and MP69 Compressor Stations as compared to the 2016 FEIS, but not the output volume of the facilities; no additional capacity was added and no downstream emissions would be realized by construction of the Project. Accordingly, Commission staff calculated the social cost of carbon dioxide, nitrous oxide, and methane. For the analysis, staff assumed discount rates of 5 percent, 3 percent, and 2.5 percent,71 assumed the Project will be completed in 2025 and that the Project’s emissions

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67 Missouri v. Biden, 8th Cir. No. 21-3013; Louisiana v. Biden, No. 21-cv-1074-JDC-KK (W.D. La). On February 11, 2022, the U.S. District Court for the Western District of Louisiana issued a preliminary injunction limiting federal agencies’ employment of estimates of the social costs of GHGs and use of the IWG’s interim estimates. On March 16, 2022, the U.S. Court of Appeals for the Fifth Circuit issued a stay of the district court’s preliminary injunction, finding among other things that the federal agency defendants’ continued use of the interim estimates was lawful. Louisiana v. Biden, No. 22-30087 (5th Cir. Mar. 16, 2022).


69 See Order Issuing Certificates and Approving Abandonment, 178 FERC ¶ 61,199 (2022) at footnote 141.


71 IWG Interim Estimates Technical Support Document at 24. To quantify the potential damages associated with estimated emissions, the IWG methodology applies consumption discount rates to
will be at a constant rate throughout the life of the 20-year contract. Construction emissions are assumed to take place in 2023, 2024 and 2025 evenly. Noting these assumptions, the emissions from construction and operation of the Project is calculated to result in a total social cost of cGHGs equal to $32,041,260, $122,197,830, $185,110,425, respectively (all in 2020 dollars). Using the 95th percentile of the social cost of GHGs, and using the 3 percent discount rate, the emissions from this Project are calculated to result in a total social cost of GHGs equal to $370,603,929 (in 2020 dollars).

4.8.3 Noise

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

Two measurements used by some federal agencies to relate the time-varying quality of environmental noise to its known effects on people are the equivalent sound level (Leq) and the day-night equivalent sound level (Ldn). The Leq is a sound level containing the same sound energy as the instantaneous sound levels measured over a specific time period. Noise levels are perceived differently, depending on length of exposure and time of day. The Ldn takes into account the duration and time the noise is encountered. Specifically, in the calculation of the Ldn, late night to early morning (10:00 p.m. to 7:00 a.m.) noise exposures are penalized by 10 A-weighted decibels (dBA), to account for people’s greater sensitivity to sound during the nighttime hours. The A-weighted scale is used because human hearing is less sensitive to low and high frequencies than mid-range frequencies. For an essentially steady sound source that operates continuously over a 24-hour period, the Ldn is 6.4 dBA above the measured Leq.

estimated emissions costs. The IWG’s discount rates are a function of the rate of economic growth where higher growth scenarios lead to higher discount rates. For example, IWG’s method includes the 2.5 percent discount rate to address the concern that interest rates are highly uncertain over time; the 3 percent value to be consistent with OMB circular A-4 (2003) and the real rate of return on 10-year Treasury Securities from the prior 30 years (1973 through 2002); and the 5 percent discount rate to represent the possibility that climate-related damages may be positively correlated with market returns. Thus, higher discount rates further discount future impacts based on estimated economic growth. Values based on lower discount rates are consistent with studies of discounting approaches relevant for intergenerational analysis. Id. at 18-19, 23-24.

72 The IWG draft guidance identifies costs in 2020 dollars. Id. at 5 (Table ES-1).

73 This value represents “higher-than-expected economic impacts from climate change further out in the tails of the [social cost of CO2] distribution.” Id. at 11. In other words, it represents a higher impact scenario with a lower probability of occurring.

74 The IWG draft guidance identifies costs in 2020 dollars. Id. at 5 (Table ES-1).
In 1974, the EPA published its *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. This document provides information for state and local governments to use in developing their own ambient noise standards. The EPA has indicated that an $L_{dn}$ of 55 dBA protects the public from indoor and outdoor activity interference. Golden Pass has adopted this criterion to evaluate the potential noise impacts from the Project at noise-sensitive areas (NSAs) such as residences, schools, or hospitals. FERC requires that the noise attributable to any new installation (i.e., new compressor stations and associated pipeline facilities) during full load operation not exceed an $L_{dn}$ of 55 dBA at any NSAs. Due to the 10 dBA nighttime penalty added when calculating the $L_{dn}$, for a facility to meet the $L_{dn}$ 55 dBA limit, it must be designed such that average noise levels on a 24-hour basis do not exceed 48.6 dBA $L_{eq}$ at any NSA.

**Construction Noise**

Construction of the modifications at the MP33 and MP69 Compressor Stations would involve operation of general construction equipment and noise would be generated during installation of the Project components. Hoover and Keith conducted acoustical assessments for the MP33 and MP69 Compressor Station sites. These assessments identified 3 NSA’s in the MP33 Compressor Station construction area on July 1, 2019, and 2 NSA’s in the MP69 Compressor Station construction area on September 11, 2019.\(^75\)

Table 4.8.3-1 and table 4.8.3-2 summarize the predicted noise levels produced during construction of the Project facilities at nearby NSAs. Construction noise would be highly variable due to the types of equipment in use and timing of activities. Construction equipment would be operated on an as-needed basis during the construction period. Construction activities would occur primarily during daytime hours but may extend until 10pm based on Golden Pass’s proposed work schedule.

There are no noise regulations or ordinances at the state or county level applicable to the Project.

\(^75\) MP33 and MP69 pre-construction surveys can be found in Resource Report 9, Attachment 13, o. Of Accession No. 20210611-5124 and Accession No. 20201002-5106, respectively.
Table 4.8.3-1
MP33 and Meter Station Construction Noise Levels

<table>
<thead>
<tr>
<th>NSA</th>
<th>Distance to Center of Proposed Site</th>
<th>Existing Ambient Ldn (dBA)</th>
<th>Construction Ldn (dBA)</th>
<th>Total of Ambient Ldn and Construction</th>
<th>Expected Increase (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSA 1</td>
<td>1,150 ft. (NE)</td>
<td>46.3</td>
<td>53.0</td>
<td>53.8</td>
<td>7.5</td>
</tr>
<tr>
<td>NSA 2</td>
<td>1,260 ft. (E)</td>
<td>51.2</td>
<td>48.8</td>
<td>53.2</td>
<td>2.0</td>
</tr>
<tr>
<td>NSA 3</td>
<td>3,470 ft. (N)</td>
<td>44.6</td>
<td>35.9</td>
<td>45.1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Table 4.8.3-2
MP69 Estimated Construction Noise Levels

<table>
<thead>
<tr>
<th>NSA</th>
<th>Distance to Center of Proposed Site</th>
<th>Existing Ambient Ldn L_{dn} (dBA)</th>
<th>Construction Ldn L_{dn} (dBA)</th>
<th>Existing Ambient and Construction L_{dn} L_{dn} (dBA)</th>
<th>Expected Increase (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSA-1</td>
<td>2,454 ft/ E</td>
<td>51.8</td>
<td>34.9</td>
<td>51.9</td>
<td>0.1</td>
</tr>
<tr>
<td>NSA-2</td>
<td>2,332 ft/ NE</td>
<td>35.5</td>
<td>37.1</td>
<td>39.4</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Based on the intermittent nature of construction noise and that the expected construction noise levels would be below 55 dBA, only primarily during daytime hours, we conclude that construction of the Project would not significantly impact noise in the surrounding area.

**Operational Noise**

Operation of the Project would result in increased noise at nearby NSA’s from the MP33 and MP69 Compressor Stations. New operational noise sources at the MP33 Compressor Station include the three gas turbine compressor units, four bays of gas cooling, and metering facilities. Operational noise sources at the MP69 Compressor
Station include the seven gas turbine compressor units, nine bays of gas cooling, one bay of recycle gas cooling, and suction and discharge piping.

The compressor units at the MP33 Compressor Station would be enclosed in skid mounted enclosures with exhaust mufflers, and ventilation inlet and outlet ducts would be provided with in-line duct silencers. The Solar Titan 130 would be housed in one new acoustically treated metal building. The Solar Taurus 70 units would both be housed in one acoustically treated metal building. Operational noise levels for the MP33 Compressor Station are presented in table 4.8.3-3.

<table>
<thead>
<tr>
<th>NSA</th>
<th>Distance/ Direction to Station Center</th>
<th>Ambient Sound Level Ldn (dBA)</th>
<th>Operational Ldn (dBA)</th>
<th>Total Ambient and Operational Ldn (dBA)</th>
<th>Expected Increase (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSA 1</td>
<td>1,150 ft. (NE)</td>
<td>46.3</td>
<td>50.3</td>
<td>51.8</td>
<td>5.5</td>
</tr>
<tr>
<td>NSA 2</td>
<td>1,260 ft. (E)</td>
<td>51.2</td>
<td>49.2</td>
<td>53.3</td>
<td>2.1</td>
</tr>
<tr>
<td>NSA 3</td>
<td>3,470 ft. (N)</td>
<td>44.6</td>
<td>38.5</td>
<td>45.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Due to the minimal increase in expected noise at NSA’s 2 and 3, sounds occurring during operation of the Project would not be noticeable. Sound level increase would be noticeable at NSA 1, but below FERC limits. Based on the predicted operational sound levels, we recommend that:

- Golden Pass should file a noise survey with the Secretary no later than 60 days after placing MP33 Compressor Station in service. If a full load condition noise survey is not possible, Golden Pass should file 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 MP33 Compressor Station under interim or full horsepower load conditions exceeds an L_{dn} of 55 dBA at any nearby NSAs, Golden Pass should:
a. file a report with the Secretary on what changes are needed for review and written approval by the Director of the Office of Energy Projects (OEP), or the Director’s designee;

b. install additional noise controls to meet the level within 1 year of the in-service date; and

c. confirm compliance with the Ldn 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.

