



December 4, 2020

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Carter P. Smith  
Executive Director

Dr. Efrain Lopez  
U.S. Department of Transportation - Maritime Administration  
Docket Management Facility  
West Building, Ground Floor, Room W12-140  
1200 New Jersey Avenue SE  
Washington, DC 20590-0001

RE: Deepwater Port License Application: Blue Marlin Offshore Port, LLC  
Notice of Intent; Notice of Public Meeting; Request for Comments  
Docket No. MARAD-2020-0127

Dear Dr. Lopez:

The Texas Parks and Wildlife Department (TPWD) has received a notice of intent (NOI) to prepare an environmental impact statement (EIS) for the proposed ownership, construction, and operation of the Blue Marlin Offshore Port (BMOP). The BMOP would be an offshore deepwater port (DWP) located in federal waters of the Gulf of Mexico, approximately 99 statute miles off the coast of Cameron Parish, Louisiana in waters approximately 162 feet deep in order to provide crude oil transportation and loading services for crude oil produced in the continental United States. The proposed project involves the design, engineering, construction, and decommissioning of a DWP that includes onshore components located in Orange and Jefferson counties in Texas and Cameron Parish in Louisiana. Pipeline crossings of major waterbodies would occur at the Neches River and in Sabine Lake in Texas. Offshore components would be located in state and federal waters of the Gulf of Mexico adjacent to Louisiana. Considering that the proposed project components are located in Texas, Louisiana, and federal Gulf waters, TPWD offers these scoping comments and recommendations as they relate to direct, indirect, and/or cumulative adverse effects to natural resources in Texas.

### Offshore Components

Offshore components would include an existing fixed, manned platform complex; two new crude oil loading pipelines; and two new pipeline end manifold (PLEM) systems and catenary anchored leg mooring (CALM) buoys. Crude oil would be transported from Cameron Parish, Louisiana to the existing platforms through approximately 103.4 miles of an existing 36-inch pipeline that would be converted from natural gas service to an oil pipeline (mainline). From each PLEM system, the crude oil will be routed to its respective floating CALM buoy through submerged flexible hoses. Very large crude carriers (VLCCs) or other large seafaring crude oil vessels will moor at a CALM buoy, retrieve and connect with the floating crude oil

hoses connected to the CALM buoy, and the crude oil will then route from the buoy to the VLCC for loading. Blue Marlin LLC, the applicant, is requesting that the United States Coast Guard (USCG) captain of the port establish a Safety Zone around the entire DWP operations area and will utilize existing USCG-designated anchorage areas.

### **Onshore Components**

Onshore components in Texas include a new 42-inch pipeline, a new pump station located in Jefferson County, four mainline valves, and four new permanent access roads. The 42-inch pipeline will run for approximately 37 miles, from the existing Nederland Terminal in Jefferson County, Texas, through Orange County, Texas to the 36-inch mainline in Cameron Parish, Louisiana that would be converted from natural gas to oil. The pipeline route begins at the proposed BMOP pump station and proceeds north across the Neches River, continuing almost to Bridge City, Texas, before turning east/southeast and crossing Sabine Lake through Texas into Louisiana.

The majority of the construction of the new onshore pipeline will occur in inundated wetlands and open water (i.e., Sabine Lake). The new pipeline will be installed by the push/pull method in areas of inundated wetlands/marsh and the barge lay method in areas of open water in Sabine Lake. Conventional open cut construction techniques will mainly be conducted where the proposed pipeline is colocated with the existing powerline/pipeline corridor in Jefferson and Orange counties, Texas, in areas where soils are not inundated. Nine horizontal directional drilling (HDD) operations will be conducted along the pipeline route for installation across the Neches River, Lower Neches Wildlife Management Area (WMA), foreign pipelines, the Gulf Intracoastal Waterway (within Sabine Lake), and canal and highway crossings.

A new BMOP pump station will be located in Jefferson County, Texas, adjacent to the existing Nederland Terminal on land that is currently being permitted for development. The BMOP pump station site is proposed to be graded and filled and developed as part of the Nederland Terminal Buildout Project, which is anticipated to commence construction in January 2021, prior to construction of the BMOP project.

