



**Federal Energy Regulatory Commission**  
 Office of Energy Projects  
 Washington, DC 20426

**Rio Grande LNG Project**  
*Final Environmental Impact Statement*  
*Volume III, Part 1*



**Rio Grande LNG, LLC and Rio Bravo Pipeline Company, LLC**

**April 2019**  
**Docket Nos. CP16-454-000, CP16-455-000**  
**FERC/EIS-0287F**

**Cooperating Agencies:**



U.S. Environmental Protection Agency



U.S. Department of Transportation



U.S. Coast Guard



U.S. Department of Energy



U.S. Army Corps of Engineers



U.S. Fish and Wildlife Service



Federal Aviation Administration



National Park Service



National Oceanic Atmospheric Administration - National Marine Fisheries Service

**APPENDIX R**  
**DRAFT ENVIRONMENTAL IMPACT STATEMENT COMMENTS AND**  
**RESPONSES**

Federal Agencies (FA)

FA1 - U.S. Fish and Wildlife Service

20181127-0012 FERC PDF (Unofficial) 11/27/2018



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Texas Coastal Ecological Services Field Office
P.O. Box 81468,
Corpus Christi, Texas 78468-1468
361/994-9005/ (Fax) 361/994-8262



In Reply Refer To:
FWS/R2/ES/02ETTX
X0-2015-I-0371
FWS/R2/ES/02ETTX
00-2018-CPA-0070
FERC Project Docket
numbers:
CP16-454-000
CP16-455-000

ORIGINAL

November 19, 2018

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

Dear Ms. Bose: CP16-116-000

The U.S. Fish and Wildlife Service (Service) has participated as a cooperating agency in the planning process for the Rio Grande LNG, LLC (RG LNG) and Rio Bravo Pipeline Company, LLC (RB Pipeline). The applicant, RG LNG is requesting authorization from the Federal Energy Regulatory Commission (FERC) to site, construct, and operate facilities necessary to liquefy and export natural gas at their proposed terminal facility along the Brownsville Ship Channel (BSC) in Cameron County, Texas. Also, RB pipeline is requesting from FERC a Certificate of Public Convenience and Necessity to site, construct, operate, and maintain a new pipeline system and related facilities in Jim Wells, Kleberg, Kenedy, Willacy, and Cameron counties, Texas. We received and reviewed the Draft Environmental Impact Statement (DEIS) of October 12, 2018, and our comments follow.

As was noted in the DEIS, significant issues are yet to be addressed and resolved with regard to the impacts of the proposed project on federally listed threatened and endangered species and for impacts of the project on federally regulated waters and wetlands. The Service will be continuing consultation with FERC under section 7 of the Endangered Species Act with regard to impacts of the proposed RG LNG and RB Pipeline on federally listed threatened and endangered species and critical habitat, Consultation Number 02ETTX00-2015-I-0371. Additionally, the Service will continue coordination with the U.S. Army Corps of Engineers (USACE) on the RG LNG and RB Pipeline Permit Application SWG-2015-00114 pursuant to impacts of the proposed project under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Currently, as is noted in the DEIS, RG LNG and RB Pipeline have only submitted a Conceptual Mitigation Plan for the proposed impacts. Service comments and recommendations on the permit application were submitted to the USACE by letter dated November 13, 2018.

REGULATORY COMMISSION
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FA1-1 Comment noted.

FA1-2 Comment noted.

FA1-1

FA1-2

Ms. Bose

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In addition to resolving the proposed impacts of the project on protected species and regulated waters and wetlands, which includes special aquatic sites, the DEIS outlines a number of other deficiencies yet to be addressed. Several plans and reports are still in draft form as of the publication of the DEIS. Also, a number of post-construction measures and monitoring requirements are without defined plans in the DEIS and so have not been reviewed by the Service. These missing documents and other plans include:

FA1-3

1. RG Developers' Plan and Procedures,
2. Spill Prevention, Control, and Countermeasure Plan,
3. Stormwater Pollution Prevention Plan,
4. RG LNG's Dredged Material Management Plan,
5. RB Pipeline completed pre-construction vegetation surveys for the preferred routes of Pipeline 1 and Pipeline 2 and work corridor,
6. RG Developers' Migratory Bird Conservation Plan,
7. FERC's recommendation that RG Developers' consult with the Natural Resource Conservation Service and our agency to develop a final seed mix to be used in areas to be restored. The Service also recommends requiring a post-construction, and a monitoring plan for restored areas.
8. Coordination with Texas Parks and Wildlife Department for identification of impacts to, and implementation of Texas Tortoise best management practices,
9. Texas Coastal Management Plan concurrence documentation,
10. Documentation that the RB Pipeline route would avoid National Wildlife Refuge lands,
11. Final surveys and completion of consultation under Section 106 of the National Historic Preservation Act,
12. Final, approved plan by RG Developers' to FERC and State Historic Preservation Office for addressing unanticipated discovery of cultural resources or human remains during construction,
13. Site-specific measures to mitigate noise impacts from 24-hour horizontal directional drill activities near identified noise sensitive areas (NSAs),
14. Approved alternative to RG LNG's proposed, 1-mile-long, temporary haul road through wetlands.

The Service is concerned about the process FERC has for determining whether these documents are final, and who would be involved in the final review process and the determination of acceptability. Of specific concern is that FERC would issue an FEIS, and their authorization and certificate prior to the documents above being finalized and accepted. The Service requests the opportunity to review RG Developers' finalized versions of the documents above. We recommend that FERC share their review process with the Service, other cooperating agencies, and other state and local entities who would have a stake in the decisions and processes that would be implemented by the final documents, particularly, how FERC will address any unresolved issues, or measures that the Service or other agencies have determined to be unacceptable or incomplete.

FA1-3

We acknowledge the U.S. Fish and Wildlife Service (FWS) request to review Rio Grande LNG, LLC (RG LNG) and Rio Bravo Pipeline Company (collectively, RG Developers') final construction plans prior to construction. All of the documents listed by the FWS would be required to be filed with the Federal Energy Regulatory Commission's (FERC) and would be available on FERC's publicly accessible eLibrary (assuming that the information within is not privileged or otherwise non-public). The issuance of a Certificate of Public Convenience and Necessity (Certificate) for the Project, if approved, would not authorize construction. RG Developers would be required to meet any environmental conditions identified in the Certificate or prior commitments regarding the completion of consultation, receipt of applicable permits, and finalizing construction plans, before construction of the Project. As applicable, RG Developers would be required to consult with the FWS (and file with FERC) regarding construction and mitigation plans that pertain to resources under FWS jurisdiction. Regarding the recommendation for post-construction and monitoring plans for restored areas, section 7.1 of RG Developers' Plan includes requirements for monitoring and maintenance to ensure successful revegetation. For example, revegetation in non-agricultural areas shall be considered successful if, upon visual survey, the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed lands. Section 6.4.5 of RG Developers' Procedures describes the criteria for determining successful wetland restoration, including that vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction. If natural rather than active revegetation is used, the plant species composition must be consistent with early successional wetland plant communities in the affected ecoregion. The U.S. Army Corps of Engineers (COE) may require additional monitoring parameters during its permitting process. Also see comment letter APP1.

Federal Agencies (FA)

FA1 - U.S. Fish and Wildlife Service

20181127-0012 FERC PDF (Unofficial) 11/27/2018

Ms. Bose

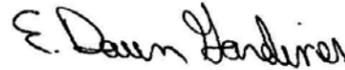
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FERC analyzed the anticipated cumulative impacts from the construction and operation of the projects in their identified geographic scope, particularly relative to the concurrent construction and operation of the RG LNG, Texas LNG, and Annova LNG projects. FERC identified construction-related dredging and pile-driving impacts in the Brownsville Ship Channel on fish and sea turtles, vehicle traffic issues on State Highway 48, potential direct impacts on the federally endangered ocelot and jaguarundi, and noise impacts on NSAs during concurrent construction. The primary operation-related identified cumulative impacts include marine vessel impacts on water quality and on existing marine vessel traffic in the BSC, as well as loss or degradation of vegetation that provides habitat for federally listed species. The Service requests that the FERC identify their role and responsibility as the permitting agency for mitigation of the identified cumulative impacts.

FA1-4

The Service appreciates the opportunity to provide comments and recommendations on the DEIS for the RG LNG and RB Pipeline. If you have questions regarding these comments, please contact Pat Clements at 361-225-7316, or by email at pat\_clements@fws.gov.

Sincerely,



for Charles Ardizzone  
Field Supervisor

Cc:  
Delfinia Montano, Region 2, USFWS, Albuquerque, NM

FA1-4

The Environmental Impact Statement (EIS) is not a decision document; rather, it is a tool to ensure that the potential environmental impacts that would occur as a result of a federal action are fully analyzed and presented, in compliance with The National Environmental Policy Act of 1969 (NEPA). Under NEPA, the determination that an impact is significant necessitates the preparation of an EIS (as opposed to an Environmental Assessment). FERC staff has identified and acknowledged cumulative impacts associated with the three proposed Brownsville liquified natural gas (LNG) Terminals. Although a determination of significant impacts as a result of cumulative impacts is not prohibited under Section 7 or any other part of the Endangered Species Act (ESA), FERC staff recommends multiple measures to minimize the contribution of the Rio Grande LNG Project's (Project) contribution to the overall cumulative effects noted in section 4.13.