The compressor units at the MP69 Compressor Station would be enclosed in skid mounted enclosures with exhaust mufflers, and ventilation inlet and outlet ducts would be provided with in-line duct silencers. The Solar Titan 130 units would be housed in three acoustically treated metal buildings, and the Solar Centaur 40 units would both be contained in one acoustically treated metal building. Operational noise levels for the MP69 Compressor Station are presented in table 4.8.3-4.

<table>
<thead>
<tr>
<th>NSA</th>
<th>Distance to Center of Proposed Site</th>
<th>Existing Ambient L_{dn} (dBA)</th>
<th>Estimated Sound Level of Station L_{dn} (dBA)</th>
<th>Existing Ambient and Predicted Station Contribution L_{dn} (dBA)</th>
<th>Expected Increase (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSA-1</td>
<td>2,454 ft/ E</td>
<td>51.8</td>
<td>41.1</td>
<td>52.2</td>
<td>0.4</td>
</tr>
<tr>
<td>NSA-2</td>
<td>2,332 ft/ NE</td>
<td>35.5</td>
<td>44.5</td>
<td>45.5</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Due to the minimal increase in expected noise at NSA 1, sounds occurring during operation of the Project would not be noticeable. Sound level increase would be noticeable at NSA 2, but below FERC limits. Based on the predicted operational sound levels, we recommend that:

- **Golden Pass should file a noise survey with the Secretary no later than 60 days** after placing MP69 Compressor Station in service. If a full load condition noise survey is not possible, Golden Pass should file 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 MP69 Compressor Station under interim or full horsepower load conditions exceeds an L_{dn} of 55 dBA at any nearby NSAs, Golden Pass should:
a. file a report with the Secretary on what changes are needed for review and written approval by the Director of OEP, or the Director’s designee;
b. install additional noise controls to meet the level within 1 year of the in-service date;
b.c. reduce operation of this station until a noise level below an L_{dn} of 55 dBA at the nearby NSAs is achieved; and
c.d. 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.

Blowdown events would occur as part of Project operation as discussed in the 2016 FEIS. Blowdown silencers would be installed and designed to not exceed 55 dBA at the nearest NSA’s. Noise from blowdowns would be infrequent and short term, lasting from 1 to 4 minutes.

Based on the projected operational sound levels and our recommended conditions, we conclude that operational noise from the Project would not have a significant impact on the acoustical environment at the nearby NSAs.

EPA states the draft EIS indicates the length of time that FERC is granting for the applicant to remedy an exceedance of the noise threshold is one year from the in-service date. They accepted that length of time is excessive for the MP69 Compressor Station based on the proximity to adjacent communities with environmental justice concerns. EPA suggests the FERC consider requiring that the exceedance be remedied no later than six months from the filing of the report. We note this comment. The time allocated to the Project to detect and remedy a noise noncompliance is consistent with FERC policy and in recognition that it can take up to 6 months after in service in some circumstances to obtain a full power load noise survey; however, to limit impacts should an exceedance be detected in the interim or full load surveys at the MP69 Compressor Station, we have added a stipulation to require reduced operations until compliance is achieved., and appropriate.

4.9 Reliability and Safety

The pressurization of natural gas at the proposed aboveground facilities involves some incremental risk to the public due to the potential for accidental release of natural gas. The greatest hazard is a fire or explosion following a major rupture. CH₄, 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. CH₄ has an auto-ignition temperature of 1,000° Fahrenheit (F) and is flammable at concentrations between 5.0 and 15.0 percent in air. An unconfined mixture of CH₄ and air is not explosive; however, it may ignite and burn if there is an ignition source. A flammable
concentration within an enclosed space in the presence of an ignition source can explode. It is buoyant at atmospheric temperatures and disperses rapidly in air.

Under a Memorandum of Understanding on Natural Gas Transportation Facilities (Memorandum) dated January 15, 1993, between the USDOT and the FERC, the USDOT 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 it would design, install, inspect, test, construct, operate, replace, and maintain the facility for which a Certificate is requested in accordance with federal safety standards and plans for maintenance and inspection. Alternatively, an applicant must certify that it has been granted a waiver of the requirements of the safety standards by the USDOT in accordance with section 3(e) of the Natural Gas Pipeline Safety Act. The FERC accepts this certification and does not impose additional safety standards. If the Commission becomes aware of an existing or potential safety problem, there is a provision in the Memorandum to promptly alert USDOT. The Memorandum also provides for referring complaints and inquiries made by state and local governments and the general public involving safety matters related to pipelines under the Commission's jurisdiction.

Safety Standards

The USDOT is mandated to prescribe minimum safety standards to protect against risks posed by natural gas facilities under Title 49 of the U.S. Code, Chapter 601. The USDOT’s Pipeline and Hazardous Materials Safety Administration (PHMSA) administers the national regulatory program to ensure the safe transportation of natural gas and other hazardous materials by pipeline. It develops safety regulations and other approaches to risk management that ensure safety in the design, construction, testing, operation, maintenance, and emergency response of natural gas facilities. Many of the regulations are written as performance standards, which set the level of safety to be attained and allow the operator to use various technologies to achieve safety. The PHMSA’s safety mission is to ensure that people and the environment are protected from the risk of incidents. This work is shared with state agency partners and others at the federal, state, and local level.

The natural gas pipelines, appurtenances, and associated aboveground facilities would be designed, constructed, operated, and maintained in accordance with the USDOT Minimum Federal Safety Standards in 49 CFR 192. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures. The USDOT specifies material selection and qualification; minimum design requirements; and protection from internal, external, and atmospheric corrosion.

Part 192 of 49 CFR establishes safety guidelines for the design and construction of compressor stations in addition to pipeline safety standards. Part 192.163 requires the location of each main compressor building of a compressor station be on a property under
the 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 building from structures on adjacent properties. Part 192.163 also
requires each building on a compressor station site be made of specific building materials
and to have at least two separate and unobstructed exits. The station must be in an
enclosed fenced area and must have at least two gates to provide a safe exit during an
emergency.

Class Locations and High Consequence Areas

The USDOT Pipeline Safety Regulations require operators to develop and follow
a written integrity management program that contain all the elements described in 49
CFR 192.911 and address the risks on each transmission pipeline segment. The rule
establishes an integrity management program which applies to all high consequence areas
(HCA). The USDOT has published rules that define HCAs where a gas pipeline accident
could do considerable harm to people and their property and requires an integrity
management program to minimize the potential for an accident.\textsuperscript{76} This definition
satisfies, in part, the Congressional mandate for USDOT to prescribe standards that
establish criteria for identifying each gas pipeline facility in a high-density population
area.

The USDOT defines area classifications, based on population density in the
vicinity of the pipeline, and specifies more rigorous safety requirements for populated
areas. The class location unit is an area that extends 220 yards on either side of the
centerline of any continuous 1-mile length of pipeline. The four area classifications are
defined below:

Class 1 Location with 10 or fewer buildings intended for human occupancy;

Class 2 Location with more than 10 but fewer than 46 buildings intended for human
occupancy;

Class 3 Location with 46 or more buildings intended for human occupancy or
where the pipeline lies within 100 yards of any building, or small well-
defined outside area occupied by 20 or more people on at least 5 days a
week for 10 weeks in any 12-month period; and

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

Class locations representing more populated areas (e.g., Class 2, 3 and 4) require
higher safety factors in pipeline design, testing, and operation. For instance, pipelines
constructed on land in Class 1 locations must be installed with a minimum depth of cover
of 30 inches in normal soil and 18 inches in consolidated rock. Class 2, 3, and 4

\textsuperscript{76} PHMSA Regulations CFR Part 192; https://cms7.phmsa.dot.gov/regulations/title49/b/2/1
locations, as well as drainage ditches of public roads and railroad crossings, require a minimum cover of 36 inches in normal soil and 24 inches in consolidated rock.

Class locations also specify the maximum distance to a sectionalizing block valve (e.g., 10.0 miles in Class 1, 7.5 miles in Class 2, 4.0 miles in Class 3, and 2.5 miles in Class 4). Pipe wall thickness and pipeline design pressures; hydrostatic test pressures; maximum allowable operating pressure; inspection and testing of welds; and frequency of pipeline patrols and leak surveys must also conform to higher standards in more populated areas. Class locations for the Project remain unchanged from the 2016 FEIS; the proposed facilities would be within a Class 1 area.

**Emergencies**

The USDOT prescribes the minimum standards for operating and maintaining pipeline and aboveground natural gas facilities, including the requirement to establish a written plan governing these activities. Each operator is required to establish an emergency plan that includes procedures to minimize the hazards of a natural gas emergency. Key elements of the plan include procedures for:

- receiving, identifying, and classifying emergency events, gas leakage, fires, explosions, and natural disasters;
- establishing and maintaining communications with local fire, police, and public officials, and coordinating emergency response;
- emergency system shutdown and safe restoration of service;
- making personnel, equipment, tools, and materials available at the scene of an emergency; and
- protecting people first and then property and making them safe from actual or potential hazards.

The USDOT 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. Golden Pass must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas emergency and report it to the appropriate public officials. Golden Pass would provide the appropriate training to local emergency service personnel before the Project is placed in service.

