

1.0 INTRODUCTION

On September 1, 2006 the Federal Energy Regulatory Commission (FERC or Commission) received an application from the Gulf South Pipeline Company, LP (Gulf South) pursuant to Section 7(c) of the Natural Gas Act and Part 157 of the Commission's regulations for a Certificate of Public Convenience and Necessity (Certificate) to construct, operate and maintain the following natural gas facilities:

- approximately 240.0 miles of 42-inch-diameter natural gas pipeline extending easterly from DeSoto Parish, Louisiana to Simpson County, Mississippi;
- approximately 3.3 miles of 36-inch-diameter natural gas pipeline extending northward from Gulf South's existing Carthage Junction Compressor Station in Panola County, Texas to interconnects with existing natural gas facilities within Panola County;
- two new compressor stations, the Vixen and the Tallulah Compressor Stations, located in Ouachita and Madison Parishes, Louisiana, respectively;
- modifications to three existing compressor stations, the Carthage Junction, Hall Summit and McComb Compressor Stations in Panola, County, Texas, Bienville Parish, Louisiana and Walthall County, Mississippi, respectively; and
- other ancillary facilities including six M/R facilities, eleven mainline valves, nine side valves and six pig launcher and/or receiver facilities.

The Commission's staff has prepared this Environmental Impact Statement (EIS) to analyze the environmental impacts that would likely occur as a result of the construction and operation of these proposed facilities, collectively referred to as the East Texas to Mississippi Expansion Project (Project).

1.1 PROJECT PURPOSE AND NEED

The purpose of this Project is to transport natural gas from production fields in eastern Texas to markets in the Gulf coast, Midwestern, Northeastern, and Southeastern regions of the United States. Construction and operation of the proposed Project would help meet growing energy demands and would enhance reliability by providing increased access to domestic natural gas supplies.

According to the Energy Information Administration (EIA) total energy consumption in the United States will increase from 99.7 quadrillion British thermal units (BTU) per year in 2004 to 127.0 quadrillion BTU per year in 2025 (EIA 2006a). To maintain pace with this growing energy demand, the EIA anticipates that consumption of natural gas in the United States will grow from 22.4 trillion cubic feet (Tcf) per year in 2004 to 27.0 Tcf by 2025. The growth in natural gas demand is being driven primarily by increased use of natural gas for electricity generation and industrial applications, which together account for 62 percent of the projected demand growth from 2004 to 2025 (EIA 2006a).

The United States natural gas supply currently comes from three main sources: domestic production, pipeline imports from Canada and Mexico, and imports of liquefied natural gas (LNG). Net pipeline imports of natural gas from Canada and Mexico are expected to decline in coming years, and although LNG represents an increasingly important source of natural gas, LNG imports are only expected to account for about 15 percent of total United States natural gas consumption by 2025. Domestic production of natural gas will continue to account for the majority of total United States consumption, with onshore production expected to account for the bulk of that supply, growing to 14.7 Tcf by 2025 (EIA 2006a). Onshore production of natural gas from unconventional sources (e.g., shale, tight sands,

and coal bed methane) is expected to be a major contributor to that growth. The EIA (2006a) projects, that unconventional natural gas production in the lower 48 states will account for about 45 percent of total domestic production by 2030.

1.2 PURPOSE AND SCOPE OF THIS EIS

The FERC is the federal agency responsible for evaluating applications filed for authorization to construct and operate interstate natural gas pipeline facilities. As such, the FERC is the lead federal agency for the preparation of this EIS, in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500–1508), and the FERC regulations implementing NEPA (18 CFR 380). Consistent with NEPA and their respective responsibilities and regulations, the U.S. Fish and Wildlife Service (FWS), the U.S. Army Corps of Engineers (COE), the National Park Service (NPS), and the EPA are federal cooperating agencies for the development of this EIS.