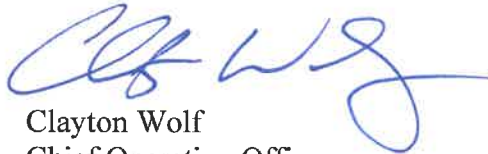
Section 7.0 of Volume IIb Appendix C, page 13, states that, "The pipeline will cross the Lower Neches Wildlife Management Area (WMA)..." and that, "Consultation with the TPWD has been conducted concerning the route through the Lower Neches WMA..." The Texas Parks and Wildlife Commission (TPW Commission) has not granted any easement traversing the Lower Neches WMA for the BMOP. TPWD notes that consultation for the BMOP, though initiated, has not been completed.

**Scope of Environmental Impact Analysis**

Based on the information provided, TPWD has concerns regarding potential direct, indirect, and cumulative impacts to multiple habitats, including, but not limited to: emergent wetlands, forested wetlands, bottomland forest and other grasslands, woodlands, coastal prairies, rivers, submerged aquatic vegetation, ponds, streams, riparian habitat, unvegetated shallow water habitat, colonial waterbird nesting and foraging areas, migratory neo-tropical bird habitat, migratory waterfowl wintering and nesting habitat, open water, unconsolidated bottoms, and habitats of federal- and state-listed Threatened and Endangered Species, as well as Species of Greatest Conservation Need (SGCN). TPWD also has concern for potential impacts due to the use of a state wildlife management area, impacts to commercial and recreational fishing, outdoor recreation and boating, and wildlife viewing in the project area. TPWD recommends the draft EIS include detailed descriptions and evaluations for all phases (construction, operation, and decommissioning) of the project relative to these concerns, which are further detailed in Attachment A.

TPWD appreciates the opportunity to provide comments and recommendations for this proposed project and looks forward to future coordination to avoid and minimize impacts to natural resources. If you should have any questions or remarks regarding coordination related to aquatic impacts (including wetlands), please contact Ms. Leslie Koza of the TPWD Ecosystem Resources Program by email at [leslie.koza@tpwd.texas.gov](mailto:leslie.koza@tpwd.texas.gov) or by phone at (361) 825-2329. Questions and coordination related to terrestrial impacts and state-listed species can be directed to Ms. Rachel Lange of the TPWD Wildlife Habitat Assessment Program by email at [rachel.lange@tpwd.texas.gov](mailto:rachel.lange@tpwd.texas.gov) or by phone at (979) 732-4213). Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Clayton Wolf', is positioned above the printed name and title.

Clayton Wolf  
Chief Operating Officer

CW:DG:LK:RL

Attachment

cc: Mr. William Nabach  
Mr. Carter Smith  
Mr. Robin Riechers  
Mr. John Silovsky  
Mr. James Murphy

## ATTACHMENT A

TPWD recommends any environmental impact statement for the BMOP include detailed descriptions and evaluation for all associated phases of the project relative to the following.