**Pipeline Accident Data**

The USDOT requires all operators of natural gas transmission pipelines to notify the USDOT of any significant incident and to submit a report within 20 days. Significant incidents are defined as any leaks that caused a death or personal injury requiring

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77 Title 49, USC Chapter 601.
hospitalization or involve property damage of more than $50,000 (1984 dollars).\textsuperscript{78} During the period from 2000 through 2019, a total of 1,112 significant incidents were reported on approximately 296,000 total miles of onshore natural gas transmission pipelines nationwide (USDOT PHMSA 2020a).

The use of both an external protective coating and a cathodic protection system\textsuperscript{79}, required on all pipelines installed after July 1971, significantly reduces the corrosion rate compared to unprotected or partially protected pipe. Outside force, excavation, and natural forces were the cause in 32.1 percent of significant pipeline incidents from 2000 to 2019. These result from the encroachment of mechanical equipment such as bulldozers and backhoes; earth movements due to soil settlement, washouts, or geological hazards; weather effects such as winds, storms, and thermal strains; and willful damage. From 2000 through 2019, a total of 1,112 significant incidents were reported on approximately 296,000 total miles of natural gas transmission lines and indicates the risk is low for an incident at any given location (USDOT PHMSA 2020a). The operation of the Project would represent a slight increase in risk to the nearby public.

Since 1982, operators have been required to participate in One-Call public utility programs in populated areas to minimize unauthorized excavation activities in the vicinity of pipelines. The One-Call program is a service used by public utilities and some private sector companies (e.g., oil pipelines and cable television) to provide preconstruction information to contractors or other maintenance workers on the underground location of pipes, cables, and culverts.

This Project does not incorporate any modifications that change the reliability and safety standards of the existing stations. With continued compliance with USDOT safety standards, operation, and maintenance requirements, we conclude the Project would be constructed and operated safely.\textsuperscript{80}

\textsuperscript{78} $50,000 in 1984 dollars is approximately $126,927 as of February 2020 (Bureau of Labor Statistics, 2020).

\textsuperscript{79} Cathodic protection is a technique to reduce corrosion (rust) of the natural gas pipeline through the use of an induced current or a sacrificial anode (like zinc) that corrodes at faster rate to reduce corrosion.

\textsuperscript{80} PHMSA federal inspectors perform inspections on interstate natural gas pipeline facilities in Louisiana. The USDOT pipeline standards are published in CFR Parts 190-199 of Title 49.
5 STAFF’S CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Environmental Analysis

The conclusions and recommendations presented in this EIS are those of the Commission’s environmental staff. Based on the analysis contained in this EIS, we have determined that if Golden Pass constructs the facilities in accordance with its application and staff’s mitigation measures listed below, the Project would result in limited adverse environmental impacts. For some resources, adverse environmental impacts would be reduced from what was approved in the Commission’s December 21, 2016 Order. Most adverse environmental impacts would be temporary or short-term during construction and have minimal effects on existing land use as new Project facilities would be added within an area characterized by energy production and transmission facilities. This determination is based on a review of the information provided by Golden Pass and further developed from data requests; scoping; literature research; alternatives analysis; and contacts with federal, state, and local agencies as well as individual members of the public.

Overall, Commission staff conclude that approval of the Project would not result in significant environmental impacts, with the exception of climate change impacts which we do not characterize as significant or insignificant. We also conclude that no system, route, or other alternative would provide a significant environmental advantage over the Project as proposed. Therefore, we conclude that the proposed Project, with our recommended mitigation measures, is the preferred alternative to meet the Project objectives.

5.2 FERC Staff’s Recommended Mitigation

If the Commission authorizes the Project, we recommend that the following measures be included as specific conditions in the Commission’s Order. We have determined that these measures would further mitigate the environmental impacts associated with Project construction and operation as proposed. The section number in parentheses at the end of a condition corresponds to the section number in which the measure and related resource impact analysis appears in the EIS.

1. Golden Pass 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 EIS, unless modified by the Order. Golden Pass must:
   a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;
   b. justify each modification relative to site-specific conditions;
c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and

d. receive approval in writing from the Director of OEP, or the Director’s designee, before using that modification.

2. The Director of OEP, or the Director’s designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of environmental resources during construction and operation of the Project. This authority shall allow:

a. the modification of conditions of the Order;

b. stop-work authority; and

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


4. The authorized facility locations shall be as shown in the EIS, as supplemented by filed alignment sheets. As soon as they are available, and before the start of construction, Golden Pass shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

Golden Pass’s exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Golden Pass’s right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline/facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

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

This requirement does not apply to extra workspace allowed by the Commission’s Upland Erosion Control, Revegetation, and Maintenance Plan and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

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

a. implementation of cultural resources mitigation measures;

b. implementation of endangered, threatened, or special concern species mitigation measures;

c. recommendations by state regulatory authorities; and

d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. Golden Pass shall file a noise survey with the Secretary no later than 60 days after placing MP33 Compressor Station in service. If a full load condition noise survey is not possible, Golden Pass shall file 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 MP33 Compressor Station under interim or full horsepower load conditions exceeds an L_{dn} of 55 dBA at any nearby NSAs, Golden Pass shall:

a. file a report with the Secretary on what changes are needed for review and written approval by the Director of OEP, or the Director’s designee;

b. install additional noise controls to meet the level within 1 year of the in-service date; and

c. confirm compliance with the L_{dn} of 55 dBA requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls. (Section 4.8.3)
6.7. Golden Pass shall file noise surveys with the Secretary **no later than 60 days** after placing the MP33 and MP69 Compressor Stations into service. If a full power load condition noise survey is not possible, Golden Pass shall file an interim survey at the maximum possible power load **within 60 days** of placing the MP33 and MP69 Compressor Stations into service and file the full power load survey **within 6 months**. If the noise attributable to operation of all equipment under interim or full power load conditions exceeds an $L_{dn}$ of 55 dBA at any nearby NSA, Golden Pass shall:

a. file a report with the Secretary, for review and written approval by the Director of OEP, or the Director’s designee, on what changes are needed;

b. install additional noise controls to meet that level **within 1 year** of the in-service date; and

c. reduce operation of this station until a noise level below an $L_{dn}$ of 55 dBA at the nearby NSAs is achieved; and

c. confirm compliance with this requirement by filing a second full power load noise survey with the Secretary no later than 60 days after it installs the additional noise controls. (*Section 4.8.3*)
6 REFERENCES CITED


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APPENDIX A-1
RESPONSE TO SCOPI NG COMMENTS

Index

Individuals

IND1 – Healthy Gulf and South Wings

Tribes

IND2 TR1 – Choctaw Nation of Oklahoma
IND3 – RESTORE
IND4—United States Environmental Protection Agency (EPA)
IND5—Louisiana Department of Wildlife and Fisheries
IND6—Golden Pass Pipeline Company, LLC
14 December 2020

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

Re: Golden Pass Pipeline, LLC. Docket No. CP21-1-000. Scoping comments, relocation and modification.

Dear Secretary Bose and Federal Energy Regulatory Commission,

I am writing on behalf of Healthy Gulf\(^1\) and SouthWings\(^2\) regarding scoping for environmental issues for the proposed compression relocation and modification of the Golden Pass Pipeline ("Project", "Applicant"). The Project is encompassed in Docket number CP21-1-000 for the Federal Energy Regulatory Commission ("FERC" or "Commission"). Healthy Gulf has already filed a Motion to Intervene with FERC for this Docket, and Golden Pass Pipeline answered on record (see attachments).

This Project is for some modifications of the Golden Pass Pipeline system, an already existing pipeline that connects to the Golden Pass LNG terminal ("Golden Pass Project"). The Golden Pass Project should never have been built in the first place. In response to Healthy Gulf’s Motion to Intervene, the Applicant states that “Healthy Gulf did not intervene” in the 2016 FERC Order, the DEIS or FEIS. This is true, yet other parties (Sierra Club, e.g.) did make comments similar to Healthy Gulf’s, and the Golden Pass Project was authorized anyways. Sierra Club intervened and filed extensive comments, and Healthy Gulf raises the same issues and concerns now. Furthermore, the Project is part of an ecosystem of pipelines, compressor stations, LNG terminals and other facilities comprising the fossil gas industry. It is inexcusable that any projects regarding fossil gas and especially LNG for export are allowed to continue without a thorough review of the cumulative impact of the industries’ facilities and proposals. This

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\(^1\) Healthy Gulf is a diverse coalition of more than 25,000 individual citizens and local, regional, and national organizations committed to providing the research, communications, and coalition-building tools needed to reverse the long pattern of over-exploitation of the Gulf of Mexico’s natural resources.

\(^2\) SouthWings is a non-profit conservation organization that provides a network of volunteer pilots to advocate for the restoration and protection of the ecosystems and biodiversity of the Southeast through flight.

IND1-1 Response: See section 4.1 of the final EIS for a discussion of other projects in the area and section 1.4 regarding programmatic environmental reviews.
IND1-2 Response: See section 4.8.2 of the final EIS for a discussion on climate change.