Our¹ principal purposes in preparing this EIS are to:

- identify and assess the potential impacts to the natural and human environment that would result from implementation of the proposed action;
- describe and evaluate reasonable alternatives to the proposed action that would avoid or minimize adverse affects to the natural and human environment;
- identify and recommend specific mitigation measures to minimize environmental impacts; and
- encourage and facilitate public involvement in identifying significant environmental impacts.

This EIS describes the affected environment as it currently exists, the environmental consequences of constructing and operating the proposed Project, compares the proposed Project's potential impacts to those of alternatives and presents our conclusions and recommended mitigation measures.

1.3 PERMITS, APPROVALS AND REGULATORY REQUIREMENTS

A number of federal, state, or local regulatory agencies have permit or approval authority or consultation requirements for portions of the proposed Project (see Table 1.3-1). The FERC states in its orders that applicants should cooperate with state and local agencies. However, any state or local permits issued with respect to jurisdictional facilities must be consistent with the conditions of any Certificate the FERC may issue. The FERC encourages cooperation between interstate pipeline companies and local authorities, but state and local authorities may not prohibit or unreasonably delay the construction or operation of facilities approved by the FERC through application of state and local laws.

¹ “We”, “us” and “our” refer to the environmental staff of the Federal Energy Regulatory Commission’s Office of Energy Projects.

**TABLE 1.3-1
Summary of Major Permits, Approvals and Consultations for the Proposed East Texas to
Mississippi Expansion Project**

Agency	Permit/Approval/ Consultations	Agency Action (Status)
FEDERAL		
Advisory Council on Historic Preservation	Consultations under Section 106 of the National Historic Preservation Act (NHPA)	Has the opportunity to comment on the undertaking. (Consultation pending)
Federal Energy Regulatory Commission	Certificate of Public Convenience and Necessity under Section 7(c) of the Natural Gas Act	Determine whether the construction and operation of the proposed natural gas pipeline is in the public interest. (Application submitted on September 1, 2006)
U.S. Army Corps of Engineers (COE)	Permits under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899	Consider issuance of Section 404 permits for the placement of dredge or fill material into all waters of the United States, including wetlands. Considers issuance of Section 10 permit for work in or affecting navigable waters of the United States. (Pre-construction notification submitted September, 2006)
U.S. Department of Agriculture, Natural Resources Conservation Service	Compatible Use Permit	Consider issuance of a permit for crossing of lands enrolled in the Wetlands Reserve Program, Conservation Reserve Program, Prior Converted Wetlands, and related conservation easements. (Application submitted September 2006)
U.S. Department of the Interior, Fish and Wildlife Service	Consultations under Section 7 of the Endangered Species Act, the Migratory Bird Treaty Act, and the Fish and Wildlife Coordination Act	Consult on endangered and threatened species and migratory birds; general consultation regarding conservation of fish and wildlife resources. (Consultations on-going)
National Park Service	Right-of-way permit for crossing the Natchez Trace Parkway; Consultation regarding crossing of Nationwide Rivers Inventory streams	Review for impacts on the Natchez Trace Parkway crossing (Application submitted September 2006); Consultations regarding potential impacts to Nationwide Rivers Inventory streams.
U.S. Department of Transportation Federal Highway Administration	Encroachment permit	Consider issuance of permit to work within road right-of-way. (Application pending)
U.S. Environmental Protection Agency	Compliance with Sections 401, 402, and 404 of the CWA.	Consider issuance of water use and crossing, National Pollutant Discharge Elimination System (NPDES) discharge, stormwater, and wetland dredge-and-fill permits. Permitting authority delegated to the states.