- A comprehensive alternatives analysis that evaluates potential project sites based on site-specific information to quantify and compare potential environmental impacts among a practicable set of alternatives.
- Evaluate direct, indirect, permanent, temporary, and cumulative impacts to sensitive coastal resources that would result from the proposed project. Detailed project maps should be provided and include overlays illustrating the location, extent, and type of coastal resources that occur within the vicinity of the project.
- Identify and describe measures that would be taken to avoid and minimize direct, indirect, permanent, temporary, and cumulative adverse effects to fish and wildlife and their habitats.
- Define “sensitive wildlife habitat,” as stated in Volume IIB Appendix C, pages 5 and 11.
- Section 7.0 of Volume IIB Appendix C, page 13, states that, “The pipeline will cross the Lower Neches WMA...” and that, “Consultation with the TPWD has been conducted concerning the route through the Lower Neches WMA...” The TPW Commission has not granted any easement traversing the Lower Neches WMA for the BMOP. Please refer to the paragraph below related to the protection of public lands, including WMAs, in Texas Parks and Wildlife Code (PWC) chapter 26 (Protection of Public Parks and Recreational Lands). TPWD notes that consultation for the BMOP, though initiated, has not been completed.
- Potential impacts to all SGCN, including federal- and state-listed Threatened and Endangered species and their habitats within a five-mile vicinity of the project.
- Potential impacts to all aquatic habitats including wetlands, ponds, streams, riparian habitats, embayments, marine bottoms, and submerged aquatic vegetation.
- Potential impact to bottomland forest, a critical habitat for migrating neo-tropical birds.
- An evaluation of individual and cumulative impacts to native woody vegetation from terrestrial land clearing activities that will not be replanted or allowed to re-establish, as well as the cumulative impacts of unrestored temporary and permanent impacts to aquatic habitats.
- Potential impacts to native coastal prairie vegetation, including depressional wetlands.
- Potential impacts from invasive species and the development of an Invasive Plant Species Control Plan that addresses rapid colonizers of disturbed sites, such as Chinese tallow tree (*Triadica sebifera*) and Deep-rooted sedge (*Cyperus entrerianus*).
- Potential impacts to commercial and recreational fisheries and associated fishing activities, including both terrestrial and aquatic access routes and fishing grounds.
- An evaluation of the individual and cumulative effects of temporary and permanent impacts (including economic) to recreational and commercial fishing activities including traditional access points such as waterbodies and shorelines.
- Potential magnitude of impacts to egg, larval, and adult phases of fish, shellfish, and other aquatic organisms associated with all phases of the project, including hydrostatic testing of the pipelines and facility use, in the event the project moves to completion.

- Potential for bird and bat collisions into project infrastructure.
- Potential impacts, including physical removal of habitat and disturbance from human foot-traffic and machinery use, to colonial bird nesting areas during construction and operation of the proposed project.
- Potential impacts to public access to paddling trails, recreational fishing sites, bird watching sites, WMAs, or other outdoor nature-based activities and include the development of a Public Access Plan.
- Potential impacts to public lands (e.g. municipal or county park land, WMAs, national wildlife refuges [NWRs]) and public land uses (e.g., recreation, hunting, education, conservation and wildlife management; wildlife habitat restoration, etc.).
- Develop a comprehensive Habitat Restoration Plan that details pre-construction and post-construction surveys, reference sites, methods, timing, material sourcing, duration and extent of monitoring activities, success criteria, and adaptive management that will be used to fully restore each terrestrial and aquatic habitat type that may be temporarily affected by the project.
- Develop a comprehensive Compensatory Mitigation Plan that details how unavoidable permanent impacts to aquatic resource functions will be offset in a manner as defined in 33CFR 332.4(c)(2) through (c)(13) of the USACE/EPA Final Mitigation Rule (April 10, 2008).
- Develop a Dredged/Excavated Materials Management Plan for all phases and components of the project that includes the size and draft depth of all equipment that would be used to handle excavated sediments and the minimum water depths located within the work corridors, access routes, and staging areas.
- The potential to re-suspend and redistribute contaminants (including sediments) during all phases and components of the project; an evaluation of impacts associated with those re-suspended contaminants; and a plan that details the timing and specific measures that would be taken to avoid and minimize those impacts.
- A specific schedule for construction that also identifies when specific construction activities would be initiated and when associated restoration activities would be completed.
- The EIS should not assume that onshore and inshore components will be abandoned in place.
- In addition to abandonment in place, potential impacts and cost estimates associated with decommissioning activities that involve the removal and disposal of onshore components of the project including pipelines, booster station, and other project-related infrastructure.
- Potential environmental impacts resulting from damages to the proposed project facilities by a major hurricane, a description of measures that will be taken to enhance protection and resiliency, and a comprehensive Hurricane Response Plan.
- Potential environmental impacts resulting from damages due to oil spills and Comprehensive Spill Response Plans to address potential on-shore or off-shore oil spills.
- Develop on-site stormwater management plans.
- The potential for facility expansion, such as excavation and fill activities, right-of-way expansion, additional storage tanks or other infrastructure and any additional impacts to fish and wildlife habitat.