UNITED STATES DEPARTMENT OF THE INTERIOR  
**FISH AND WILDLIFE SERVICE**  
 Laguna Atascosa National Wildlife Refuge  
 22817 Ocelot Road  
 Los Fresnos, Texas 78566  
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 (956) 748-3609 fax



December 2, 2018

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

**Re: Project Docket Number- CP16-454-000, CP16-455-00**

Dear Secretary Bose,

In regards to the proposed Liquid Natural Gas (LNG) facility referred to as “Rio Grande LNG Project”, the Laguna Atascosa National Wildlife Refuge (LANWR) has concerns that have been expressed to FERC because the US Fish and Wildlife Service (Service) is a cooperating agency in the NEPA process. However, I wish to express these concerns more formally through this written letter.

The LANWR currently manages approximately 105,000 acres of natural area in South Texas. The Service plans to continue protecting additional acres in an attempt to connect important tracts of land for the endangered ocelot, aplomado falcon, and other native species. Out of the three LNG facilities currently being proposed, the Rio Grande facility concerns me most. As a Refuge Manager of the neighboring LANWR the concerns are 1) potential conflict with eco-tourists and outdoor enthusiasts, 2) the location, 3) direct conflict with resource management, and 4) risk to the limited water supply.

**Conflict with Tourism**

From a very broad perspective, the proposed project is in the middle of one of the most popular destinations in South Texas. Unfortunately, the plans to develop LNG in this area is in conflict with numerous plans to expand tourism and public access in the area. South Padre Island is, by far, the largest tourist destination in South Texas, and a large percentage of those visitors utilize State Highway 48 (which is the northern boundary of this LNG facility) for access.

More specifically, this LNG facility will be in conflict with the proposed public use opportunities being proposed by LANWR at the Bahia Grande Unit, located on the northern boundary of this project. The Bahia Grande Unit is approximately 23,000 acres of native coastal prairie and thronscrub habitat surrounding the restored Bahia Grande wetlands. Although the majority of the unit is closed to the public, due to popular demand, the Service has plans to open the Unit to the

FA2-1

Impacts on recreation and special use areas, including tourism and fishing, are addressed in sections 4.8.1.5 and 4.9.3; section 4.9.3 was updated to discuss potential impacts on planned facilities in the Bahia Grande unit of the Laguna Atascosa National Wildlife Refuge (NWR). Impacts associated with visual resources for these areas are addressed in section 4.8.2. As stated in section 4.9.3.2, while shore-based anglers fish along the banks of the 0.4-mile-long Bahia Grande Channel, the land on both sides of the channel is owned by the Brownsville Navigational District (BND) and is not officially designated for fishing.

FA2-1

Federal Agencies (FA)

FA2 - U.S. Fish and Wildlife Service



UNITED STATES DEPARTMENT OF THE INTERIOR  
**FISH AND WILDLIFE SERVICE**  
 Laguna Atascosa National Wildlife Refuge  
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public in the near future. From my perspective, a neighboring LNG facility would not welcome visitors to the area, and could potentially be a safety hazard to those attempting to enjoy the Bahia Grande Unit.

FA2-1

The land proposed for the Rio Grande LNG Project and the neighboring Bahia Grande Unit are popular destinations for local anglers. The Brownsville Navigation District (BND) has graciously allowed public access in the area for decades. If developed, the nearly 1,000-acre development site will be closed to public access and therefore reduce a significant portion of those accessible areas.

**Location and Size of the Project**

The Rio Grande LNG project is the largest of the three proposed LNG facilities in Brownsville. Due to the size and location of the project, this LNG facility will also destroy nearly 500-acres of wetlands.

FA2-2

**Inability to Manage Natural Resources**

Having an LNG facility as large as this project on the southern border of the Bahia Grande Unit would make some resource management activities very difficult. In regards to prescribed fire management, the staff conducting those burns would be much less safe with an LNG facility next door. In addition, the fire fighters who must respond to wild fires will be in particular danger while trying to potentially protect this LNG facility from an approaching fire.

FA2-3

**Risk to Water Quality**

The sole source of water that flows into the Bahia Grande wetlands is the "pilot channel" that was constructed in 2005 to re-flood the Bahia Grande wetlands with saline water from the Brownsville Ship Channel. The pilot channel shares its northeast boundary with this LNG project, and once it is developed, there's high likelihood that any debris, spill, or other mishap at the LNG facility could easily enter the Bahia Grande wetlands. The US government, non-profit partners, and local governments have spent a great deal of time and resources on restoring the Bahia Grande wetlands and constructing an LNG facility in close proximity to this valuable resource seems an unnecessary risk.

FA2-4

The above-mentioned concerns are the reason why I hope this project is either relocated or not completed at all. I understand that even with concerns from cooperators or other outside agencies, the project may move-forward. In the event it is constructed, I also hope that the agencies involved will do their best to consider the wetlands lost, and make a concerted effort to

FA2-5

FA2-6

FA2-2

As described in section 4.4.2 of the EIS, the LNG terminal would permanently impact 191.8 acres of wetlands (not 500 acres). As discussed in section 3.3.2 of the EIS, alternative sites were evaluated that would affect more and less acreage of wetlands; however, with the various other criteria analyzed for alternative locations, none provided an environmental advantage over the proposed Project. Since the COE has a goal of "no net loss" of wetlands in the United States, and construction of the Project, if approved, could not proceed without implementation of a COE-approved wetland mitigation plan, impacts on wetlands would be adequately mitigated. **The suitability of proposed wetland mitigation is more appropriately handled during the Section 404/Section 10 permit review process, in which applicable federal agencies (the COE and the U.S. Environmental Protection Agency [EPA]) have the authority to impose requirements for compensatory mitigation.**

FA2-3

As stated in section 4.7.1 of the EIS, prescribed burning, although not allowed on the LNG Terminal site itself, would not be precluded in the adjacent areas. In addition, the northern edge of the project site would be bounded by a 4 lane state highway (SH-48) as well as a 17-foot storm levee. Furthermore, onsite process equipment would be installed at a distance of over 500 feet from SH-48. This would provide sufficient separation distances between any prescribed wild fires and onsite process equipment. We also note that hot embers from wildfires or prescribed burns could reach onsite equipment and piping, however metal components and paving around these components would not be considered a fuel source and would not be susceptible to catching fire. If hot embers did ignite onsite components, RG LNG's proposed hazard and fire mitigation measures described in Section 4.12.1.6 of the EIS would be activated as needed.

FA2-4

Section 4.3.2.2 of the final EIS was revised to clarify that construction of the levee would protect the Bahia Grande Channel from potential contamination during construction and operations. In addition, RG LNG would implement its site-specific Spill Prevention, Control, and Countermeasure (SPCC) Plan during construction and operation of the Project to minimize the potential for impacts on surface waters due to spills or leaks of hazardous materials.

FA2-5

Comment noted.

FA2-6

As described in section 4.4.2 of the EIS, RG LNG is consulting with the COE, EPA, and FWS regarding wetland mitigation plans as part of the permitting process associated with Section 404 of the Clean Water Act (CWA). RG LNG's final wetland mitigation plans would be developed and submitted to the COE, and would be implemented in addition to the construction mitigation measures outlined in RG LNG's Procedures and the measures described in the EIS. Construction of the LNG Terminal would not commence prior to finalization of the wetland mitigation plans and issuance of the COE's CWA Section 404/Section 10 permit.

Federal Agencies (FA)

FA2 - U.S. Fish and Wildlife Service



UNITED STATES DEPARTMENT OF THE INTERIOR  
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protect habitat perpetually as an offset to those losses. The mitigation should include protection of the habitat and restoration of any wetlands to make-up for any wetland impacts involved in the development of the Rio Grande LNG project. | FA2-6

Sincerely,

*Boyd Blihovde*

Boyd Blihovde  
Refuge Manager

20181210-0041 FERC PDF (Unofficial) 12/10/2018



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202-2733

ORIGINAL

November 29, 2018

FILED  
SECRETARY OF THE  
COMMISSION

2018 DEC 10 P 3 06

FEDERAL ENERGY  
REGULATORY COMMISSION

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

Dear Ms. Bose:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (EIS) for the Rio Grande LNG Project, Docket Nos. CP16-454-000, CP16-455-000, (CEQ No. 20180246), pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations (40 CFR Parts 1500 – 1508), and our NEPA review authority under Section 309 of the Clean Air Act.

FA3-1

The purpose of the proposed action is to develop, own, operate, and maintain a natural gas pipeline system and a liquefied natural gas (LNG) export facility along the Brownsville Ship Channel in Cameron County, Texas, and in Jim Wells, Kleberg, Kennedy, Willacy, and Cameron Counties, Texas. The proposed action would provide an additional source of firm, long-term, and competitively priced LNG to the global market. The EPA is a cooperating agency for this project.