IND1-3 Response: See section 4.1 of the final EIS for a discussion on wetlands.
Best regards,

Naomi Yoder
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Cc: Scott Eustis, Healthy Gulf
    Raleigh Hoke, Healthy Gulf
Attachment A

Motion to Intervene

Golden Pass Pipeline, LLC
FERC Docket No. CP21-1-000

UNITED STATES DEPARTMENT OF ENERGY
BEFORE THE DEPARTMENT OF ENERGY
FEDERAL ENERGY REGULATORY COMMISSION

In the Matter of
Golden Pass Pipeline, LLC
FERC Docket No. CP21-1-000

HEALTHY GULF’S NOTICE OF INTERVENTION, MOTION TO INTERVENE, AND COMMENT
ON THE GOLDEN PASS PIPELINE PROJECT

November 9, 2020

Naomi Vody, Staff Scientist
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Attachment A p.1
Golden Pass Pipeline, LLC,
FERC Docket No. CP21-1-000

1. Background and Motion to Intervene

Golden Pass is a diverse coalition of more than 25,000 individual citizens and local, regional, and national organizations committed to providing the research, communications, and coalition-building tools needed to reverse the long pattern of overexploitation of the Gulf of Mexico's natural resources. Golden Pass believes that the proposed Golden Pass Pipeline natural gas pipeline would inflict far-reaching environmental damage along the proposed route through the coastal areas and wetlands in eastern Texas and western Louisiana.

On October 5, 2020, Golden Pass Pipeline, LLC (Golden Pass pipeline, FERC Docket No. CP14-518-000) filed an application with the Federal Energy Regulatory Commission (FERC) under Section 7(a) of the Natural Gas Act to amend an existing authorization for the pipeline project already in construction. This new docket is FERC Docket CP21-1-000 (the “Project,” the “Pipeline”). The arguments presented in the new docket include calculation of one of the three compressor stations, as well as change to compression capabilities, in order to tie in to a different connector pipeline than the one previously authorized. The cost for this Project is over $1.3 billion. The original docket called for 1.4 miles of pipeline constructed parallel to the existing Golden Pass Pipeline which is already in place. The original docket also called for three compressor stations. Disregarding that three compressor stations seems economical for such a short-length pipeline, the price tag is absolutely absurd and the applicant has not demonstrated why this Project is beneficial to the communities and environment of the Gulf Coast. In addition to the proposed line price tag, the Project is already underway. There is no justification for such a change to this project. Such a change would require a new Environmental Impact Statement to demonstrate the public benefit and the impact on the environment (including climate change).

The federal regulatory review process requires an exhaustive Environmental Impact Study (EIS) which would assess the impact on local biodiversity and on regional wetlands, streams and groundwater. The EIS would also assess the Project’s contribution to climate change. Finally, the EIS should assess the cumulative impact of all finished “natural” gas projects in the region together, as opposed to one at a time. The results of
Golden Pass Pipeline, LLC
FERC Docket No. CP21-1-000

Such a study would clearly demonstrate the extensive potential damage to the environment from the pipeline and its associated facilities (such as compressor stations, etc.). The existing EIS is incomplete and inadequate, as it does not take into account all of these components and certainly did not evaluate the assessment proposed in the new Project. Healthy Gulf requests a Programmatic or Area-wide Environmental Impact Statement (EIS) for the Project. Such an evaluation is needed to take into account all of the pipeline liquefaction plants, compressor stations, FLNG and other facilities comprising the LNG export industry on the Gulf Coast in Texas, Louisiana, and offshore. Without a PFEIS, the public will continue to be denied the chance to view and comment on the cumulative impact of the Project on our communities and environment.

A. Motion to Intervene

Healthy Gulf wishes to submit a Motion to Intervene, based on the inadequate assessment process and the lack of cumulative assessment the pipeline would have with other fracked gas pipelines and facilities on greenhouse gas emissions in the region. Similarly, the clearing and fill of wetlands in valuable coastal areas along the pipeline route also contribute to climate change and climate change mitigation. This Motion to Intervene is in the public's interest. as the public should have the opportunity to be aware of and comment on an unnecessary pipeline (along with the compressor stations and other associated facilities).

The existing Final Environmental Impact Statement (FEIS) states that the proposed Golden Pass pipeline expansion will be built alongside the existing Golden Pass pipeline to reverse directionality. Compressor stations will have to be added. The original Docket project itself was not an "expansion" of the existing pipeline; it was a duplication. Now, the changes proposed in the new Docket are not justified and the Project application materials do not demonstrate the public benefit. There is no justification for this "expansion" Golden Pass pipeline project.

B. Conclusions

The findings of a properly executed environmental assessment must be an integral part of the federal regulatory review process, so that no harm will be done to our wetlands, to
Golden Pass Pipeline, LLC
FERC Docket No. CP21-1-000

...our climate and to our communities. We urge FERC to reject the proposed Golden Pass pipeline expansion amendment.

Respectfully submitted,

[Signature]

Natali Tober
Healthy Staff
Staff Scientist
(503) 528-1528 x213
natali@healthystaff.org
UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Golden Pass Pipeline LLC

Dockets Nos. CP21-1-000

ATTACHMENT B

MOTION OF GOLDEN PASS PIPELINE LLC FOR LEAVE TO ANSWER AND ANSWER TO COMMENTS

Pursuant to Rules 212 and 213 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("Commission" or "FERC"), 18 C.F.R. §§ 385.212 and 385.213 (2020), Golden Pass Pipeline LLC ("Golden Pass Pipeline") hereby submits this Motion for Leave to Answer and Answer to the Comments of Healthy Gulf filed on November 9, 2020, in this proceeding.1

BACKGROUND

This proceeding involves Golden Pass Pipeline’s abbreviated application under Section 7(c) of the Natural Gas Act ("NGA"), 15 U.S.C. § 717f(c) to amend the authorization previously granted by the Commission2 to expand the existing pipeline system owned and operated by Golden Pass Pipeline in Texas and Louisiana (the "Compression Relocation and Modification Project" or "CRM Project").

Golden Pass Pipeline owns and operates a 69-mile interstate pipeline located in

1 In the same filing, Healthy Gulf moved for leave to intervene in this proceeding. Golden Pass Pipeline does not oppose Healthy Gulf’s intervention. If and to the extent necessary, Golden Pass Pipeline requests leave to file this Motion and Answer one day out-of-time.

Texas and Louisiana. The Golden Pass Pipeline was originally approved by the Commission in 2005\(^1\) and placed in service in 2011. The Commission authorized Golden Pass Pipeline to transport up to 2.5 billion cubic feet ("Bcf") per day ("Bcf/d") of re-vaporized liquefied natural gas ("LNG") in a north-flow direction from the Golden Pass LNG Terminal for redelivery into interstate commerce. The Expansion Project approved by the Commission in the December 2016 Order will enable Golden Pass Pipeline to provide south-flow firm service for up to 2.5 Bcf/d per of domestically produced natural gas for liquefaction and export, in conjunction with an expansion of the Golden Pass LNG Terminal to add liquefaction and export capability.\(^4\)

Among other things, the December 2016 Order approved Golden Pass Pipeline's application to construct and operate three new compressor stations to enable Golden Pass Pipeline to transport gas in a south-flow direction to liquefied natural gas ("LNG") export facilities to be constructed and operated by Golden Pass LNG Terminal, LLC ("Golden Pass LNG") in Sabine Pass, Texas. The 2016 Order authorized Golden Pass Pipeline to

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\(^4\) Contrary to Healthy Gulf's assertion (Comments, p. 3) that the December 2016 Order did not approve an expansion of the Golden Pass Pipeline system, that order did authorize an expansion. Golden Pass Pipeline was authorized to provide firm service for a combined total of up to 5 Bcf/d, up to 2.5 Bcf/d in both directions, whereas before it had been authorized to transport up to 2.5 Bcf/d in a north-flow direction only. Moreover, and contrary to the characterization on page three of Healthy Gulf's Comments, the proposed expansion is not a long-line pipeline that would be constructed "alongside" the existing mainline. The existing mainline capacity will be increased primarily through the addition of compression at three new compressor stations, as explained in the application and herein. Indeed, the CRM Project would eliminate the only looping that had been approved for the Expansion Project, a short three-mile segment between Mileposts 66 and 69.
construct and operate three new compressor stations at Milepost ("MP") 01, MP 33 and MP 66 on the pipeline system, to enable Golden Pass Pipeline to transport quantities received at various interconnects on its system in a south-flow direction to the Golden Pass LNG Terminal.

The CRM Project entails relocation and modification of one of the three previously approved compressor stations, as well as certain modifications to that compressor station and associated facilities. It is a limited revision to the previously authorized project, confined to the portion of the system near the northern terminus. As explained in the CRM amendment application, the project would, among other things, (1) relocate the MP 65 compressor station approved in the December 2016 Order approximately three miles, to MP 69; (2) add to the compression to be installed at the relocated MP 69 compressor station; (3) establish a new interconnection and associated meter station near the MP 69 compressor station to interconnect with the proposed interstate pipeline to be constructed by Excela Gulf Run Transmission, LLC ("Gulf Run"); (4) eliminate the previously approved three-mile looping facilities between MP 63 and MP 66 in Calcasieu Parish, Louisiana ("Calcasieu Loop").

As designed, the proposed compression facilities to be installed at MP 69 as a part

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5 Golden Pass LNG commenced construction of the LNG export terminal facilities in 2019. The project schedule calls for Golden Pass Pipeline to commence construction in second quarter 2021 in order to complete all activities by fourth quarter 2022. The FERC approved an order in Docket No. CP20-171-000 on July 10, 2020, vacating the authorization issued to Golden Pass Pipeline to construct and operate the MP01 Compressor Station and amending Golden Pass LNG’s NGA Section 3 authorization to include the siting, construction and operation of the same MP 01 facilities. Golden Pass LNG Terminal LLC and Golden Pass Pipeline LLC, 172 FERC ¶ 61,021 (2020).
of the proposed amendments to the Expansion Project proposed in the CRM Project have been selected and configured to address air and noise impacts to the environment. As noted above, the proposed amendment eliminates the Calcasieu Loop, which would have consisted of approximately three miles of pipeline looping along the route of the current Golden Pass Pipeline system. The elimination of the Calcasieu Loop eliminates the need for horizontal directional drilling and other potential environmental disturbances.