### ***Erratum***

The NOI summary of the application (85 *Federal Register* 70707, November 5, 2020), states that the BMOP DWP onshore storage and supply components would contain anchorage areas and a support vessel mooring area. Because these facilities are proximal to the single point mooring (SPM), they are located “offshore” and should not be considered “onshore” components. Also, the summary does not describe pipelines or product storage facilities that would be required by the project.

### ***Texas Parks and Wildlife Code***

Under PWC section 12.0011, TPWD is charged with “providing recommendations that will protect fish and wildlife resources to local, state, and federal agencies that approve, permit, license, or construct developmental projects” and “providing information on fish and wildlife resources to any local, state, and federal agencies or private organizations that make decisions affecting those resources.”

Due to the scope of the project, there may be aspects of the project which will require prior authorization(s) from TPWD. For example, if aquatic plants need to be planted in public water to restore impacted areas or aquatic organisms need to be relocated, authorization would be required from TPWD.

**Recommendation:** To ensure compliance with state laws, Blue Marlin, LLC is encouraged to provide current, detailed project descriptions and associated plans to TPWD for agency review. Timely coordination will help ensure that concerns and recommendations for fish and wildlife resources of Texas may be addressed and incorporated into any required environmental assessment. Additional information regarding relevant state and federal codes and statutes that protect Texas’ natural resources are provided in the subsections below.

### **Nongame Birds**

State law prohibits any take or possession of nongame birds, including their eggs and nests. Laws and regulations pertaining to state-protection of nongame birds are contained in PWC sections 64.002 and 64.003. This protection applies to most native bird species, including ground-nesting species. Many bird species which are not listed as threatened or endangered are protected by PWC chapter 64 and are known to be year-round or seasonal residents or seasonal migrants through the proposed project area.

Coastal Texas is included in the winter range of many migratory birds and within the spring-summer breeding range of many other species. The proposed project area is in the Central Migratory Flyway, which millions of birds pass through during spring and fall migrations. Bottomland forests and other coastal woodlands provide water and a diversity of food sources for wildlife and are critical staging, stopover, and fall-out habitats for migrating neotropical birds. Expanses of undeveloped prairie, along with coastal dunes, swales, and marshes, provide diverse habitats for many avian species, including shore birds, wading birds, grassland birds, and raptors.

**Recommendation:** The proposed project is in a region with very diverse habitats that are within the range and suitable habitat for many rare species and migratory

birds, including SGCN. TPWD recommends that any environmental assessment of this project thoroughly evaluate the potential impacts of all phases of the project to nongame birds.

Any vegetation clearing that would be required to construct onshore infrastructure, improve existing access roads, or construct new access roads should be scheduled to occur outside of the March 15 – September 15 bird nesting season. Contractors should be made aware of the potential of encountering nongame migratory birds (either nesting or wintering) in the proposed project site and should be instructed to avoid negatively impacting them.

If vegetation clearing or ground disturbance must be scheduled to occur during the nesting season, TPWD recommends the vegetation to be impacted should be surveyed for active nests by a qualified biologist. Nest surveys should be conducted no more than five days prior to clearing to ensure that recently constructed nests are identified. If active nests are observed during surveys, TPWD recommends a 150-foot buffer of vegetation remain around the nests until young have fledged or the nest is abandoned.

### **State-listed Species**

PWC section 68.015 regulates state-listed Threatened and Endangered Animal Species. The capture, trap, take, or killing (incidental or otherwise) of state-listed Threatened and Endangered Animal Species is unlawful unless expressly authorized under a permit issued by the U.S. Fish and Wildlife Service (USFWS) or TPWD. A copy of TPWD Protection of State-Listed Species Guidelines, which includes a list of penalties for take of species, can be found online at the TPWD Wildlife Habitat Assessment Program: Laws and Regulations Applicable to TPWD Review webpage: [https://tpwd.texas.gov/huntwild/wild/wildlife\\_diversity/habitat\\_assessment/laws.phtml](https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/habitat_assessment/laws.phtml). While the webpage has the general guidelines, it is the responsibility of the project applicant to determine whether the project would adversely affect a state-listed species and comply with all statutes and provisions of law. For purposes of relocation, surveys, monitoring, and research, state-listed species may only be handled by persons with the appropriate authorization obtained through the TPWD Wildlife Permits Program. For more information on this authorization, please contact the TPWD Wildlife Permits Office by phone at (512) 389-4647.