We appreciate the opportunity to review this draft EIS. EPA has no comments on the project as proposed. Please note that effective October 22, 2018, the EPA no longer includes ratings in our comment letters. Information about this change is explained in the Memorandum on Changes to EPA's Environmental Review Rating Process, available at <https://www.epa.gov/nepa/policy-and-procedures-review-federal-actions-impacting-environment-under-section-309-clean-air>. If you have any questions, please contact Magda Dallemagne, the lead contact for this project, at (214) 665-7396 or [dallemagne.magdeleine@epa.gov](mailto:dallemagne.magdeleine@epa.gov).

Sincerely,

Cheryl T. Seager  
Director  
Compliance Assurance and  
Enforcement Division

cc: Gertrude Johnson, FERC, [gertrude.fernandez.johnson@ferc.gov](mailto:gertrude.fernandez.johnson@ferc.gov)

FA3-1

Comment noted.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Texas Coastal Ecological Services Field Office

3325 Green Jay Road

Alamo, Texas 78516

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In Reply Refer To:  
FWS/R2/ES/02ETCC00-2018-TA-0372

November 28, 2018

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

Dear Ms. Bose:

This letter acknowledges the U.S. Fish and Wildlife Service's (Service) receipt of the Federal Energy Regulatory Commission (FERC) October 25, 2018, letter, received November 16, 2018, requesting initiation of formal section 7 consultation under the Endangered Species Act of 1973, as amended. The applicant, Rio Grande LNG, LLC (RG LNG) and Rio Bravo Pipeline, LLC (RBP), has requested initiation of Section 7 consultation for authorization to construct, install, operate, and maintain structures and equipment for liquefaction and export of natural gas. The project site is located in a 135-mile-long pipeline corridor in Jim Wells, Kleberg, Kenedy, Willacy, and Cameron counties, Texas, and a 750.4-acre terminal site on property owned by the Brownsville Navigation District, adjacent to and in the Brownsville Ship Channel in Cameron County, Texas.

FA4-1

FERC determined that the Project "may affect, not likely to adversely affect" the West Indian manatee, red knot, whooping crane, gulf coast jaguarundi, black lace cactus, slender rush-pea, and South Texas ambrosia. Not all plant surveys have been completed due to lack of property access in the proposed pipeline alignment. This information is needed for the Service to be able to concur with FERC's determination.

FA4-2

FERC determined that the project "may affect, likely to adversely affect" the northern aplomado falcon, piping plover and its critical habitat, and ocelot. The Service concurs with the determination of "may affect, likely to adversely affect" for the ocelot. We recommend that the piping plover and its critical habitat could be considered as a "may affect not likely to adversely affect" determination. Also, the northern aplomado falcon is already covered for take under the Endangered Species Act by a 99-year Safe Harbor Agreement and associated 10(a)1B permit that allows development to occur in the area around the Port of Brownsville. However, we

FA4-3

FA4-4

FA4-1 Comment noted.

FA4-2 As noted in section 4.7.1.6, species-specific surveys would be completed prior to construction, if the Project is approved. FERC staff has coordinated with the FWS regarding its requests and understand that the FWS' Biological Opinion for the Project is pending additional information that will be provided by the Applicant and/or FERC. Further, based on coordination with the FWS, we have revised our determination of the jaguarundi to a "may affect, likely to adversely affect," as identified in section 4.7.1.4.

FA4-3 Section 4.7.1.3 was updated in accordance with this recommendation.

FA4-4 Section 4.7.1.3 was updated in accordance with this recommendation/comment.

Federal Agencies (FA)

FA4 - U.S. Fish and Wildlife Service

2

Ms. Bose

encourage aplomado habitat conservation across the landscape to offset cumulative impacts over time. We also request that you alert us to aplomado nests in the project area and any coso that eggs and young may be relocated if needed.

FA4-4

Additional information needed for the biological assessment (BA) includes assessing cumulative ocelot habitat loss from other federal projects and how that habitat loss can be avoided, minimized, and mitigated. When the Service receives an updated BA with the plant surveys, ocelot habitat information, and any additional voluntary conservation measures, we can initiate formal Section 7 consultation and complete a Biological Opinion for the ocelot.

FA4-5

As a reminder, the Endangered Species Act requires that after initiation of formal consultation, the federal action agency may not make any irreversible or irretrievable commitment of resources that limits future options. This practice insures agency actions do not preclude the formulation or implementation of reasonable and prudent alternatives that avoid jeopardizing the continued existence or endangered or threatened species or destroying or modifying their critical habitats.

If you have questions or concerns about this consultation or the consultation process, please contact Dawn Gardiner at (361) 225-7310 or Ernesto Reyes at (956) 784-7560.

Sincerely,

*E. Dawn Gardiner*  
Charles Ardizzone  
Field Supervisor

cc:  
Field Supervisor, U.S. Fish and Wildlife Service, Corpus Christi, TX  
Boyd Blihovde, Los Fresnos, TX  
Pat Clements, Corpus Christi, TX

FA4-5

FERC staff has coordinated with the FWS and understand that the Biological Opinion is pending additional information that will be provided by the Applicant and/or FERC. Further, cumulative impacts on threatened and endangered species are disclosed in the EIS. A determination of significant impacts as a result of cumulative impacts is not prohibited under Section 7 or any other part of the ESA.

Ms. Bose

Attachment:

Best Management Practices (BMPs)

The following BMPs will be implemented as a part of these actions to avoid and/or minimize impacts to the federally-listed ocelot and jaguarundi.

General BMPs:

1. Prior to any operation activities, a kick-off meeting will be scheduled. One of the primary purposes will be to discuss the BMPs and education training for all on-site workers.
2. Individual federally listed animals found in the project area will not be harassed and will be allowed to leave on their own volition. An individual, with the authority to stop construction activities, will be on-site during operation activities, and will halt all activities immediately upon report of an ocelot or jaguarundi sighting. Contact the Service immediately at (956) 784-7560 if a federally-listed animal is seen in the project vicinity during normal business hours. After hours, please call (956) 784-7520 (Refuge Dispatch).
3. During helicopter activities, an environmental monitor, with authority to temporarily suspend operation at any time the appropriate BMPs are not being properly implemented, will be present on site. Duties of the monitor will include ensuring that activities stay within designated project areas, evaluating the response of individuals that come near the project site, and implementing the appropriate BMP.
4. If new or improved access is needed that will clear thornscrub brush, plans will be coordinated with the Service.
5. Tree and brush removal should be minimized and permanent loss will be restored with native vegetation.
6. Dispose of all food related trash items such as wrappers, cans, bottles, and food scraps in closed containers and remove daily from the project site to eliminate attraction of predators.
7. All equipment, materials, and vehicles will be staged in designated areas that are currently cleared and covered with aggregate.
8. Operation activities will be conducted only during daylight hours to avoid noise and lighting issues at night. Noise levels should be minimized.
9. Vehicle traffic associated with the project will remain on established roads and reduce speeds to the maximum extent practicable.
10. The project management plan will provide for a report describing the implementation of the BMPs and their effectiveness. All personnel involved with the on-the-ground or maintenance for the proposed action will receive training in the affected species, the agreed upon BMPs, and the role of the construction monitor.

Ms. Bose

## Best Management Practices for the Northern Aplomado Falcon

This document describes some Best Management Practices (BMPs) for the northern aplomado falcon (*Falco femoralis septentrionalis*) (aplomado falcon) recommended by the Texas Coastal Ecological Service Field Office (TCESFO) that may be applicable to various types of projects. Best Management Practices (BMPs) are recommended measures that if implemented as part of the proposed action, would, to the extent practicable, avoid, minimize, and mitigate for adverse effects of that proposed action on the aplomado falcon. However, even with these BMPs in place, there may be adverse effects that may remain and require initiation of formal consultation. The inclusion of BMPs into the project proposal would streamline any formal consultation or conference that might still be required. Further technical assistance on analysis of effects is available by contacting the appropriate Ecological Services Field Office (ESFO).

## Project Planning and Documentation

- Identification of suitable habitats and pre-activity surveys for the aplomado falcon should be conducted during project planning, and typically include systematic observations in suitable habitat for territorial aplomado falcons and/or nest sites if operations are conducted between March-August; coordination with the Peregrine Fund and Laguna Atascosa is recommended before helicopter operations take place. Pre-activity surveys should be conducted by qualified, permitted individuals in accordance with protocols that are recognized by the U.S. Fish and Wildlife Service's (Service) and/or Arizona Game and Fish Department, New Mexico Department of Game and Fish, or Texas Parks and Wildlife Department. Currently, Service survey protocol guidance is contained in the 2003 Interim Survey Methodology for the Northern Aplomado Falcon (*Falco femoralis septentrionalis*) in Desert Grasslands.
- All personnel involved with the on-the-ground and aerial operation or maintenance for the proposed action will receive training in the subspecies, the agreed upon BMPs, and the role of the operation monitor.
- During aerial or maintenance activities in or within .5 miles of northern aplomado falcon habitat (or such distance that noise, light, or other effects reach the habitat), a operation monitor with authority to halt operations at any time the appropriate BMPs are not being properly implemented as agreed to will be present on-site.
- Measures to reduce adverse environmental impacts to aplomado falcons should be incorporated into projects, in accordance with agency plans, permits, and regulations.
- New proposed actions should undergo environmental review during which potential affects to the aplomado falcon would be considered.
- If an active aplomado falcon territory is discovered during the planning phase of a proposed operation, a different alternative should be considered to minimize disturbance..
- Aerial operations should be located at least .5 miles outside of any known northern aplomado falcon territory. Northern aplomado falcon home range size is estimated to be about 8,400 acres. For management purposes, this can be described as a circle with a radius of two miles around a particular habitat feature (e.g., a nest site or the preferred roosting site of a territorial northern aplomado falcon).
- New roads in the vicinity of northern aplomado falcon territories and other important habitat areas should be avoided to reduce effects of human activity.