TABLE 1.3-1 (continued)
Summary of Major Permits, Approvals and Consultations for the Proposed East Texas to Mississippi Expansion Project

Agency	Permit/Approval/ Consultations	Agency Action (Status)
STATE		
Louisiana		
Louisiana Department of Culture, Recreation, and Tourism, Division of Archaeology and Historic Preservation	Consultations under Section 106 of the NHPA	Review and comment on project activities potentially affecting cultural resources. (Concurrence requested September, 2006)
Louisiana Department of Environmental Quality	Water Quality Certification under Section 401 of the CWA	Consider issuance of a permit for stream and wetland crossings in conjunction with COE Section 404 permit. (Application submitted September, 2006)
	Hydrostatic Test Water Withdrawal and Discharge Permits	Water withdrawal permit. Consider issuance of a Section 402 permit regulating discharge of hydrostatic test water from the construction work area. (Application will be submitted December, 2006)
	Minor Source Air Permit	Consider issuance of a permit to construct and operate facilities with the potential for air emissions. (Application submitted May 2006)
Louisiana Department of Transportation	Road Crossing Permits	Consider issuance of permits to cross and work within the right-of-way of state highways. (Application submitted October 2006)
Louisiana Department of Wildlife and Fisheries	Consultations regarding special status species	Review and comment on activities potentially affecting state-listed species. (Protected species report submitted August 2006; consultations on-going)
	Special Use Permit	Consider issuance of a permit for the proposed crossing of the Ouachita Wildlife Management Area. (Application submitted September 2006)
	Natural and Scenic Rivers Permit	Consider issuance of a permit for proposed crossings of the Saline Bayou and Black Lake Bayou. (Applications submitted September 2006)
Louisiana Levee Board	Levee Crossing Permit	Consider issuance of a permit for proposed crossings of the Red River, Mississippi River, and Ouachita River levees. (Applications submitted September 2006)

TABLE 1.3-1 (continued)
Summary of Major Permits, Approvals and Consultations for the Proposed East Texas to Mississippi Expansion Project

Agency	Permit/Approval/ Consultations	Agency Action (Status)
STATE		
Mississippi		
Mississippi Department of Wildlife, Fisheries, and Parks	Threatened and Endangered Species Consultation	Review and comment on activities potentially affecting state-listed species. (Consultations on-going)
Mississippi Department of Environmental Quality	Water Quality Certification under Section 401 of the CWA	Consider issuance of a permit for stream and wetland crossings in conjunction with COE Section 404 permit. (Application submitted September 2006)
	Hydrostatic Test Water Withdrawal and Discharge Permits	Water withdrawal permit. Consider issuance of a Section 402 permit regulating discharge of hydrostatic test water from the construction work area. (Application will be submitted December, 2006)
Mississippi Department of Archives and History	Consultations under Section 106 of the NHPA	Review and comment on project activities potentially affecting cultural resources. (Concurrence requested September, 2006)
Texas		
Texas Commission on Environmental Quality	Water Quality Certification under Section 401 of the CWA	Consider issuance of a permit for stream and wetland crossings in conjunction with COE Section 404 permit. (Consultations on-going)
	Stormwater Discharge Permit	Consider issuance of a Section 402 permit regulating discharge of stormwater from the construction work area. (Application pending)
	Minor Source Air Permit	Consider issuance of a Permit by Rule authorizing construction and operation of facilities with the potential for air emissions. (Application submitted May 2006)
	Hydrostatic Test Water Discharge Permit	Consider issuance of a Section 402 permit regulating hydrostatic test water discharge, and construction dewatering to waters of the state. (Anticipated submittal December 2006)
Railroad Commission of Texas	Hydrostatic Test Water Discharge Permit	Consider issuance of a Section 402 permit regulating hydrostatic test water discharge, and construction dewatering to waters of the state. (Anticipated submittal December 2006)
Texas Department of Transportation	Road Crossing Permits	Consider issuance of permits to cross and work within the right-of-way of state highways. (Application pending)

TABLE 1.3-1 (continued)
Summary of Major Permits, Approvals and Consultations for the Proposed East Texas to Mississippi Expansion Project

Agency	Permit/Approval/ Consultations	Agency Action (Status)
STATE		
Texas		
Texas Historical Commission	Consultations under Section 106 of the NHPA	Review and comment on project activities potentially affecting cultural resources. (Concurrence requested September, 2006)
Texas Parks and Wildlife Department	Rare Resources Review	Review and comment on activities potentially affecting state-listed species. (Concurrence requested on July, 2006; consultations on-going)
	Stream Disturbance Permits	Consider issuance of a permit for disturbance of state-owned streambed and/or removal of streambed materials. (Application pending)

As the lead federal agency for the proposed Project, the FERC has certain obligations under Section 7 of the Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA). At the federal level, required permits and approval authority outside of the FERC’s jurisdiction include compliance with the Clean Water Act (CWA), the Rivers and Harbors Act of 1899, and the Clean Air Act (CAA). Each of these statutes has been taken into account in the preparation of this document.