TPWD provides online access to state-listed species information through the TPWD Rare, Threatened, and Endangered Species of Texas by County (RTEST) application. This application provides county-level information regarding occurrence of tracked SGCN, including state and federally listed species, and may be utilized to inform development project planning. Please note the RTEST application underwent a major update in 2019 and continues to be updated on a regular basis. Additionally, records of occurrence for SGCN are tracked within the Texas Natural Diversity Database (TXNDD) and are publicly available by request.

The potential occurrence of state-listed species in the project area is primarily dependent upon the availability of suitable habitat. Direct impacts to high-quality or suitable habitat



can be directly proportional to the magnitude and likelihood to directly impact state listed species. It is important to note that state listed reptiles are typically slow moving or unable to move due to cool temperatures and are especially susceptible to being directly impacted during vegetation clearing for roads, staging areas, easements, or machinery access corridors.

Please be aware that determining the actual presence of a species in an area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency, and population density (both wildlife and human). The absence of a species can be demonstrated only with great difficulty and then only with repeated negative observations, considering all the variable factors contributing to the lack of detectable presence.

The application documents prepared for the proposed project do not specifically assess potential impacts to state-listed species by the project.

**Recommendation:** TPWD recommends reviewing the most current TPWD RTEST county lists of SGCN for Jefferson and Orange counties, as rare species could be present depending upon habitat availability. This application provides county-level information regarding occurrence of protected species (federal- or state-listed Threatened or Endangered) and may be utilized to inform development project planning. Additionally, records of occurrence for these protected species are tracked within the TXNDD and are publicly available by request.

**Recommendation:** Please note that the TXNDD is intended to assist users in avoiding harm to rare species or significant ecological features. Given the small proportion of public versus private land in Texas, the TXNDD does not include a comprehensive inventory of rare resources in the state. Absence of information in an area does not imply that a species is absent from that area. Although it is based on the best data available to TPWD regarding rare species, the TXNDD data do not provide a definitive statement as to the presence, absence or condition of rare species, natural communities, or other significant features within your project area. They represent species that may potentially be in the project area. This information cannot be substituted for field surveys. The TXNDD data is updated continuously based on new, updated and undigitized records; therefore, TPWD recommends requesting the most recent TXNDD data on a regular basis. For questions regarding a record or to request the most recent data, please contact: [TexasNaturalDiversityDatabase@tpwd.texas.gov](mailto:TexasNaturalDiversityDatabase@tpwd.texas.gov).

**Recommendation:** TPWD recommends the draft EIS thoroughly evaluate the proposed project's potential impacts to state listed species in all project areas, both onshore and offshore, within five miles of the project corridor. Information provided in future environmental documents should be verified for accuracy and consistency with the most current list. Specific evaluations should be designed to predict project impacts upon natural resources.

Construction activities and heavy machinery may adversely affect small, low-mobility species, particularly amphibians, reptiles, and small mammals.



**Recommendation:** TPWD recommends reduced speed limits be established in areas of suitable habitat for wildlife. Reduced speeds would allow vehicle and equipment operators increased ability to see wildlife in roads, and to avoid harming them.

**Recommendation:** TPWD recommends avoiding disturbance to state-listed species during clearing, construction, operation, and maintenance of the proposed pipelines and associated right-of-way (ROW). TPWD recommends a qualified biologist be present during construction to assist in detecting state listed species in the ROW, especially in areas of suitable habitat. For purposes of relocation, surveys, monitoring, and research, terrestrial state listed species may only be handled by persons permitted through the TPWD Wildlife Permits Office.

**Recommendation:** A mixture of cover, food sources, and open ground is important to wildlife. TPWD recommends revegetating disturbed areas within suitable habitat with site-specific native, patchy vegetation rather than sod-forming grasses.