Ms. Bose

During Construction/Maintenance

- Aerial activities that must be closer than one mile to occupied northern aplomado falcon habitat should occur between August 1 and January 31 to avoid the northern aplomado falcon breeding season. Staging areas for equipment and supplies should be as far as practicable from aplomado falcon habitats.
- Operation and maintenance activities should be conducted during daylight hours only to avoid noise and lighting issues during the night.
- The perimeter of all areas to be disturbed during construction or maintenance activities should be clearly demarcated using flagging or temporary construction fence, and no disturbance outside that perimeter should be authorized.
- If new access is needed or existing access requires improvement to be usable for the project, roads should be constructed to accepted standards.
- To the extent possible, areas already disturbed by past activities or those that will be used later in the operation period should be used for staging, parking, and equipment storage.
- Waste materials and other discarded materials should be removed from the site as quickly as possible. This should assist in keeping the project area and surroundings free of litter and reduce the amount of disturbed area needed for waste storage.

Additional General Recommendations

- Report all newly discovered aplomado falcon active nests within 1 day, and new aplomado falcon sightings within 3 days, to the appropriate ESFO at 956-784-7560.
- Prevent intentional or unintentional take of aplomado falcons, nests, eggs, and nestlings.
- Minimize incidental take through BMPs and coordination with the appropriate ESFO.
- Minimize impacts to, and fragmentation of, grassland habitats and protect large, complex yucca trees and structures that can support corvid or raptor nests.

In conclusion, the appropriate ESFO can provide additional technical assistance on aplomado falcons, conservation measures, and BMPs as you proceed in planning and developing projects. We encourage you to analyze potential effects from your projects on both aplomado falcons and their breeding and foraging habitat when designing and implementing projects. We appreciate your continued coordination with the Service on issues involving listed and rare species and your concern for endangered species.

FA5-1

The comment is a duplicate of comment letter FA4.

ORIGINAL



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Texas Coastal Ecological Services Field Office

3325 Green Jay Road

Alamo, Texas 78516

Main: (956) 784-7560 Fax: (956) 787-8338



REGULATORY COMMISSION  
NOV DEC 21 A 8 59  
SECRETARY OF THE

In Reply Refer To:

FWS/R2/ES/02ETCC00-2018-TA-0372

November 28, 2018

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

CP16-116-000  
CP16-454-000  
CP16-455-000

Dear Ms. Bose:

This letter acknowledges the U.S. Fish and Wildlife Service's (Service) receipt of the Federal Energy Regulatory Commission (FERC) October 25, 2018, letter, received November 16, 2018, requesting initiation of formal section 7 consultation under the Endangered Species Act of 1973, as amended. The applicant, Rio Grande LNG, LLC (RG LNG) and Rio Bravo Pipeline, LLC (RBP), has requested initiation of Section 7 consultation for authorization to construct, install, operate, and maintain structures and equipment for liquefaction and export of natural gas. The project site is located in a 135-mile-long pipeline corridor in Jim Wells, Kleberg, Kenedy, Willacy, and Cameron counties, Texas, and a 750.4-acre terminal site on property owned by the Brownsville Navigation District, adjacent to and in the Brownsville Ship Channel in Cameron County, Texas.

FA5-1

FERC determined that the Project "may affect, not likely to adversely affect" the West Indian manatee, red knot, whooping crane, gulf coast jaguarundi, black lace cactus, slender rush-pea, and South Texas ambrosia. Not all plant surveys have been completed due to lack of property access in the proposed pipeline alignment. This information is needed for the Service to be able to concur with FERC's determination.

FERC determined that the project "may affect, likely to adversely affect" the northern aplomado falcon, piping plover and its critical habitat, and ocelot. The Service concurs with the determination of "may affect, likely to adversely affect" for the ocelot. We recommend that the piping plover and its critical habitat could be considered as a "may affect not likely to adversely affect" determination. Also, the northern aplomado falcon is already covered for take under the Endangered Species Act by a 99-year Safe Harbor Agreement and associated 10(a)1B permit that allows development to occur in the area around the Port of Brownsville. However, we

Ms. Bose

encourage aplomado habitat conservation across the landscape to offset cumulative impacts over time. We also request that you alert us to aplomado nests in the project area and any coso that eggs and young may be relocated if needed.

Additional information needed for the biological assessment (BA) includes assessing cumulative ocelot habitat loss from other federal projects and how that habitat loss can be avoided, minimized, and mitigated. When the Service receives an updated BA with the plant surveys, ocelot habitat information, and any additional voluntary conservation measures, we can initiate formal Section 7 consultation and complete a Biological Opinion for the ocelot.

As a reminder, the Endangered Species Act requires that after initiation of formal consultation, the federal action agency may not make any irreversible or irretrievable commitment of resources that limits future options. This practice insures agency actions do not preclude the formulation or implementation of reasonable and prudent alternatives that avoid jeopardizing the continued existence or endangered or threatened species or destroying or modifying their critical habitats.

If you have questions or concerns about this consultation or the consultation process, please contact Dawn Gardiner at (361) 225-7310 or Ernesto Reyes at (956) 784-7560.

Sincerely,

  
for Charles Ardizzone  
Field Supervisor

cc:  
Field Supervisor, U.S. Fish and Wildlife Service, Corpus Christi, TX  
Boyd Blihovde, Los Fresnos, TX  
Pat Clements, Corpus Christi, TX

FA5-1

Ms. Bose

Attachment:

Best Management Practices (BMPs)

The following BMPs will be implemented as a part of these actions to avoid and/or minimize impacts to the federally-listed ocelot and jaguarundi.

General BMPs:

1. Prior to any operation activities, a kick-off meeting will be scheduled. One of the primary purposes will be to discuss the BMPs and education training for all on-site workers.
2. Individual federally listed animals found in the project area will not be harassed and will be allowed to leave on their own volition. An individual, with the authority to stop construction activities, will be on-site during operation activities, and will halt all activities immediately upon report of an ocelot or jaguarundi sighting. Contact the Service immediately at (956) 784-7560 if a federally-listed animal is seen in the project vicinity during normal business hours. After hours, please call (956) 784-7520 (Refuge Dispatch).
3. During helicopter activities, an environmental monitor, with authority to temporarily suspend operation at any time the appropriate BMPs are not being properly implemented, will be present on site. Duties of the monitor will include ensuring that activities stay within designated project areas, evaluating the response of individuals that come near the project site, and implementing the appropriate BMP.
4. If new or improved access is needed that will clear thornscrub brush, plans will be coordinated with the Service.
5. Tree and brush removal should be minimized and permanent loss will be restored with native vegetation.
6. Dispose of all food related trash items such as wrappers, cans, bottles, and food scraps in closed containers and remove daily from the project site to eliminate attraction of predators.
7. All equipment, materials, and vehicles will be staged in designated areas that are currently cleared and covered with aggregate.
8. Operation activities will be conducted only during daylight hours to avoid noise and lighting issues at night. Noise levels should be minimized.
9. Vehicle traffic associated with the project will remain on established roads and reduce speeds to the maximum extent practicable.
10. The project management plan will provide for a report describing the implementation of the BMPs and their effectiveness. All personnel involved with the on-the-ground or maintenance for the proposed action will receive training in the affected species, the agreed upon BMPs, and the role of the construction monitor.

FA5-1

Ms. Bose

## Best Management Practices for the Northern Aplomado Falcon

FA5-1

This document describes some Best Management Practices (BMPs) for the northern aplomado falcon (*Falco femoralis septentrionalis*) (aplomado falcon) recommended by the Texas Coastal Ecological Service Field Office (TCESFO) that may be applicable to various types of projects. Best Management Practices (BMPs) are recommended measures that if implemented as part of the proposed action, would, to the extent practicable, avoid, minimize, and mitigate for adverse effects of that proposed action on the aplomado falcon. However, even with these BMPs in place, there may be adverse effects that may remain and require initiation of formal consultation. The inclusion of BMPs into the project proposal would streamline any formal consultation or conference that might still be required. Further technical assistance on analysis of effects is available by contacting the appropriate Ecological Services Field Office (ESFO).