Section 7 of the ESA, as amended, states that any project authorized, funded, or conducted by a federal agency (for example, the FERC) should not “jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical” (16 United States Code (USC) § 1536[a][2]). The FERC is required to consult with the FWS to determine whether any species federally listed or proposed for listing as endangered or threatened, or their designated critical habitat occur in the vicinity of the proposed Project. If, upon review of existing data or data provided by Gulf South, the FERC determines that these species or habitats may be affected by the proposed Project, the FERC is required to prepare a biological assessment to identify the nature and extent of these affects, and to recommend measures that would avoid the habitat and/or species, or would reduce potential impacts to acceptable levels. Additional information on Section 7 consultation is provided in Section 3.7 of this EIS.

Section 106 of the NHPA requires the FERC to take into account the effects of its undertakings on properties listed in, or eligible for listing in, the National Register of Historic Places (NRHP), including prehistoric or historic sites, districts, buildings, structures, objects, or properties of traditional religious or cultural importance, and to afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on the undertaking. The FERC has requested that Gulf South, as a non-federal party, assist in meeting the FERC’s obligations under Section 106 by preparing the necessary information and analyses as required by the ACHP procedures in 36 CFR 800. Additional information on Section 106 consultation is provided in Section 3.10 of this EIS.

Gulf South is required to comply with Sections 401, 402, and 404 of the CWA. The EPA has delegated water quality certification (Section 401) to the jurisdiction of individual state agencies, but the

EPA may assume this authority if no state program exists, if the state program is not functioning adequately, or at the request of a state. Water used for hydrostatic testing of pipelines that is point-source discharged into waterbodies requires a National Pollutant Discharge Elimination System (NPDES) permit (Section 402) issued by the state with EPA oversight.

The COE has responsibility for determining compliance with the regulatory requirements of Section 404 of the CWA. The EPA also independently reviews Section 404 wetland dredge-and-fill applications for the COE and has Section 404(c) veto power for wetland permits issued by the COE. The Section 404 permitting process regulates the discharge of dredged or fill material associated with the construction of pipelines across streams and in wetlands. Before an individual Section 404 permit can be issued, the CWA requires completion of a Section 404(b)(1) guidelines analysis. The FERC, in the NEPA review required to prepare this EIS, has analyzed the technical issues required for the Section 404(b)(1) guidelines analysis, including analysis of natural resources and cultural resources that would be affected by the proposed Project, as well as analyses of alternatives and route variations that would eliminate or minimize the discharge of fill material into the waters of the United States. The COE, as a federal cooperating agency, may use the EIS to support its decision on the Section 404 permit for the proposed Project.

In addition to its CWA responsibilities, the COE has jurisdiction over Section 10 permits. Section 10 permits would be required for all construction activities in navigable waterways under the Rivers and Harbors Act of 1899.

Ambient air quality is protected by federal regulations under the CAA. These regulations include compliance under the New Source Performance Standards (NSPS) and the requirements for the Prevention of Significant Deterioration (PSD). The federal permitting process for the CAA has been delegated to individual state agencies. Although applications are reviewed by both the states and the EPA, the states would determine the need for NSPS or a PSD permit. Air quality and applicable regulations are discussed further in Section 3.11.1 of this EIS.