MOTION TO ANSWER

If and to the extent necessary, Golden Pass Pipeline respectfully requests leave to answer the comments of Healthy Gulf. The Commission permits answers otherwise barred by Rule 213 for good cause where the Commission’s consideration of matters addressed in the answer will facilitate the decisional process or aid in the Commission analysis of issues. Because this Answer provides information relevant to the decision-making process, good cause exists to accept this Answer. For the reasons set forth below, Golden Pass Pipeline requests that the Commission accept this Answer, limit its review in this proceeding to the limited amendment to the Commission’s previous authorizations as discussed below, and promptly grant the authorizations sought by Golden Pass Pipeline on or before May 1, 2021, as requested in CRM amendment application.

6 18 C.F.R. § 385.213 (2020) (prohibiting answers to a protest, an answer, a motion for oral argument, or a request for rehearing, or "[i]f an answer is not otherwise permitted under this paragraph," unless otherwise ordered by the decisional authority).

7 Transcontinental Gas Pipe Line Co., 169 FERC ¶ 61,051 at P 11 (2019); see also Tennessee Gas Pipeline Co., LLC, 161 FERC ¶ 61,264 at P 11 (2017); Southern Natural Gas Co., 113 FERC ¶ 61,199 at P 23 (2005).
ANSWER

Healthy Gulf's comments raise issues that the Commission considered previously in issuing the December 2016 Order, such as the need for the proposed compression facilities as part of the overall design of the Expansion Project, the estimated cost of the project, and the need for the Project. The Commission Staff previously prepared draft and final Environmental Impact Statements ("EIS") for the Expansion Project, which were reviewed in detail in the December 2016 Order. Healthy Gulf did not intervene in that proceeding, and did not submit comments on either the Draft EIS or the Final EIS.

Golden Pass Pipeline's limited CRM Project amendment application does not present any basis upon which to re-evaluate the Commission's previous approval of the Expansion Project in the December 2016 Order, including the Commission's findings that the public convenience and necessity required approval of the Project. The CRM Project proposes limited modifications to the location and design of one compressor station. The CRM Project does not propose any increase to the total 2.5 Bcf/d certificated capacity of the Expansion Project approved in the December 2016 Order. Any future modifications to the Project or to other facilities approved or authorizations issued by the Commission will require separate authorization and approval at the time proposed, consistent with the Natural Gas Act and Commission rules and regulations. In cases such

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8 December 2016 Order, 157 FERC ¶ 61,222 at PP 27-42.
9 Id., at PP 53-101.
10 As stated in the CRM Project Application, Golden Pass Pipeline is currently evaluating necessary modifications to the Milepost 33 Compressor Station and associated facilities (text continued on next page)
as this where the basic elements of the Expansion Project, including location, service levels and rates remain unchanged, there is no basis upon which to revisit the Commission’s previous findings that the Expansion Project is required by the public convenience and necessity.\footnote{See National Fuel Gas Supply Corp., 172 FERC \textcopyright} 61,236 at P 13 (2003) (“Accordingly, we find that the proposed amendment to re-designate the spare compression to regular use does not alter the Commission’s previous [public convenience and necessary] finding. Therefore, we conclude that the proposal is consistent with the criteria set forth in the Certificate Policy Statement and analyze the environmental impacts of the proposal below.”); NSTAR Electric Co. v. ISO New England, Inc., 120 FERC \textcopyright} 61,261 at P 33 (2007) (“Collateral attacks on final orders and refutation of applicable precedent, especially by parties that were active in the earlier case, thwart the finality and expose that are essential to administrative efficiency, and are therefore strongly discouraged”)}
CONCLUSION

WHEREFORE, for the foregoing reasons, Golden Pass Pipeline respectfully request that the Commission amend the authorizations granted in the December 2016 Order to implement the Compression Relocation and Modification Project as described herein.

Respectfully submitted,

Blaine Yamagata
Vice President and General Counsel
Golden Pass LNG Terminal LLC
811 Louisiana Street, Suite 1400
Houston, TX 77002

/s/ Kevin M. Sweeney
Kevin M. Sweeney
Law Office of Kevin M. Sweeney
1717 E Street, NW, Suite 900
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(202) 606-7799

Counsel for
Golden Pass LNG Terminal LLC

November 25, 2020
CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C., this 25th day of November, 2020.

[Signature]
Kevin M. Sweeney

Kevin M. Sweeney
TR1-1 Response: See section 4.5.3 for a detailed response to this information request.

IND2 – 1 Response: See section 4.5.3 for a detailed response to this information request.
APPENDIX A-2
RESPONSE TO DEIS COMMENTS

Index

Federal Agencies
FDA1 – United States Environmental Protection Agency (EPA)

State Agencies
SA1 – Louisiana Department of Wildlife and Fisheries

Individuals
IND1 – RESTORE
IND2 – Healthy Gulf

Applicant
AP1 – Golden Pass Pipeline Company, LLC
IND3-1 Response: See section 4.1 for a discussion of other projects in the area.

The FERC EIS Table 4.8.1-5 shows:

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(Note in Public Notice but PDF Page 5 in EDMS Doc# 13140227)
IND3-2 Response: See section 4.4.3 of the final EIS for a discussion of Tribal Outreach. In addition, section 106 of the NHPA requires consultation with federally recognized tribes.
grasp the impacts. Maybe some maps of sea level change along the Louisiana coast making clear which towns will be lost by the end of the century would be beneficial.

It is worse than shortsighted to use methane as a fuel instead of for its highest and best use, as a molecular building block to fix nitrogen. The Haber-Bosch Process is mankind’s only known practical way to produce sufficient fertilizer to feed the world’s present and future population. Without methane that process cannot work.

What does this particular loss of methane to fuel mean for food production? I have done some rough calculations (and I would certainly welcome other people doing the same kind of thing) that showed me that for every LNG tankerload sent away to be burned mankind loses the capacity to make enough fertilizer to grow 8 million pounds of wheat or 260 million servings of rice. That concept should be included and precisely analyzed in the Environmental Impact Statement.

Finally, although the FERC EIS acknowledges on PDF Page 15 the known presence of the rare and endangered species, the Red-Cockaded Woodpecker in Calcasieu Parish, it jumps to a conclusion that the MP69 Station will have no effect, therefore the U.S. Fish and Wildlife Service has not done a consultation. Since a colony of the Red-Cockaded Woodpecker was documented less than 10 miles away (during LDEQ proceedings on a proposed hazardous waste incinerator project at the DeQuincy Industrial Air Park—with a subsequent denial of the proposed permit), it seems incumbent upon FERC to require Golden Pass to do a rigorous search of the silviculture area they propose to clear for their construction project to verify that no colony of the rare species exists there. That search should actually be extended out for at least three miles.

Sincerely,

Michael Tritico, Biologist and President of RESTORE

Restore Explicit Symmetry To Our Ravaged Earth
April 4, 2022

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

Re: Docket No. CP14-518-000: MP66-69 Compression Relocation and Modification Amendment and the MP33 Compressor Station Modification Amendment Project, Draft Environmental Impact Statement, Calcasieu Parish, LA and Orange County, TX

Dear Secretary Bose:

The U.S. Environmental Protection Agency (EPA) has reviewed the Federal Energy Regulatory Commission (FERC) Draft Environmental Impact Statement (EIS) (CEQ No. 20220015) for the MP66-69 Compression Relocation and Modification Amendment and the MP33 Compressor Station Modification Amendment Project, proposed by Golden Pass Pipeline, LLC/Golden Pass. The draft EIS was reviewed pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500 – 1508), and EPA’s authority under Section 309 of the Clean Air Act.

Golden Pass proposes to relocate, modify, and eliminate certain pipeline facilities previously approved by FERC, but not yet constructed, as part of the Pipeline Expansion Project (Docket No. CP14-518-000) in Calcasieu Parish, Louisiana and Orange County, Texas. The Amendments would include relocating the approved compressor station at Milepost (MP) 66 approximately 3 miles to MP 69 and increasing the authorized compression; eliminating the previously approved 3-mile Calcasieu Loop from MP66–MP69; relocating the MP33 Compressor Station approximately 50 feet north-northwest and increasing the authorized compression; adding three new interconnects and appurtenant facilities adjacent to the MP33 Compressor Station; and eliminating receipt stations at the existing Texoma delivery interconnect. Golden Pass proposes the amendments due to new supply arrangements and the resulting engineering design requirements. The draft EIS concludes that construction and operation of the proposal would not result in significant environmental impacts—except for climate change impacts, where the draft EIS states that FERC staff are unable to determine significance.

EPA has concerns regarding the disclosure and assessment of impacts from greenhouse gas emissions and potential impacts to communities with environmental justice concerns. We have included recommendations to assist FERC in addressing potential disproportionately high and adverse human health or environmental effects of the project on communities with environmental justice concerns consistent with Executive Orders 12898 and 14008.
We have enclosed detailed comments which more clearly address these concerns and others. EPA appreciates the opportunity to review this draft EIS. We look forward to the receipt of the final EIS and your responses addressing our concerns. If you have any questions regarding our comments, please contact Michael Jansky, at jansky.michael@epa.gov or 214-665-7451.