## Project Planning and Documentation

- Identification of suitable habitats and pre-activity surveys for the aplomado falcon should be conducted during project planning, and typically include systematic observations in suitable habitat for territorial aplomado falcons and/or nest sites if operations are conducted between March-August; coordination with the Peregrine Fund and Laguna Atascosa is recommended before helicopter operations take place. Pre-activity surveys should be conducted by qualified, permitted individuals in accordance with protocols that are recognized by the U.S. Fish and Wildlife Service's (Service) and/or Arizona Game and Fish Department, New Mexico Department of Game and Fish, or Texas Parks and Wildlife Department. Currently, Service survey protocol guidance is contained in the 2003 Interim Survey Methodology for the Northern Aplomado Falcon (*Falco femoralis septentrionalis*) in Desert Grasslands.
- All personnel involved with the on-the-ground and aerial operation or maintenance for the proposed action will receive training in the subspecies, the agreed upon BMPs, and the role of the operation monitor.
- During aerial or maintenance activities in or within .5 miles of northern aplomado falcon habitat (or such distance that noise, light, or other effects reach the habitat), a operation monitor with authority to halt operations at any time the appropriate BMPs are not being properly implemented as agreed to will be present on-site.
- Measures to reduce adverse environmental impacts to aplomado falcons should be incorporated into projects, in accordance with agency plans, permits, and regulations.
- New proposed actions should undergo environmental review during which potential affects to the aplomado falcon would be considered.
- If an active aplomado falcon territory is discovered during the planning phase of a proposed operation, a different alternative should be considered to minimize disturbance..
- Aerial operations should be located at least .5 miles outside of any known northern aplomado falcon territory. Northern aplomado falcon home range size is estimated to be about 8,400 acres. For management purposes, this can be described as a circle with a radius of two miles around a particular habitat feature (e.g., a nest site or the preferred roosting site of a territorial northern aplomado falcon).
- New roads in the vicinity of northern aplomado falcon territories and other important habitat areas should be avoided to reduce effects of human activity.

Ms. Bose

**During Construction/Maintenance**

- Aerial activities that must be closer than one mile to occupied northern aplomado falcon habitat should occur between August 1 and January 31 to avoid the northern aplomado falcon breeding season. Staging areas for equipment and supplies should be as far as practicable from aplomado falcon habitats.
- Operation and maintenance activities should be conducted during daylight hours only to avoid noise and lighting issues during the night.
- The perimeter of all areas to be disturbed during construction or maintenance activities should be clearly demarcated using flagging or temporary construction fence, and no disturbance outside that perimeter should be authorized.
- If new access is needed or existing access requires improvement to be usable for the project, roads should be constructed to accepted standards.
- To the extent possible, areas already disturbed by past activities or those that will be used later in the operation period should be used for staging, parking, and equipment storage.
- Waste materials and other discarded materials should be removed from the site as quickly as possible. This should assist in keeping the project area and surroundings free of litter and reduce the amount of disturbed area needed for waste storage.

FA5-1

**Additional General Recommendations**

- Report all newly discovered aplomado falcon active nests within 1 day, and new aplomado falcon sightings within 3 days, to the appropriate ESFO at 956-784-7560.
- Prevent intentional or unintentional take of aplomado falcons, nests, eggs, and nestlings.
- Minimize incidental take through BMPs and coordination with the appropriate ESFO.
- Minimize impacts to, and fragmentation of, grassland habitats and protect large, complex yucca trees and structures that can support corvid or raptor nests.

In conclusion, the appropriate ESFO can provide additional technical assistance on aplomado falcons, conservation measures, and BMPs as you proceed in planning and developing projects. We encourage you to analyze potential effects from your projects on both aplomado falcons and their breeding and foraging habitat when designing and implementing projects. We appreciate your continued coordination with the Service on issues involving listed and rare species and your concern for endangered species.



December 3, 2018

Life's better outside.

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Carter P. Smith  
Executive Director

VIA ELECTRONIC FILING

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

Re: Rio Grande LNG, LLC and Rio Bravo Pipeline, LLC  
Draft Environmental Impact Statement, RG LNG Project  
**Docket Nos. CP16-454-000 and CP16-455-000**

Dear Secretary Bose:

Texas Parks and Wildlife Department (TPWD) has reviewed the Draft Environmental Impact Statement (DEIS) dated October 12, 2018 for the construction and operation of a liquefied natural gas (LNG) production, storage, and export facility proposed by Rio Grande LNG, LLC (RG LNG) and Rio Bravo Pipeline Company, LLC (RB Pipeline) (collectively referred to as the RG Developers) The RG LNG project would construct and operate liquefied natural gas export facilities in Cameron County, Texas and the RB Pipeline would construct, operate and maintain a new 135-mile-long pipeline system in Jim Wells, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas.

TPWD has coordinated with the applicant, the Federal Energy Regulatory Commission (FERC), and the U.S. Army Corps of Engineers (USACE) regarding this project. TPWD has provided recommendations to avoid and minimize wildlife and aquatic resources and requested consideration of other mitigation strategies rather than preservation alone for unavoidable impacts. The applicant has reduced access roads and the pipeline route, however little change has occurred to minimize the footprint of the terminal site to avoid wetland impacts. The applicant has not incorporated resource agency recommendations regarding appropriate compensatory mitigation as preservation remains the proposed mitigation plan.

The comments provided here refer to information provided in the DEIS, issued by FERC, and addresses areas of concern that remain for TPWD.

*Section 1.4.2 Electric Transmission Line and Switchyard for the LNG Terminal*

According to this section of the DEIS, as well as Sections 2.1.1.7 and 4.8.2.1, both a temporary and permanent electrical transmission line would be constructed to

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To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.

SA1-1

As described in section 4.4.2 of the EIS, wetland mitigation plans are part of the permitting process associated with Section 404 of the CWA. RG LNG's final wetland mitigation plans would be developed and submitted to the COE, and would be implemented in addition to the construction mitigation measures outlined in RG LNG's Procedures and the measures described in the EIS. Based on engineering design and safety considerations, as discussed in the RG Developers' application, the footprint of the site cannot be appreciatively reduced. Construction of the LNG Terminal would not commence prior to finalization of the wetland mitigation plans and issuance of the COE's CWA Section 404/Section 10 permit.

SA1-2

Impacts associated with the non-jurisdictional electric transmission line are discussed in section 1.4 (location and land requirements) and section 4.13 (contribution to cumulative impacts). FERC does not have siting or design authority over the non-jurisdictional electric transmission line and does not have the authority to require the entity that constructs, owns, and operates it to implement certain voluntary best management practices (BMP).

SA1-1

SA1-2

Kimberly D. Bose, Secretary  
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provide power during construction and operation of the RG LNG Terminal. Two switchyards would also be constructed. The LNG is dependent upon a new, eight-mile-long transmission line being constructed, per Council on Environmental Quality (CEQ) §1508.25 (a)(1), the construction of the transmission line is a connected action and its potential environmental impacts should be discussed in the same impact statement as the LNG.

**Recommendation:** TPWD recommends potential impacts related to the construction of a new transmission line be evaluated and included in the final environmental impact statement (FEIS). Issues to be evaluated should include, but not be limited to, an alternative route analysis, habitat impacts, right-of-way (ROW) requirements, wildlife impacts, use of Avian Power Line Interaction Committee (APLIC) Best Management Practices (BMPs) (e.g., bird flight diverters, line markers) to minimize potential bird-transmission line collisions.

*Section 2.1.1.7 Utilities and Support Facilities* (also Section 3.4; 4.4.2.1; 4.6.1.2; 4.6.2.1)

As proposed, a new 1.8 mile long haul road would be constructed between the Port Isabel dredge pile and the Rio Grande LNG Terminal site. Construction of the road would impact 9.4 acres of wetlands and 1.0 acre of open water.

**Recommendation:** TPWD agrees with FERC staff that the construction of the haul road is not an acceptable deviation from the 2013 *Wetland and Waterbody Construction and Mitigation Procedures*. TPWD recommends that the project implements one of the alternatives developed in the DEIS for accessing the dredge pile.

*Section 2.1.3.2, 2.5.2.2, and 4.6.1.2*

These sections of the DEIS describe outdoor lighting at Compressor Stations and the LNG Terminal. As proposed, lighting would be downward or directionally placed to minimize impacts on birds. Additionally, at the Terminal, lighting may be dimmed, turned off or use colors in consideration of wildlife.

**Recommendation:** TPWD appreciates the proposed measures to reduce potential impacts of artificial night lighting at above ground facilities associated with the Rio Grande LNG and Rio Bravo Pipeline projects. To further minimize potential impacts associated with night lighting, TPWD recommends that down-shielded light fixtures should be mounted as low as possible to reduce the amount of glare and light visible to animals in the area and that security lights be motion or heat activated so they are on only when necessary. Also, recent research has indicated that the use of LED lighting in outdoor applications may increase potential negative impacts to

SA1-2

SA1-3

SA1-4

SA1-3

As described in section 3.4 of the EIS, RG LNG originally proposed a new 1.8-mile-long temporary haul road to transport fill material from the Port Isabel dredge pile to the LNG Terminal site. We recommended in the draft EIS that RG LNG conduct a feasibility assessment for transporting fill material from the Port Isabel dredge pile to the LNG Terminal site via the existing system of roads or via barges. As a result of these assessments, RG LNG is no longer pursuing use of the temporary haul road.