1.4 PUBLIC REVIEW AND COMMENT

On February 6, 2006 and March 31, 2006, Gulf South filed requests with the Commission to implement its Pre-Filing Review Process for the East Texas Expansion and Mississippi Expansion Projects, respectively. We granted Gulf South's request to use the Pre-Filing Process for the proposed East Texas Expansion Project on February 17, 2006, and established a pre-filing docket number (PF06-17-000) to place information relevant to the proposed Project into the public record. On April 13, 2006, the FERC also granted Gulf South's request to use the Pre-Filing Process and established a pre-filing docket number (PF06-23-000) for the proposed Mississippi Expansion Project, similarly creating a public record. The Pre-Filing Process was established by the FERC to encourage early involvement of interested stakeholders, facilitate interagency cooperation, and identify and resolve environmental issues before an application is filed with the FERC.

As part of the pre-filing review process, on March 28, 2006 and May 23, 2006, we issued a *Notice of Intent to Prepare an Environmental Impact Statement, Request for Comments on Environmental Issues* (NOI) for the proposed East Texas Expansion and Mississippi Expansion Projects, respectively. The NOIs were sent to affected landowners; federal, state, and local government agencies; elected officials; environmental and public interest groups; Native American tribes; local libraries and newspapers; and other interested parties. The NOIs, which were published in the Federal Register, provided a summary of the proposed Projects, outlined our NEPA-required environmental review process, provided a list of the then currently identified environmental issues, and requested comments on the scope of the analysis for the EISs. The NOI for the proposed Mississippi Expansion Project also listed the

locations, dates, and times of two public scoping meetings that were sponsored by the FERC to give the general public an opportunity to learn more about the proposed Project and to comment on environmental issues to be addressed in the EIS. The public scoping meetings for the proposed East Texas Expansion Project were publicly noticed through a separate FERC mailing on June 7, 2006. The Mississippi Expansion Project scoping meetings were held on June 12 and 13, 2006, in Raymond and Vicksburg, Mississippi, respectively. The scoping meetings for the proposed East Texas Expansion Project were held on June 21 and June 22, 2006 in Quitman, and Delhi, Louisiana, respectively.

The transcripts of all scoping meetings, as well as all written comments received before and after the scoping meetings, are part of the public record for the proposed Project and are available for viewing on the FERC Internet website (www.ferc.gov). During the pre-filing and scoping periods for the proposed Projects, we received a total of 22 written comment letters from members of the general public and federal state resource agencies. The issues and concerns identified by commentors during the public scoping process for the proposed Project are summarized in Table 1.4-1, which also identifies the EIS section in which these issues are addressed.

After reviewing the proposed East Texas and Mississippi Expansion Projects, we determined based on their identified purposes that we would combine our pre-filing review of the two proposed Projects and recommended to Gulf South that it combine these two projects into one proposal and file an application for this combined project at the end of the pre-filing process. Upon receiving Gulf South's combined application for the proposed East Texas to Mississippi Expansion Project, we established a new Docket Number CP06-446-000 which reflects this combined proposed Project. All comments received during the pre-filing period and since the submittal of Gulf South's application are filed under Docket Nos. PF06-17-000, PF06-23-000, and CP06-446-000 and collectively are considered to be part of the record for the proposed East Texas to Mississippi Expansion Project.

In addition to the public notice and scoping process discussed above, the FERC conducted agency consultations and participated in interagency meetings to identify issues that should be addressed in this EIS. These activities included participation in interagency meetings on June 21, 2006 in Shreveport, Louisiana and on July 18, 2006 in Jackson, Mississippi, to discuss the proposed Project and its associated environmental review process with other federal and state agencies. The agencies that participated in one or both of those meetings included the COE; FWS; Natural Resources Conservation Service (NRCS), the Louisiana Department of Wildlife and Fisheries (LDWF); NPS, Mississippi Department of Environmental Quality (MDEQ), Texas Parks and Wildlife Department (TPWD), and Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP).

This EIS has been filed with the EPA. A formal notice was published in the Federal Register, indicating that the EIS is available and has been mailed to individuals and organizations on the distribution list prepared for the proposed Project (see Appendix A). In accordance with the CEQ regulations implementing the NEPA, the public has 45 days to comment on this EIS. We will review and use the comments received to prepare a Final EIS for the proposed Project. All timely comment letters received on this EIS will be addressed in the Final EIS.