### **Aquatic Resources**

In addition to spills, releases, and inadvertent returns of products associated with the construction or operation of the project, dewatering, maintenance, or other construction-related activities occurring in or near aquatic habitats (including the Neches River, Sabine Lake, Old River) may negatively impact fish, shellfish, and other aquatic resources. Chapter 69 of the Texas Administrative Code (TAC) requires TPWD to actively seek full restitution for and/or restoration of fish, wildlife, and habitat loss occurring as a result of human activities.

**Recommendation:** Because the project would require work in and in proximity to aquatic habitats, the project should be coordinated with TPWD's Region 3 Regional Response Coordinator by phone at (281) 534-0133) for appropriate authorization(s) and technical guidance to ensure protection of aquatic wildlife.

### **Public Lands**

PWC chapter 26 provides that a department, agency, political subdivision, county, or municipality of this state may not approve any project that requires the use or taking of public land (designated and used prior to the project as a park, public recreation area, scientific area, wildlife refuge, or historic site) unless it holds a public hearing and determines that there is "no feasible and prudent alternative to the use or taking of such land," and the project "includes all reasonable planning to minimize harm to the land...resulting from the use or taking."

The onshore pipeline route would traverse portions of the Lower Neches WMA. The policies of the Coastal Management Program as specified in Title 31, TAC section 501.29 require compliance with PWC chapter 26 when development projects require the use or taking of any public land within a state park, WMA, or preserve.

WMAs are acquired and managed under the authority provided by PWC section 81.401. The law allows TPWD to acquire, develop, maintain, and operate WMAs along sound biological lines and to manage the wildlife and fish found on WMA lands. The proposed BMOP pipeline route would require permission from the TPW Commission to encumber TPWD land.

Projects proposing to take TPWD public land designated and used as a park, recreation area, scientific area, wildlife refuge, or historic site (such as the Lower Neches WMA) must demonstrate to the TPW Commission that there is no reasonable and prudent alternative to the taking of TPWD land and that the proposed program or project includes reasonable planning to minimize harm to the land. As such, alternative route analyses are considered by the TPW Commission.

PWC section 11.301 authorizes the TPW Commission to grant, lease or renew temporary or permanent right of way easements on TPWD lands. TPWD requires fair market value for an easement and appropriate fees and damages commensurate with impacts to its lands and applies its Damage and Fee Schedule in determining the damage fees on TPWD lands.

### ***Commercial and Recreational Fisheries***

TPWD is concerned that pipeline installation through Sabine Lake would have both direct and secondary impacts to important recreational and commercial fishery species.

**Recommendation:** TPWD recommends that any environmental assessment of the proposed project include comprehensive discussion of the fishery habitat value of Sabine Lake.

### ***Conservation Easements***

A conservation easement is a legal agreement between a landowner and a land trust or governmental agency that permanently limits uses of the land (including future fragmentation) to protect and conserve the land's natural values such as fertile soils, mature trees, and wildlife habitat. Lands with conservation easements protect existing wildlife habitat from future fragmentation and therefore have greater environmental integrity than comparable lands without conservation easements. Potential fragmentation of wildlife habitat from pipeline construction on properties where conservation easements serve to protect the state's natural resources now and in the future is of concern to TPWD.

**Recommendation:** TPWD recommends properties protected by conservation easements be identified in the constraints analysis and avoided during development of the project. Data sources for the location of these properties include, but are not limited to, online databases such as the Protected Areas Data Portal and the National Conservation Easement Database, as well as available county records. TPWD recommends an analysis of habitat and species impacts associated with projects impacting existing conservation easements be included in any accounting of project impacts presented in forthcoming documents.

### ***Waters of the U.S., and Special Aquatic Sites***

The project plans do not identify the specific acreages of coastal wetlands, palustrine wetlands, or other waters of the U.S. that may be impacted by the proposed project. Any environmental assessment of potential project impacts should include information on alternative routes that have been considered to avoid impacts, measures that can be taken to minimize impacts, and specific acreages and classifications of all waters and special aquatic sites that cannot be avoided. The assessment should include not only special aquatic sites that would be directly impacted, but also those that may be impacted due to alterations in surface elevations and hydrology. TPWD is particularly concerned that the project would impact forested bottomland wetlands, which are difficult to replace and critical for the support of declining avian species. Clearing of forest may leave wetland elevations intact; however, the conversion of this wetland type results in a loss of habitat function and value.