SA1-4

Section 4.6.1.2 has been updated to reflect RG Developers' confirmation that these requests would be implemented to the extent feasible when accounting for safety and security requirements of the facility. RG Developers also indicated their intent to share the terminal lighting plan and any future updates on lighting with the Texas Parks and Wildlife Department (TPWD). In light of expressed concerns of the Project's lighting plans, we have also included the TPWD as a consulting party for development of the final lighting plan.

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wildlife. In general, using bulbs with long wavelengths (e.g., amber) that is the lowest possible lighting level consistent with human safety further reduces potential negative impacts to wildlife. Light emitted at 589 nanometers (nm) has been determined to provide effective vision for humans while minimizing the amount of interference with some nocturnal animals. If LED lights must be used, TPWD recommends dimming them if possible and having them turn off for a portion of the night (e.g., midnight until 5 AM). Also, if full-spectrum LED lighting is required, the lowest possible color temperature is recommended (Longcore and Rich 2016).

SA1-4

*Section 2.5.2.1 (and Section 4.5.2.2)*

Page 2-43 of the DEIS states that trees or other woody debris would be chipped, burned, or disposed of offsite.

SA1-5

**Recommendation:** In order to provide cover and nesting habitat for wildlife and to replace habitat lost due to clearing trees in the pipeline ROWs or easements, TPWD recommends, with landowner consent, that any large trees or shrubs removed from the ROW or easements should be used to construct brush piles outside of the cleared ROW.

Cleanup and restoration throughout the project would include revegetation “in accordance with the Project-specific Plan, Procedures, NRCS and county conservation district reseeding recommendations, and landowner requirements.” Throughout the Draft EIS, revegetation is described as an activity that will “be allowed” revegetate or “revert to” (e.g., Page 2-48, 4-79, 4-123).

**Recommendation:** TPWD recommends all revegetation efforts be actively managed; i.e., not relying on revegetation to occur on its own. Allowing areas to revegetate on their own often results in the establishment of undesirable introduced and/or invasive species.

SA1-6

TPWD recommends revegetation efforts consist of locally adapted native species of herbaceous vegetation as well as shrubs and trees for riparian restoration. Additionally, due to significant declines in the population of migrating monarch butterflies (*Danaus plexippus*) there is widespread concern about this species and the long-term persistence of the North American monarch migration. As part of an international conservation effort, TPWD has developed a Texas Monarch and Native Pollinator Conservation Plan. One of the broad categories of action in the plan is to augment larval feeding and adult nectaring opportunities. The plan is available on TPWD’s website.

For disturbed sites within the monarch migration corridor and for revegetation opportunities in pipeline ROWs, TPWD recommends

SA1-5

Section 2.5.2.1 has been updated to specify that RG Developers may also leave construction debris, such as cleared trees and brush, within construction workspaces if approved by the landowner or land management agency for beneficial reuse, stabilization, or habitat restoration in accordance with RG Developers’ Plan.

SA1-6

“Being allowed to revert” and similar language is generally used to indicate lands that would not be further encumbered by the Project, thus being allowed to return to its previous state. Restoration of upland vegetation impacted by the pipeline facilities would generally occur through active seeding using the Natural Resource Conservation Service (NRCS)- recommended seed mixes. In addition, following issuance of the draft EIS, RG Developers consulted with the FWS regarding the use of seed mixes; coordination on the final seed mixes is ongoing, and RG Developers will coordinate with the Caesar Kleberg Wildlife Research Institute at the FWS’ recommendation. In response to TPWD’s comments, RG Developers have committed to incorporating monarch butterfly-friendly plants into the revegetation plan, where possible. We have revised section 4.6.1.4 with this information. Certain areas, such as cultivated cropland, would not be reseeded unless requested by the landowner. Wetland revegetation will occur in accordance with a Project-specific wetland restoration plan, which is being developed in coordination with the COE (see section 4.4.2.2). Regardless of the method of revegetation, RG Developers are required to follow the measures to ensure successful revegetation, including the density and cover of non-nuisance species (see section 7.1 of the Project-specific Plan [appendix D] and section 6.4 of the Project-specific Procedures [appendix E]).

Kimberly D. Bose, Secretary  
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revegetation efforts include planting or seeding native milkweed (*Asclepias* spp.) and nectar plants as project funding and seed availability allow. Where appropriate and sustainable, TPWD recommends landscaping plans incorporate monarch-friendly plants. Information about monarch biology, migration, and butterfly gardening can be found on the Monarch Watch website.

SA1-6

According to the DEIS and in accordance with the 2013 *Upland Erosion Control, Revegetation, and Maintenance Plan*, Rio Bravo Pipeline would only segregate topsoil in cropland and managed pastures.

**Recommendation:** TPWD recommends topsoil segregation occur throughout the entirety of the pipeline ROW. The Annotated County Lists of Rare Species for counties through which the pipeline would be constructed list over twenty rare plants that could potentially occur in various habitat types throughout the project corridor. Segregating the topsoil throughout the project corridor will ensure that good soil and the native seed bank, potentially including rare species, remains intact and viable rather than being intermixed with subsurface soils or buried too deep to regenerate.

SA1-7

In this section of the DEIS under, "Waterbody Crossings," RB Pipeline would implement measures in their *Project-Specific Wetland and Waterbody Construction and Mitigation Procedures*, which vary slightly from the 2013 *Wetland and Waterbody Construction and Mitigation Procedures*. Per the 2013 *Wetland and Waterbody Construction and Mitigation Procedures*, construction at waterbody crossings should occur between June 1 and November 30.

SA1-8

**Recommendation:** In South Texas, precipitation amounts typically increase between May and September. Therefore, in order to increase the potential that waterbodies will be dry or have low flow during construction, TPWD recommends that waterbody crossing be scheduled to occur during periods that are typically the driest in south Texas which is November through January. To avoid impacts to fish and wildlife resources, dewatering activities should be coordinated with TPWD when crossings cannot be done "in the dry".

*Section 2.5.2.2 Aboveground Facilities*

In preparation to construct aboveground facilities, areas would be cleared, graded, and compacted. Erosion and sediment controls would be established around perimeters of disturbed areas prior to construction.

SA1-9

**Recommendation:** TPWD recommends that prior to clearing areas, a pre-construction survey for wildlife and rare plants be performed. Any wildlife

SA1-7

As stated in section 4.2.2 of the EIS, in addition to cropland and managed pastures, Rio Bravo Pipeline Company, LLC (RB Pipeline) would segregate topsoil in unsaturated wetlands and other areas as requested by landowners. We consider the measures in the RG Developers' Plan, which are consistent with our Plan, regarding topsoil segregation and revegetation of the proposed pipeline rights-of-way to be sufficient to ensure successful revegetation. In section 4.7.1.6 of the EIS, we recommend that RB Pipeline file the results of its completed surveys for federally listed threatened and endangered plant species, as well as any comments from the FWS regarding the results. We also recommend that RB Pipeline file avoidance/minimization measures that it would implement if individual plants are found, developed in consultation with the FWS. For rare plants potentially present in the Project area, we have updated section 4.5.4 to recommend that RB Pipeline consult with the TPWD to determine if specific locations along the pipeline right-of-way may warrant topsoil segregation for the protection of rare plants.

SA1-8

Section 4.6.2.2 has been updated to acknowledge TPWD's recommendation and indicate that RG Developers must cross all waterbodies with perceptible flow between November 1 and January 31.

SA1-9

Rare plants identified by the agencies during early consultation, as well as plans to survey for specific species prior to construction, are discussed in section 4.7.1.6. Impacts on the Texas tortoise are discussed in section 4.7.2.1 and include RB Pipeline's intent to implement the Texas Tortoise BMPs within the footprint of the pipeline facilities, including aboveground facilities.

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found in the site, particularly less mobile species such as tortoises that cannot be hazed, should be relocated outside the area of imminent danger. Also, after erosion controls are established around the perimeter of the construction area, the Environmental Inspector (EI) should inspect the inside of the erosion control device (e.g., silt screen, hay bales) for individuals trying to get out.

SA1-9

*3.3.2 Alternative Terminal Sites at the Port of Brownsville*

Findings and justification for the preferred and proposed site compared to the alternative ones along the BSC are presented in this section. The assessment of alternative sites was based on an initial screening criterion (e.g., land availability with a 1.5-mile buffer and a long-term lease), then it was further evaluated on environmental effects to wetlands and open water (Table 3.3.2-1).

It is unclear as to how the analysis for the Alternative Terminal Sites was done. The table shows that two of the five alternative sites were “Not Evaluated” on many of the criteria. Those that did pass the initial screening and affected fewer acres of wetlands, were not evaluated further as a potential alternative site.

SA1-10

The applicant eliminated the option of two alternative terminal sites, the South Bank West and North Bank West, based on the criteria of land availability with a 1.5-mile buffer of non-developed land. This is in error as these two sites can provide land that fits the land availability criteria with the desired buffer zone. It is unclear why the proposed terminal site was selected when two LNG facilities (Texas and Annova) hold active leases (Brownsville Navigation District) located within that buffer zone, therefore failing that buffer criteria with any facility or development.