**TABLE 1.4-1
Issues Identified and Comments Received During the Public Scoping Process
for the Proposed East Texas to Mississippi Expansion Project**

Issue/Specific Comments	EIS Section Addressing Comment
General	
Project purpose and need	1.1
Public notification requirements	1.3
Project timeline	2.4
Describe construction methods and land requirements	2.2, 2.3, 3.8
Maintenance procedures to be implemented during operation, including vegetation management and inspections	2.5, 3.5, 3.12
Potential damage to existing utilities, including water lines and irrigation systems	2.3
Geology and Soils	
Impacts to soils, including compaction, drainage, possible contamination, and erosion potential following construction, and associated mitigation such as topsoil segregation	3.2
Impacts to topography, including rugged topography	3.2
Impacts to prime farmland soils	3.2
Water Resources	
Use of HDD at major water crossings	2.3
Impacts to waterbodies (rivers and streams), particularly that associated with crossings of major or state-designated scenic rivers; spills and contamination	3.3, 3.8
Impacts to wells, groundwater, and drinking water	3.3
Vegetation and Wetlands	
Impacts to native vegetation and forested habitats	3.5
Avoidance and minimization of impacts to sensitive habitats, including wetlands, bottomland hardwoods, riparian habitats, and native prairies and rangelands during construction and maintenance activities; mitigation for Project-related effects	3.4, 3.5
Fish and Wildlife Resources	
Impacts to fish and wildlife habitat	3.4, 3.5, 3.6
Potential impacts to colonial, nesting waterbirds or migratory bird species	3.6, 3.7
Threatened, Endangered, and Special Status Species	
Potential impacts to state and federally protected species, including red-cockaded woodpecker, bald eagle, interior least tern, Louisiana black bear, pallid sturgeon, Louisiana pine snake, or their habitat	3.7
Land Use, Recreation and Special Interest Areas, and Visual Resources	
Impacts to affected property including agriculture, silviculture activities, and property access during operation	3.8
Proximity of pipeline to occupied structures	3.8

TABLE 1.4-1 (continued)
Issues Identified and Comments Received During the Public Scoping Process
for the Proposed East Texas to Mississippi Expansion Project

Issue/Specific Comments	EIS Section Addressing Comment
Land Use, Recreation and Special Interest Areas, and Visual Resources	
Reduced property access during construction activities	2.3, 3.8
Compatibility/potential conflicts with designated special use areas, including U.S. Fish and Wildlife Service conservation easements and lands within the Natural Resource Conservation Service's Wetland Reserve and Conservation Reserve Programs	3.4, 3.6, 3.8
Impacts of vegetation removal on visual resources	3.8
Allowable uses/restrictions on future development along the permanent right-of-way	3.8
Impacts of multiple pipeline and utility rights-of-way	3.8
Air Quality and Noise	
Potential air emission impacts from compressor stations during operations	3.11
Potential noise impacts from compressor stations during operations	3.11
Cultural Resources	
Identification, evaluation, and protection of potentially affected cultural resources	3.10
Socioeconomics	
Loss of timber production values for affected silviculture operations	3.8, 3.9
Potential effect on property values	3.9
Use of local employment	3.9
Impacts to development potential of property	3.9
General economic effects to agricultural operations and livestock	3.8, 3.9
Reliability and Safety	
Stability and integrity of pipeline; potential for damage from outside forces such as agricultural operations and equipment	2.6, 3.12
Public safety; risk of leak, explosion, or catastrophic accident	3.12
Cumulative Impacts	
Cumulative impacts of similar proposed pipeline projects	3.13
Alternatives	
Use of alternative fuels to reduce need for the proposed Project	4.1
Analysis of alternative pipeline routes and aboveground facility locations, including alternative compressor station sites	4.3, 4.4, 4.5