Sincerely,

ROBERT
HOUSTON

Robert Houston
Staff Director
Office of Communities, Tribes and Environmental Assessment

Enclosure
Greenhouse Gas Emissions, Climate-Related Impact Acknowledgements and Remaining Concerns

Consistent with EPA’s past recommendations, EPA reaffirms the suggestion that the Federal Energy Regulatory Commission (FERC) avoid expressing project-level greenhouse gas (GHG) emissions as a percentage of national or state GHG emissions or GHG emission targets. Conveying the information in this way inappropriately diminishes the significance of project-level GHG emissions. Instead, we continue to recommend disclosing the increasing conflict between GHG emissions and national, state, and local GHG reduction policies and goals, and whether there are ways to address that conflict in projects that expand and lock-in fossil fuel infrastructure. In particular, for this project, EPA recommends that FERC address the GHG emissions not just as an incremental fraction but more explicitly discuss whether the project is consistent with and supports the Louisiana GHG targets.

EPA recommends the final EIS quantify all upstream and downstream GHG emissions by activity associated with the proposed action, as supported by the Council on Environmental Quality’s (CEQ’s) preamble to the notice of proposed rulemaking on certain aspects of its regulations for implementing the procedural provisions of NEPA. Upstream GHG emissions are demonstrably reasonably foreseeable indirect effects of the proposed action, which combats natural gas, and therefore should be considered under NEPA. Omitting consideration of upstream GHG emissions results in an understimation of the proposal’s impacts. In particular, we believe it would appropriate for the project to include, “for reference,” the total project upstream GHG emissions, as was included for the downstream GHG emissions.

The draft EIS states that “FERC staff continue to be unable to determine significance with regards to climate change impacts.” EPA continues to recommend monetizing climate damages or benefits, or Social Cost of GHG (SC-GHG), to assess climate impacts generated by each additional ton of GHG emitted. While we acknowledge the uncertainty associated with these methods, EPA reiterates our strong recommendation to use estimates of the SC-GHG, which reflect the best available science and methodologies to incorporate the value to society of net changes in direct and indirect GHG emissions resulting from a proposed action.

---

FA1-1 Response: See section 4.8.2 of this final EIS.

FA1-2 Response: See section 4.8.2 of this final EIS under Response to Comments on Social Cost of Greenhouse Gas.
Finally, EPA recommends that the final EIS specifically discuss how climate resiliency has been considered in the design of the proposed action and consider any other appropriate measures to protect the compressor infrastructure from climate impacts.

**Air Impact Analysis**

The draft EIS presents potential impacts to air quality by discussing planned activities, presenting an emission inventory, and summarizing air quality modeling results. EPA appreciates that the full modelling report was cited and made available in the docket. We recommend the final EIS present sufficient information necessary for the reader to review, interpret and understand the analyses about impacts to air resources. EPA offers the following recommendations:

**Operational Monitoring:** As identified in the draft EIS, the compressors, valves and connections associated with this project have the potential to emit GHG emissions through equipment leaks. Therefore, EPA recommends the final EIS discuss any applicable required leak detection, monitoring and controls for the proposed action. If there are no requirements that would currently apply, we recommend developing a monitoring plan capable of identifying and committing to fixing leaks and including the plan as a recommended condition from FERC staff for certificate issuance. One example of a monitoring approach could be the use of optical gas imaging, which can be used to quickly and frequently assess whether there are sources of leaking gas.

**Nitrogen Dioxide (NOx) NAAQS Cumulative Impact Analysis:** The draft EIS concludes that because the impact modelling performed for the National Ambient Air Quality Standard (NAAQS) does not show a NAAQS violation, the proposed action does not have a significant impact on air quality in the area. The draft EIS uses the EPA “significant impact levels” (SIL) for the assessment of criteria pollutants, determining that NOx is over the significant impact level for all of the applicable standards, and well above the impact level for the 1-hour standard. Given that the NO2 significance thresholds were exceeded, a cumulative or “full impact analysis” was conducted. However, the draft EIS does not include sufficient detail to determine if the background concentration that is used for the full impact analysis is representative of local air quality. EPA recommends that the cumulative impact analysis discussion in the draft EIS be updated to identify and provide a justification for the appropriate use of the monitor date as representative of the local air quality. If the monitor data is not representative of the nearby communities in the impact area, EPA recommends that FERC consider following EPA’s Guideline on Air Quality Models and explicitly model nearby NOx sources to better reflect local air quality for a more appropriate comparison to the NAAQS and associated conclusion about ‘significance’ of the project emissions. In addition, given that the impact analysis indicates the project emissions cause air quality to exceed EPA SIL values for NO2, EPA recommends that the final EIS not characterize the NOx impacts as ‘not significant,’ but rather, based on an updated analysis, consistent with EPA’s Guidelines, EPA recommends the final EIS indicate that the project emissions ‘do not cause or contribute to a NAAQS violation.’

**Environmental Justice Impact Analysis**

FERC is simultaneously reviewing applications for the construction and operation of numerous energy related projects within Calcasieu Parish, Louisiana. The draft EIS acknowledged that minority and low-income populations and communities with disproportionately high and adverse impacts are present in the affected area.

FA1-3 Response: See section 4.8.1 of this final EIS.
Executive Order (EO) 12898 directs federal agencies to identify and address disproportionately high and adverse human health or environmental impacts of its activities on minority and low-income populations. EO 14008 directs federal agencies to identify and address the disproportionately high and adverse climate-related, environmental, human health, and other cumulative impacts on disadvantaged communities. Consistent with these EOs, we recommend that FERC address such project impacts that may cause disproportionately high and adverse impacts to communities with environmental justice concerns that may carry the bulk of the environment and socioeconomic burden.

EPA recommends the final EIS include demographics of the communities with environmental justice concerns that are identified as bearing most of the proposed action’s disproportionately high and adverse impacts and discuss appropriate mitigation measures.

EPA asks that FERC incorporate maps in the final EIS depicting the locations and alignments of all approved and reasonably foreseeable future planned projects that may directly, indirectly, and cumulatively impact the minority or low-income populations in Calcasieu Parish, Louisiana, and Orange Texas. Maps should include existing and reasonable forecast projects associated with pipeline, natural gas, and energy projects. These maps will assist the public and those adversely impacted by providing a framework to connect and assess cumulative environment impacts being imposed by the project(s) and make recommendations for adequate mitigation.

EPA recommends FERC briefly describe the network of all the approved and reasonably foreseeable future planned pipeline projects in Calcasieu Parish and the cumulative impact to low income and minority populations and how the modification amendments of this project minimizes and/or increases any adverse impact. FERC should substantiate the finding that Golden Pass proposes the amendments primarily due to new supply arrangements, and that the resulting engineering design requirements and supply arrangements could not be undertaken without furthering the disproportionately high and adverse impacts to the communities with environmental justice concerns.

EPA suggests FERC provide discussion in the final EIS explaining how the construction and operation of the proposed action may alter the contour of the land and the long-term effect on the surrounding area as it relates to seasonal storms, hurricanes, livelihoods, community resiliency, and climate resiliency and consider measures to mitigate those impacts on communities with environmental justice concerns.

EPA recommends that the FERC include in the introduction of the final EIS a brief discussion of any minority and low-income populations adjacent, near, in the vicinity, up and downstream of the area of the proposed action that may be directly, indirectly, and/or cumulatively adversely impacted by the proposed action. Potential adverse effects such as climate change-related induced flooding, poor water quality, hazardous air pollutants, noise, and safety hazards should be briefly discussed. Potential impacts to the local community should be discussed which could include impacts on subsistence (and commercial) fishing and health impacts to those who consume fish or seafood that may be affected by contaminants.

EPA recommends that FERC, Golden Pass, and local governments ensure equitable treatment of minority and low-income populations when the government may need to invoke eminent domain for mitigation including buyout and relocation related to flooding or other impacts. This includes populations adversely impacted by the projects, within and adjacent/outside the area of the proposed action area (buy-out, relocation, poor water quality, hazardous air pollutants, subsistence fishing, noise, safety, etc.).

FA1-4 Response: See section 4.7.1 of this final EIS.
Noise Impact Analysis

The draft EIS indicates the length of time that FERC is granting for the applicant to remedy an exceedance of the noise threshold is one year from the in-service date (p.67). This length of time appears to be quite long especially given that there are adjacent communities with environmental justice concerns. EPA suggests the FERC consider requiring that the exceedance be remedied no later than six months from the filing of the report.

**Errata:** On page 51, line 7 “criterial” should be revised to “criteria.”

FA1-5 Response: See section 4.8.3 of this final EIS.
The applicant shall properly install adequate erosion/siltation control measures around construction areas that require land-based earthwork (i.e. excavation and/or deposition of fill materials, land contouring, machinery rutting, fill maneuvering and redistribution, etc.), to ensure that no project-related sediments, debris and other pollutants enter adjacent wetlands or waters. Acceptable measures include but are not limited to the proper use and positioning of temporary silt fences, straw bales, fiber/core logs, wooden barriers, seeding or sodding of exposed soils, or other approved EPA construction site storm-water runoff control and best practices. Control techniques shall be installed prior to the commencement of earthwork activities and maintained until the project is complete and/or the subject areas are stabilized.

Upon the completion of construction activities or if at any time construction activities cease for more than 14 days, all disturbed soils shall be re-vegetated by sod, seed, or another acceptable method, as necessary, to restore cover and prevent erosion.

Ensure that the applicant provides adequate and appropriate mitigation for impacts to wetland functions.

IND5SA1-11 Response: See section 2.2 of the final EIS for a discussion of Construction Procedures

IND5SA1-2 Response: See section 4.3.4 of the final EIS for a discussion on wetlands.
Another planned compressor station (Drippwood Indian Bypou) for that same region is proposed using electrically-driven compressors in order to prevent the noise and vibration altogether.