**Recommendation:** Alternatives to the preferred terminal site should be re-evaluated. Once the initial land availability with buffer criteria has been met, then the applicant should prioritize those sites that would avoid and minimize impacts to wetlands and other unique habitats (e.g., lomas) compared to the currently proposed terminal site.

*Section 4.3.2.2 Surface Water Impacts and Mitigation*

As proposed by RB Pipeline, several Additional Temporary Workspaces (ATWS) would be located within ephemeral waterbodies or wetlands. The FERC has determined that locating workspace within these waterbodies is not adequately justified.

SA1-11

**Comment:** TPWD agrees with the FERC’s assessment and determination and suggests that workspaces could be relocated to uplands or less sensitive areas.

SA1-10

As described in section 3.3.2 and table 3.3.2-1, the two sites that were not evaluated (South Bank West and South Bank East) lacked a large enough track with a long-term lease. The stated objective of the Project could not be accomplished at these locations; therefore, the analysis was not carried forward. The 1.5-mile buffer was considered in terms of land development. The sites of the other proposed LNG facilities are in the North Bank East and South Bank Central areas of the Port of Brownsville. As discussed in section 3.3.2, the North Bank East area has limited land available, and that land is within 1.5-miles of a populated/residential area which is the primary criteria of the buffer that the RG Developers established for its Project.

SA1-11

Comment noted. Since issuance of the draft EIS, RG Developers have removed additional temporary workspace located in wetlands and waterbodies that FERC identified as unacceptable. Appendix F of the final EIS has been revised accordingly.

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*4.4.2 Wetland Impacts and Mitigation*

The applicant proposes to mitigate for the permanent loss of 235.4 acres of wetlands, 51.8 acres of mudflats, and 174.8 acres open water resources through preservation by acquiring and preserving a portion of the Loma Ecological Preserve, located about one mile south of the terminal site across the BSC.

**Recommendation:** The applicant should provide appropriate compensatory mitigation to offset all unavoidable impacts to wetlands, mudflats, and open water affected during the construction and operation of the project. As defined in the USACE/EPA Final Mitigation Rule (April 10, 2008), the mitigation plan should address permittee-responsible mitigation first through restoration, establishment, and/or enhancement, followed by preservation as the last form.

Preservation is not a suitable form of mitigation as the proposed preservation area does not appear to be under threat of destruction, adverse modification, nor a site with foreseeable plans for development. Preservation alone would not compensate for the loss of aquatic resources, nor would it achieve the goal of “no net loss” of ecological functions and values.

*Section 4.5.4 Vegetation Communities of Special Concern*

Three lomas occur within the LNG Terminal site and two occur outside of the terminal site that may be affected by the proposed haul road and pipeline. Within the Terminal site, the largest loma would be permanently impacted and the other two would remain unaffected. As currently proposed, the two outside of the Terminal site would be restored after construction.

Lomas are unique and rare habitats that develop over long periods of time and occur under very specific conditions in a narrow geographic area. They also have unique vegetation assemblages and animal associations. TPWD is unaware of any successful loma restoration project in the lower Rio Grande Valley.

The DEIS states that “impacts on vegetation within the footprint of the Rio Grande LNG Terminal site would be permanent, resulting in a locally significant impact on vegetation cover at that location. However, given the extent of habitat adjacent to the proposed location, including protected land to the north and south of the LNG Terminal site, impacts on upland vegetation, though permanent, would be minor.” There is no mention of mitigation for the permanent loss of the 63.9 acres of loma habitat within the LNG terminal site.

SA1-12

SA1-13

SA1-12

As described in section 4.4.2 of the EIS, wetland mitigation plans are part of the permitting process associated with Section 404 of the CWA. RG LNG’s final wetland mitigation plans would be developed and submitted to the COE, and would be implemented in addition to the construction mitigation measures outlined in RG LNG’s Procedures and the measures described in the EIS. Construction of the LNG Terminal would not commence prior to finalization of the wetland mitigation plans and issuance of the COE’s CWA Section 404/Section 10 permit.

SA1-13

Table 3.3.2-1 has been revised to include “direct impacts to lomas” as an evaluation criteria for the alternative sites along the Brownsville Ship Channel (BSC). Lomas are prevalent along the BSC and total avoidance is not possible within these sites. The alternatives analysis considers multiple criteria and not just one over all others. Further, section 3.5.1.2 has been revised to assess alternative routing and crossing methods at the loma crossed by the pipelines. Section 4.13.2.3 of the EIS acknowledges that the proposed Project, Annova LNG Project, and Texas LNG Brownsville (Texas LNG) Project would all impact loma plant communities. We recommended in the draft EIS that RG LNG conduct a feasibility assessment for transporting fill material from the Port Isabel dredge pile to the LNG Terminal site via the existing system of roads or via barges. As a result of these assessments, RG LNG is no longer pursuing use of the temporary haul road.

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The significant impacts within the footprint of the terminal site to vegetative upland including lomas, should not be assessed by comparing it to what the adjacent habitat (i.e. protected lands) already provides near the LNG site. With two additional LNG facilities along the BSC and under FERC and USACE review, cumulative impacts pose a threat to existing fish and wildlife habitat where opportunities for development are available.

**Recommendations:**

- Lomas are formed over long periods of time from wind-blown silt or clay particles originally deposited by flooding of the Rio Grande over tidal flats. Recreating or restoring impacted lomas in the project area may be extremely difficult, if not impossible, to accomplish. TPWD recommends avoiding impacts to the two lomas outside of the Terminal site by using an alternative access to the dredge pile other than the haul road and using HDD to preserve the loma in the pipeline ROW.
- The applicant should refer to the comments on the analysis of alternative terminal sites and elevate or weight the ranking for the alternative sites that avoid and minimize permanent impacts to these important/unique habitats (e.g., lomas) in and adjacent to South Bay Coastal Preserve.

*Section 4.6.1.2 Impacts and Mitigation*

The DEIS states that, “a fencing would be installed around the LNG Terminal to deter wildlife from entering the site after grading begins.”

**Recommendation:** The fencing will also prevent wildlife inside the LNG Terminal site from leaving once grading begins. TPWD recommends the inside of the fencing be inspected periodically by the EI for wildlife attempting to leave the area. Observed wildlife should be relocated to a location away from imminent danger.

Rio Grande LNG has agreed to conduct pre-construction surveys and hazing at the Terminal site to flush wildlife from the area.

**Recommendation:** TPWD appreciates that pre-construction surveys of the site would occur and notes that not all wildlife will respond to hazing, the Texas tortoise in particular. TPWD recommends the pre-construction survey for tortoises follow survey protocols that are comprehensive enough in design to locate and remove tortoises that would be permanently impacted by clearing the site.

*Section 4.6.1.3 Migratory Birds*

SA1-14

Section 4.6.1.2 has been updated to reflect RG Developers’ confirmation that the environmental inspector (EI) would periodically inspect the inside the fenceline after it is erected to identify and relocated trapped wildlife as practicable and in accordance with Project permits.

SA1-15

As identified in section 4.7.2.1, use of biological monitors would be limited to areas along the Pipeline System. Section 4.7.2.1 has been updated to reflect RG Developer’s confirmation that they will continue to work with the TPWD to develop a plan to minimize impacts on the Texas tortoise at the LNG Terminal site.

SA1-13

SA1-14

SA1-15

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Rio Grande LNG has developed a Migratory Bird Conservation Plan (MBCP) that would be implemented to avoid and/or minimize potential impacts to migratory birds. One proposed measures would establish a buffer of 30-feet around any active nests until the young have fledged.

SA1-16

**Recommendation:** TPWD recommends a buffer of at least 150-feet until the young have fledged or the nest is abandoned.

*4.6.2.2 Impacts and Mitigation*

RG LNG proposes to dredge 94.3 acres of open water including 68.7 acres within the BSC for the marine offloading facility, marine berths, and turning basin and 14.3 acres of wetlands and mudflats that would be converted to open water for the construction of the above marine facilities. The applicant states that a “significant increase in water flow would affect turbidity or salinity levels during operation, and such an increase would occur in the event that the Bahia Grande channel is expanded” however, plans to avoid and minimize these effects are not mentioned nor is it clear whether hydrodynamic modeling was applied to this specific configuration as it was to the deepening and widening of the BSC and Brazos Santiago Pass. With plans already in place to expand the Bahia Grande channel, TPWD is concerned that the dredging activity from RG LNG will affect oyster habitat and newly established seagrass beds within the restoration site.

SA1-17

**Recommendation:** The applicant should conduct hydrodynamic analyses on the expanded channel of Bahia Grande to assess dredging effects of suspended solids on aquatic resources. Maintaining a barrier like silt curtains while limiting dredging activity to outgoing tides would reduce these types of disturbances. The applicant should incorporate these recommendations and develop a plan that will mitigate turbidity at the Bahia Grande Wetland Restoration site.