**Recommendation:** TPWD recommends that special aquatic sites be avoided to the extent possible. For unavoidable impacts, TPWD recommends formulation of a complete compensatory mitigation plan that contains all the required components identified under 33 CFR 332.4(c)(2) through (c)(14) in Compensatory Mitigation for Losses of Aquatic Resources (73 *Federal Register* 19596, April 10, 2008).

### **Construction Recommendations**

#### ***Lighting***

Lighting would be required throughout the onshore, inshore, and offshore components of the project during construction, operation, and decommissioning of the DWP facility. In addition to navigational beacons, lighting would be used for safety and security around facilities.

**Recommendation:** To avoid impacts to birds and other wildlife, TPWD recommends using the minimum amount of night-time lighting needed for safety and security and to use dark-sky-friendly lighting that is used only when needed and is only as bright as needed, is down-shielded, and minimizes blue light emissions. More specifically, TPWD recommends that down-shielded light fixtures should be mounted as low as possible to further reduce the amount of glare and light visible to animals in the area. Within terrestrial compounds, lighting should be directed away from vegetation outside of fenced areas. For offshore lighting, lights should be shielded to eliminate both skyward and sea surface illumination (which can attract fishes and invertebrates). Additionally, recent research has indicated that the use of LED lighting in outdoor applications may increase 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. TPWD recommends using bulbs with long wavelengths (e.g., amber) which are the lowest possible lighting level consistent with both human safety and reduction of potential negative impacts to wildlife. If LED lights must be used, TPWD recommends that for a portion of the night (e.g., midnight until 5 a.m.) the lights are minimally dimmed

or turned off, if possible. Motion- or heat-sensitive lighting also could be utilized to eliminate constant nighttime illumination. If full-spectrum LED lighting is required, the lowest possible color temperature is recommended (i.e., use colors in consideration of wildlife) (Longcore and Rich 2016). Lighting technologies and beneficial management practices (BMPs) can be found at the International Dark-Sky Association website: <https://www.darksky.org/>.

### *Impacts to Aquatic Habitats*

According to Volume IIb Topic Report 2: Water and Sediment Quality and Use page 2-35 the applicant states “The primary impact of pipeline construction on wetlands will be the temporary alteration of wetland vegetation and the permanent conversion of any forested and scrub-shrub wetlands to emergent wetlands over the maintained permanent easement. Most of the wetland impacts resulting from construction of the Project will be temporary, as the marsh and emergent vegetation will recover over time.” On page 2-36, the applicant states that estuarine emergent (22.22 acres of impact calculated from Table 2-8) and palustrine emergent habitat impacts (61.61 acres classified as temporary, 0.59 acres permanent) will be temporary since herbaceous vegetation will regenerate within 1-3 years, while scrub-shrub wetland habitat impacts (0.23 acres) will be short term with 3-5 years to reach functionality similar to pre-construction conditions. Forested wetlands impacts (5.54 acres) are also classified as temporary impacts but the applicant states the impacts will be long term, as it is estimated to take 30 years to regenerate. The only habitat impacts the applicant classifies as permanent are the mainline valve installations and the new permanent access road. TPWD does not consider 1 – 3 years to be temporary.

**Recommendation:** The draft EIS should detail how temporal losses will be mitigated.

The applicant has not provided sufficient information concerning post-construction restoration of aquatic resources to demonstrate that the impacts will be less than permanent and that there will be no secondary effects from the project.

**Recommendation:** TPWD recommends that the draft EIS include detailed post-construction restoration and monitoring schedules.

### *General Construction Recommendations*

#### *Upland Construction*

**Recommendation:** TPWD recommends the judicious use and placement of sediment control fence to exclude wildlife from areas to be disturbed. In many cases, sediment control fence placement for the purposes of controlling erosion and protecting water quality can be modified minimally to also provide the benefit of excluding wildlife access to construction areas.

- The exclusion fence should be buried at least six inches and be at least 24 inches high.