Since there are at least 8 residences within a mile of the possible Golden Pass Compressor, an electrically-driven alternative should be considered.

Any air pollution is not good. Recently I submitted comments to the Louisiana Department of Environmental Quality about its proposal to issue an air pollution permit to the Golden Pass Compressor Station. As I told LDEQ, “I could not get a logical set of conclusions” from the sources and amounts of greenhouse gas emissions.

Now that I have had the opportunity to read the Environmental Impact Statement for the Golden Pass Compressor Station, I am even more bewildered about apparent discrepancies between emission data supplied to FERC.

For example:

<table>
<thead>
<tr>
<th>The FERC EIS Table 4.8.1-5 shows:</th>
<th>The LDEQ Public Notice</th>
</tr>
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<tbody>
<tr>
<td>NOx: 24.73 tons per year</td>
<td>198.69</td>
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<tr>
<td>CO: 201.3</td>
<td>222.67</td>
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<tr>
<td>SOx: 11.1</td>
<td>11.1</td>
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<td>PM10: 1.3</td>
<td>1.82</td>
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<td>PM2.5: 0.9</td>
<td>1.13</td>
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<td>VOC: 33.4</td>
<td>35.32</td>
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<tr>
<td>HAPs: 4.0</td>
<td>4.13 (Not in Public Notice)</td>
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Page 1 in EDMS Docket.
Response: See section 4.8. of the final EIS for a discussion on Noise.

Response: See section 4.8.1 of the final EIS for a discussion on Air Quality.
IND1-4 Response: See section 4.4.3 of the final EIS for a discussion of Tribal Outreach. In addition, section 106 of the NHPA requires consultation with federally recognized tribes:

Buxton Marsh,
Secretary of the Interior,

Lakewood, D.C.,

May 23, 1994

IND1-4
A-14 Response: Surveys for threatened and endangered species were performed. See section 4.5.3 of the final EIS.
01 April 2022

Kimberly D. Bose
Federal Energy R.
888 First Street N.
Washington, DC 20585

Re: Golden Pass
Environmental Impact

Dear Secretary B:

I am writing in response to the
Statement (“DEIS”) of the Golden Pass
Docket number GPC-2019-0001 (“Commission”), H
(“NEPA”) scoping comments are to be
Attachment A, B of concerns. We refer to Docket.

This DEIS connects to the G Project, as well as
SouthWings. Its ecosystem of pipes other facilities could alone.

The DEIS of SouthWings in a
acknowledges, for

1Healthy Gulf is a group of organizations committed to reversing the long
IND2-1 Response: The no action alternative is discussed in Section 3.2 of this final EIS.
IND2-2 Response: See section 4.3.1 of this final EIS.

IND2-3 Response: See sections 4.1.1 and 4.3.4 of this final EIS.

IND2-4 Response: See sections 4.7.1 and 4.8.2 of this final EIS.
Best regards,

Naomi Yoder  
Staff Scientist  
Healthy Gulf  
Houston, TX  
504-525-1526  
nacmi@healthy...
AP1-1 Response: Suggested edits in the attached table have been made, as appropriate, and can be identified in the final EIS sections. The vertical line in the margin identifies text that is new or modified in the final EIS and differs materially from corresponding text in the draft EIS.

AP1-2 Response: Comment noted. See section 1.4 of this final EIS.
Hon. Kimberly D. Bose, Secretary  
April 4, 2022  
Page Two  

CP20-70-000, in an order issued on June 1, 2021. Enable Gas Transmission, LLC and Enable Gulf Run Transmission, LLC, 175 FERC ¶ 61,183 (2021). Construction of the Enable Gulf Run pipeline, which will interconnect with GPPL’s system at MP69 commenced in January 2022. Completion of the MP69 Project facilities to interconnect with the Gulf Run system is essential to GPPL’s ability to receive deliveries from the Gulf Run system. GPPL explained and discussed these timing concerns in Comments filed March 22, 2022, in the referenced proceedings.

Please contact [name, phone number, email] with any questions concerning this filing.

Respectfully submitted,

Respectfully submitted,

/s/ Kevin M. Sweeney  
Kevin M. Sweeney  

Attorneys for  
Golden Pass Pipeline LLC

cc: Parties, FERC Docket Nos. CP21-1-000 and CP21-458-000
<table>
<thead>
<tr>
<th>Comment Number</th>
<th>DEIS Section Number</th>
<th>Relevant DEIS Page Number</th>
<th>Comment</th>
<th>Recommended Resolution</th>
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| 1              | ES                  | ES 1                      | "The Milepost 66-69 Compression Relocation and Modification Amendment and MP33 Compressor Station Modification amendment Project (Project) would involve the relocation, modification, and elimination of certain pipeline facilities previously approved by the Commission, but not yet completed, as part of the Pipeline Expansion Project (Docket No. CP14-418-GN)." (emphasis added) | Golden Pass Pipeline LLC (Golden Pass) filed the MP69 Project Application in Docket No. CP21-1-000 on October 2, 2022, and the MP33 Project Application in Docket No. CP21-464-000 on May 18, 2023. The two applications involve compression and interconnection facilities that are approximately 36 miles apart, in different states. Golden Pass filed these applications separately and at different times based on the timing of agreements with the interconnecting pipelines and the needs of the construction schedule for a project of this complexity and magnitude. Golden Pass submits that any cumulative impact analysis of the MP69 and MP33 Projects can be included in the Environmental Assessment for the MP33 Project. In the event that the Commission issues a separate Environmental Assessment for the MP69 Project and an Order authorizing the construction and operation of the MP33 Project in Docket No. CP21-1-000. In the alternative, Golden Pass requests expedited issuance of a Final EIS in Docket No. CP21-464-000 and CP21-438-000, to allow Golden Pass to proceed expeditiously with construction of the MP69 facilities necessary to receive gas from the Gulf En[][]
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<td>3</td>
<td>ES</td>
<td>ES-2</td>
<td>“Constructing these new interconnects and appurtenant facilities adjacent to the MP33 Compressor Station, one interconnect with Midcoast Pipelines L.P., on existing Texas intrastate pipeline that will expand its system to deliver gas to Golden Pass’ system, and two interconnects with Golden Triangle Storage, Inc., a jurisdictional storage provider, that would enable deliveries from and receipts into Golden Pass’ system.”</td>
<td>Modify reference to Golden Triangle Storage, Inc.</td>
<td>“Golden Triangle Storage, Inc., a jurisdictional storage provider.”</td>
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### Section 4 - Environmental Impact Analysis