*Section 4.7.2.1 State Listed Species*

As indicated in the DEIS, state-listed amphibians including the black-spotted newt and a number of frog species may be encountered in the project areas, particularly within the pipeline ROW. TPWD appreciates that BMPs, including Rio Bravo Pipeline’s *Project-Specific Wetland and Waterbody Construction and Mitigation Procedures*, would be implemented to minimize potential impacts to amphibians.

SA1-18

**Recommendation:** In addition to implementing the BMPs mentioned above, TPWD recommends contractors receive environmental awareness training and be instructed to avoid negatively impacting any wildlife encountered in the construction area. The state-listed frogs that occur in

SA1-16

We have revised our recommendation in section 4.6.1.4 to include correspondence with the TPWD, as well as with the FWS, during finalization of the Migratory Bird Conservation Plan (MBCP).

SA1-17

Section 4.3.2.2 of the final EIS was revised to clarify that RG LNG conducted hydrodynamic modeling for operation of the LNG Terminal that includes widening the Bahia Grande Channel. The results of hydrodynamic modeling found that the Project would result in negligible changes in average current speeds within the Bahia Grande Channel, and would therefore not significantly increase water flow through the Bahia Grande Channel. Widening of the Bahia Grande Channel would have a significant impact on current speed and water flow; however, the purpose of the widening would be to increase tidal exchange between the BSC and the Bahia Grande. Further, the timeframe for widening the Bahia Grande Channel is not known, and may not occur prior to dredging during Project construction. All dredging would be conducted using equipment designed to meet the Texas state water quality standards and in accordance with applicable COE permit requirements, which would require that construction activities be performed in a manner to minimize turbidity in the work area and otherwise avoid adverse effects on water quality and aquatic life. RG LNG could install silt curtains to manage turbidity for either mechanical or hydraulic dredging.

SA1-18

Sections 4.6.1.2 and 4.7.2.1 have been updated to reflect RG Developers’ commitment to conduct environmental awareness training that includes instructing Project contractors to avoid negatively affecting wildlife encountered during construction and identifying its “no kill” policy.

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South Texas breed and multiply quickly following rain events so they may be quite numerous in some areas shortly after a rain event.

SA1-18

Per RG Developers Procedures, the use of synthetic mesh/netted erosion control material would be restricted in “sensitive wildlife habitat.” Sensitive wildlife habitat is not clearly defined in the DEIS. According to Figure 4.6.1-1, sensitive habitat is synonymous with managed wildlife habitats (e.g., state parks, national wildlife refuges, etc.). Ongoing research at Stephen F. Austin State University on the effects of erosion control materials on snakes has indicated that erosion control mats constructed from woven natural fibers are less likely to ensnare wildlife; polypropylene mesh mats that are anchored are more likely to ensnare snakes and other wildlife.

**Recommendation:** Regardless of the location, for soil stabilization and/or revegetation of disturbed areas within the proposed project areas, TPWD recommends using erosion and seed/mulch stabilization materials that avoid entanglement hazards to snakes and other wildlife species. Because the mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding rather than erosion control blankets or mats due to a reduced risk to wildlife. If erosion control blankets or mats will be used, the product should contain no netting or contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic mesh matting should be avoided.

SA1-19

Rio Bravo Pipeline has committed to implementing TPWD’s Texas Tortoise BMPs to assist in avoiding and/or minimizing potential impacts to reptiles in the project area.

**Recommendation:** TPWD appreciates the commitment to implement TPWD BMP’s to preserve wildlife resources. Additionally, because all snakes are generally perceived as a threat and killed when encountered during vegetation clearing or construction, TPWD recommends that project plans include comments to inform contractors of the potential for state-listed snakes to occur in the project area. The state-listed snake species that may occur in the project area are non-venomous; contractors should be advised to avoid impacts to these species and other snakes as long as the safety of the workers is not compromised. For the safety of workers and preservation of a natural resource, attempting to catch, relocate and/or kill non-venomous or venomous snakes is discouraged by TPWD. If encountered, snakes should be permitted to safely leave project areas on their own. TPWD encourages construction sites to have a “no kill” policy in regard to wildlife encounters.

SA1-20

SA1-19

RG Developers’ Plan and Procedures identify the potential for multiple methods of seeding and mulching, including drill seeding, hydromulching, and hydroseeding. A recommendation has been added to section 4.7.1.2 for RG Developers to coordinate with the TPWD to determine specific locations that might be considered “sensitive habitat” in which the use of plastic mesh/netting should be avoided.

SA1-20

Sections 4.6.1.2 and 4.7.2.1 have been updated to reflect RG Developers’ commitment to conduct environmental awareness training that includes instructing Project contractors to avoid negatively affecting wildlife encountered during construction and identifying its “no kill” policy.

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Texas tortoises were observed in previous surveys of the RG LNG Terminal site. As proposed, a qualified biological monitor would monitor construction activities and move tortoises out of the project area prior to clearing.

**Recommendation:** TPWD appreciates the proposed measures that would be implemented to preserve Texas tortoises known to occur on the terminal site. Please be aware that it will be difficult to detect tortoises in dense thornscrub, such as occurs on Loma del Rincon Chiquito, by casually surveying the area visually. Tortoises are often found near or at the base of prickly pear cactus or in their “pallets,” a shallow pan scraped out by the tortoise typically at the base of vegetation. They may also occasionally seek shade by crawling under parked vehicles at construction sites. TPWD recommends that project areas be thoroughly surveyed for tortoises using appropriate survey protocols prior to clearing.

Additionally, TPWD recommends that before driving vehicles that have been parked in either the pipeline construction or within the LNG terminal site, contractors should check underneath the vehicles to ensure no tortoises are present.

*Section 4.13.1.5 Electric Transmission and Generation Projects*

The cumulative impact analysis lists many proposed development projects that would occur in or near the general area of the RG LNG and Rio Bravo pipeline project.

**Comment:** TPWD is aware of two additional wind energy development proposed by Acciona Energy in Cameron County generally between Farm-to-Market Road (FM) 510 and the Willacy-Cameron County line. Additionally, South Texas Electric Cooperative, Inc. is in the permitting process to construct the Palmas to East Rio Hondo transmission line northeast of Rio Hondo in Cameron County. These developments should be included and evaluated in the cumulative impact section of the Final EIS. In particular, the cumulative impacts of additional transmission lines and aerial obstacles (wind turbines) on resident and migratory birds should be evaluated.

*Section 4.13.2.3 Vegetation and Wildlife*

This section of the cumulative impact analysis states that the majority of the project considered in the cumulative impact analysis are not anticipated to require operational lighting, with the exception of LNG projects and Port of Brownsville Projects. Approximately 100 new wind turbines would be constructed in the general area near the LNG project. To meet Federal Aviation Administration (FAA) requirements for visibility, many, if not all, of the turbines will have flashing lights on the tops of the towers during operation of the wind energy development.

SA1-21

SA1-22

SA1-23

SA1-21

As identified in section 4.7.2.1, use of biological monitors would be limited to areas along the Pipeline System. Section 4.7.2.1 has been updated to reflect RG Developer’s confirmation that they will continue to work with the TPWD to develop a plan to minimize impacts on the Texas tortoise at the LNG Terminal site, and to indicate that RG Developers would inform contractors to inspect under their vehicles prior to operating to ensure no wildlife are present.

SA1-22

Section 4.13 has been updated to include the referenced projects.

SA1-23

Section 4.13 has been updated to reflect additional wind energy projects.

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**Recommendation:** The Final EIS should reflect that several large-scale projects in the area do require nighttime lighting during operations.

SA1-23

**General Comments**

*Section 2.4 Environmental Compliance*

On page 2-32, regarding the definition of a “spread”, the Draft EIS reference Section 2.3.2. The Draft EIS does not contain a Section 2.3.2.

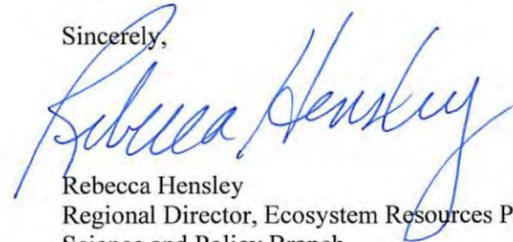
SA1-24

**Comment:** Perhaps this sentence should reference Section 2.2.2.

The Final EIS should address agency concerns and incorporate the above recommendations to minimize and avoid loss of habitat. The applicant should develop a mitigation plan that provides full compensation for impacts to fish and wildlife resources. TPWD welcomes to coordination with the applicant and other resource agencies in this effort.

Questions can be directed to Ms. Liana Lerma (956-350-4491) in Brownsville, Russell Hooten (361-825-3240) or Mrs. Leslie Koza (361-825-2329) in Corpus Christi.

Sincerely,



Rebecca Hensley  
Regional Director, Ecosystem Resources Program  
Science and Policy Branch

RH:LK:LL

**References Cited**

Longcore, T., and C. Rich. 2016. Artificial night lighting and protected lands: Ecological effects and management approaches. Natural Resource Report NPS/NRSS/NSNS/NRR-2016/1213. National Park Service, Fort Collins, Colorado.

SA1-24

The final EIS was revised to reference the pipeline facilities construction procedures in section 2.5.2, which include a description of sequential pipeline construction.