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<th>Recommended Resolution</th>
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<td>LS 3</td>
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<td>“On December 13, 2021, the Chippewa Nation noted that the Project is within their area of historic interest and requested additional project information.”</td>
<td>On February 14, 2022, the Chippewa Nation of Oklahoma updated its response. See attached e-mail string confirming communications.</td>
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<td>5</td>
<td>Introduction 1</td>
<td></td>
<td>“On February 25, 2021, and May 19, 2021, Golden Pass filed applications with FERC pursuant to Section 7(c) of the NEA, as amended.”</td>
<td>Golden Pass filed an application with FERC pursuant to Section 7(c) of the NEA, as amended.</td>
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<td>“Our principal purpose in preparing this EIS is to identify and assess the potential impacts on the natural and human environment that would result from the construction and operation of the proposed Project.”</td>
<td>The Commission initially issued a Notice of Schedule for the preparation of an Environmental Assessment of the NMP9 Project on December 9, 2020, which further provided for issuance of an EA on February 28, 2021. That EA was never issued. On November 2, 2021, the Commission issued a Notice of Intent to Prepare an EIS for the separately filed MP10 and MP33 applications. The purpose and scope statement in the draft EIS fails to adequately lay out the reasoning behind the Commission’s decision to combine the environmental review of two distinct projects with demonstrated independent activity, into one EIS.</td>
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<td>7</td>
<td>1.2</td>
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<td>“Our principal purposes in preparing this EIS are to: Identify and assess the potential impacts on the natural and human environment that would result from the construction and operation of the proposed Project.”</td>
<td>When reviewed on the individual merits each project qualifies for environmental assessment. “Under applicable NEPA regulations, FERC is required to include . . . cumulative actions . . . in a project EA.” Delaware Riverkeeper Network, et al. v. Federal Energy Regulatory Commission, D.C. Cir. 2014a; citing 40 C.F.R. § 1508.25(a). Golden Pass requests that the Commission promptly issue an Environmental Assessment and an Order authorizing the construction and operation of the MP09 Project. In the alternative, Golden Pass requests expedited issuance of a Final EIS in Docket Nos. CP21-1-000 and CP21-458-000, to allow Golden Pass to proceed with construction of the facilities necessary to receive gas delivered from the Gulf Breez Project facilities currently under construction.</td>
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<td>8</td>
<td>1.2</td>
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<td>“Our principal purposes in preparing this EIS are to: Identify and assess the potential impacts on the natural and human environment that would result from the construction and operation of the proposed Project.”</td>
<td>In fulfilling its NEPA obligations, FERC is not restricted from making these considerations in an EA as opposed to an EIS, particularly when the subject projects are not connected actions and have substantial independent utility. The mere fact that the same company proposes multiple independent projects does not on its own necessitate a combined review.</td>
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<td>9</td>
<td>1.2 Purpose and Scope of this DEIS</td>
<td>2</td>
<td>In fact, had an EA for CP21-1 been timely issued, FERC staff could easily have incorporated analysis of the project impacts into the cumulative effects review of an EA in Docket No. CP21-4-000 and fulfilled its NEPA obligations. The DEIS provides no evidence indicating staff conducted an EA as the first instance concluding that an EIS was warranted in Docket No. CP21-438, or concluding that a supplement was required in Docket Nos. CP21-2.</td>
<td>Golden Pass requests that the Commission promptly issue an Environmental Assessment and an Order authorizing the construction and operation of the MP09 Project. In the alternative, Golden Pass requests expedited issuance of a Final EIS in Docket Nos. CP21-1-000 and CP21-458-000, to allow Golden Pass to proceed with construction of the facilities necessary to receive gas delivered from the Gulf Run Project facilities currently under construction.</td>
</tr>
<tr>
<td>10</td>
<td>1.3 Public Review</td>
<td>3</td>
<td>“Golden Pass filed its formal FERC applications for the Project on February 25, 2021 and May 19, 2021 in Docket Nos. CP21-1-000 and CP21-458-000, respectively.”</td>
<td>Golden Pass filed its MP09 Project application in Docket No. CP21-1-000 on October 2, 2020.</td>
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<tr>
<td>11</td>
<td>4.4.3 Total Outreach</td>
<td>32</td>
<td>“There have been no additional comments to date for proposed Project alterations in Calcasieu Parish, Louisiana or Orange County, Texas.”</td>
<td>Update to reflect further comments from the Choctaw Nation of Oklahoma.</td>
</tr>
<tr>
<td>12</td>
<td>4.7.1 Environmental Justice</td>
<td>44</td>
<td>“Based on our analysis, we conclude that impacts on environmental justice populations may be disproportionately high and adverse to impacts in the Project area would be predominantly borne by environmental justice populations.”</td>
<td>Based on an analysis of population statistics, Golden Pass proposes to revise the DEIS by adding the sentence in the adjacent column.</td>
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<td>13</td>
<td>4.7.1</td>
<td>44</td>
<td>&quot;Additionally, although only one of the two block groups affected by the Project (or 50 percent of the block groups) includes an environmental justice community (low income), a majority of the Project's adverse impacts would be borne by the environmental justice community.&quot;</td>
<td>Based on the same analysis mentioned above, Golden Pass proposes to revise the DEIS by adding the sentence proposed in the adjacent column.</td>
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<tr>
<td>14</td>
<td>4.7.1</td>
<td>44</td>
<td>&quot;FERC’s communication and involvement with the surrounding communities have occurred throughout the environmental review process and was initiated when Golden Pass filed their application on February 23, 2011 and May 19, 2012 in Docket No. CP11-1-000 and CP11-106-000.”</td>
<td>Golden Pass filed its MP 09 Project application in Docket No. CP21-1-000 on October 2, 2020.</td>
</tr>
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<td>DEIS Section Number</td>
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<td>15</td>
<td>4.8.1 Air Quality</td>
<td>47</td>
<td>&quot;The MP90 Compressor Station would exceed Title V thresholds for NOX and CO and would be considered a major source under Title V.&quot;</td>
<td>The State of Louisiana issues a uniform permit covering NSR and Title V. Golden Pass submitted its application on April 1, 2021. Proposed Permit No. 0528-00513-VR. After review of the final proposed operational emission rates, the Prevention Of Significant Deterioration Permit (PSD) was determined as not applicable to the MP90 Project.</td>
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<tr>
<td>Comment Number</td>
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<td>DEIS Page Number</td>
<td>Relevant DEIS Text Extract</td>
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<td>16</td>
<td>4.8.1 Air Quality</td>
<td>49</td>
<td>“In addition to the federal regulations identified above, Louisiana has its own air quality regulations that may be applicable to the MP33 and MP49 CS.”</td>
<td></td>
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</tbody>
</table>

The MP33 Amendment facilities are located in Texas. The minor source permit for MP33 firms the Texas Commission on Environmental Quality was issued on October 19, 2021. See Golden Pass Data Responses held December 6, 2021 in these proceedings, Attachment 6 at Accession Number 2021209-5212. Attachment B to these Comments contains the relevant excerpt.

Standard Permit Registration Number 106661
<table>
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<tr>
<th>Comment Number</th>
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</thead>
</table>
| 17             | 4.1.1 Air Quality   | 50               | *Applicable State Air Quality Requirements*  
|                |                     |                  |                           | *Golden Pass would comply with all applicable state requirements.* | No revision to draft EIS recommended. |
### Milepost 69 Compression Relocation and Modification Project and Milepost 33 Compression Station Modification Project

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<tr>
<th>Comment Number</th>
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<tbody>
<tr>
<td>18</td>
<td>4.8.1</td>
<td>58</td>
<td>Table 4.8.1.5 MP99 Operational Emissions (tpy) &quot;Difference (tons)&quot; – CO₂, &lt;62,652</td>
<td>The DEIS finds that the MP99 Application in Docket No. CP21-1-000 would increase operational emissions of CO₂ by 82,052 tpy, below the &quot;significance&quot; threshold that would trigger an EIS under the Draft Policy Statement issued March 24, 2022 in Docket No. PL21-3-000. Moreover, the Commission’s March 24, 2022 Order on Draft Policy Statements, issued after the DEIS, states that “[t]he Commission will not apply the Updated Draft GRG Policy Statement to pending applications.” Consequently, the 100,000 tpy significance threshold is inapplicable to GPPL’s applications in Docket Nos. CP21-1-000.</td>
<td>Golden Pass requests that the Commission promptly issue an Environmental Assessment and an Order authorizing the construction and operation of the MP99 Project. In the alternative, Golden Pass requests expedited issuance of a Final EIS in Docket Nos. CP21-1-000 and CP21-3-000, to allow Golden Pass to proceed with construction of the facilities necessary to receive gas delivered from the Gulf Run Project facilities currently under construction.</td>
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</tbody>
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1 Certification of New or Increased Natural Gas Facilities, Docket Nos. PL18-1-001 and Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews, Docket Nos. PL21-3-001, 138 FERC ¶ 61,197 (March 24, 2022)
<table>
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<tr>
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<tbody>
<tr>
<td>IR, cont. 4.3.1 Air Quality</td>
<td>56</td>
<td>Table 4.3.1-5 MP09 Operational Emissions (tpy)</td>
<td>“Difference (tons)/CO₂ = 62,652”</td>
<td>Golden Pass’s application in Docket No. CP21-1-000 will establish a new interconnection and associated meter station near MP 69 to support an interconnection with the interstate pipeline to be constructed and operated by Enbridge Gulf Run Transmission, LLC (“Gulf Run”). The Commission authorized the construction and operation of the Gulf Run system in Docket Nos. CP20-68-000 and CP20-70-000, in an order issued on June 1, 2021.</td>
<td>Golden Pass requests that the Commission promptly issue an Environmental Assessment and an Order authorizing the construction and operation of the MP09 Project. In the alternative, Golden Pass requests expedited issuance of a Final EIS in Docket Nos. CP21-1-000 and CP21-458-000, to allow Golden Pass to proceed with construction of the facilities necessary to receive gas delivered from the Gulf Run Project facilities currently under construction.</td>
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<td>19</td>
<td>4.1.1</td>
<td>57</td>
<td>Table 4.1.1-2 MP33 Operational Emissions (tpy) “Difference (tons)” - CO₂, +82,321</td>
<td>Air Quality</td>
<td>The DEIS filings that the MP33 Application in Docket No. CP21-435 would increase operational emissions of CO₂ by 82,321 tpy, also below the “Significance” threshold that would trigger an EIS under the draft Policy Statement issued March 24, 2022 in Docket No. PF21-1-000. As discussed above, Golden Pass requests that the Commission promptly issue promptly issue an Environmental Assessment and an Order authorizing the construction and operation of the MP33 Project.</td>
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<td>20</td>
<td>4.1.2</td>
<td>60</td>
<td>&quot;Operation of the new emission sources would result in emissions in excess of the 2010 FEIS of up to 144,973 tons (131,491 metric tons) of CO₂e.&quot;</td>
<td>Climate Change</td>
<td>Golden Pass filed the Docket No. CP21-1-000 and CP21-435/000 applications on October 2, 2020 and June 11, 2021, respectively. The applications were filed separately and at different times based on the timing of agreements with the interconnecting pipelines and the needs of the construction schedule for a project of this complexity and magnitude. The separate applications involve compression and interconnect facilities that are approximately 36 miles apart, in different states. Golden Pass requests that the Commission promptly issue an Environmental Assessment in Docket No. CP21-1-000 for the MP33 Project, and a separate EA in Docket No. CP21-435/000.</td>
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| 21            | 3.1.2               | 52              | "The State of Louisiana, within which the MP69 Compressor Station operates, has worked with the federal government to reduce emissions by 2020, and by 2030, compared to 2005 levels." | The State of Louisiana has enacted the "Louisiana Climate Action Plan" containing specific actions to reduce GHG emissions across all levels of the state economy, including recommendations directed at industrial decarbonization—the biggest source of emissions in the state. | Revise quoted text from DEIS to add, "and zero by 2050." Include citation to the climate action plan and additional text, below: [https://www.louisiana.gov/assets/docs/CTC-Task-Force/Louisiana_Climate_Action_Plan_2020-02.pdf](https://www.louisiana.gov/assets/docs/CTC-Task-Force/Louisiana_Climate_Action_Plan_2020-02.pdf). The plan includes a methodology for determining reductions, an implementation matrix and timeframes. March 2022 the plan was presented to the governor. Louisiana’s Climate Action Plan GHG aggressive goals are based on the 2018 IPCC Special Report: Global Warming