- The exclusion fence should be maintained for the life of the project and only be removed after the project activities are completed and the disturbed sites have been revegetated or otherwise stabilized.
- Construction personnel should be encouraged to examine the inside of the exclusion area daily to determine if any wildlife species have been trapped inside the area of impact and provide safe egress opportunities prior to initiation of construction activities.
- Regarding pipeline installation and HDD entry pits, any open trenches or deep excavation areas should be covered overnight and/or inspected every morning to ensure no wildlife species have been trapped.
- For open trenches and excavated areas, escape ramps should be installed at least every 90 meters and at an angle of less than 45 degrees (1:1) to allow trapped wildlife to climb out on their own.
- If any state-listed species are trapped in trenches or excavated areas, they should be removed by personnel permitted by TPWD to handle state-listed species.

**Recommendation:** For soil stabilization and/or revegetation of disturbed areas within the proposed project area, TPWD recommends 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 poses 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 the reduced risk to wildlife these options provide. 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 and hydromulch containing microplastics should be avoided.

### *Pipeline Installation*

The majority of the construction of the onshore pipeline will occur in inundated wetlands and open water (i.e., Sabine Lake). The pipeline will be installed by the push/pull method in areas of inundated wetlands/marsh and the barge lay method in areas of open water in Sabine Lake. Conventional open cut construction techniques will mainly be conducted where the proposed pipeline is colocated with the existing powerline/pipeline corridor in Jefferson and Orange counties in Texas in areas where soils are not inundated. Nine HDD operations will be conducted along the pipeline route for installation across the Neches River, Lower Neches WMA, foreign pipelines, the Gulf Intracoastal Waterway, and canal and highway crossings.

HDD projects, while minimizing the impacts to waterbodies, can still have the following impacts: geotechnical work in the waterbody, water uptake and discharge during HDD installation, and the potential for the inadvertent release of drilling fluid (frac-out) to the surface of the soil or waterbody. Drilling fluid is primarily water with bentonite clay added. Bentonite is a non-toxic fine clay material that enhances the lubricating, spoil transport, and caking properties of the drilling fluid. The primary areas of concern for inadvertent

releases occur at the entrance and exit points where the drilling equipment is at shallower depths. The likelihood of inadvertent return decreases as the depth of the pipe increases.

**Recommendation:** TPWD recommends the project applicant locate water intake and/or discharge points to minimize impacts to species that are dependent on water quality and quantity upstream and downstream.

**Recommendation:** TPWD recommends measures be taken to minimize sedimentation impacts from the water uptake and geotechnical borings, such as installation of silt fences. A qualified biologist should determine the presence/absence of protected aquatic species at the proposed boring and water uptake locations and any other areas that would be impacted prior to work being conducted.

**Recommendation:** The draft EIS should identify the entrance and exit points for drilling. TPWD also recommends that the draft EIS include the applicant's frac-out spill containment plan and HDD contingency plan for public review and comment.

**Recommendation:** The Inadvertent Returns Contingency Plan should be included in the draft EIS and should include site-specific plans for addressing returns in shallow water habitats that are in and adjacent to submerged or emergent aquatic vegetation. Site specific plans should include preferred access routes and specific protocols and/or guidelines for developing containment and recovery strategies that aim to avoid and minimize secondary impacts from machinery, equipment, foot traffic, and drilling fluid. The plan should also provide protocols and contact information for reporting inadvertent returns to the appropriate state and federal resource agencies. In the event an inadvertent return occurs, an assessment of the impacts and required mitigation should be conducted in consultation with TPWD.

**Recommendation:** Detailed project maps should be provided which include the location, extent and habitat details of each HDD segment and open trench segment.

### *Invasive Species*

The onshore components of the proposed project consist of a mixture of habitat types and vegetation communities including agricultural land, coastal prairie, salty prairie, salty prairie shrub land, salt and brackish low tidal marsh, salt and brackish high tidal marsh, salt and brackish high tidal shrub wetland, tidal flat, open water and streams. In general, current and past vegetation clearing can be a significant threat to native plant communities in an area because disturbed areas are often re-vegetated with invasive, introduced species. The proposed project area is susceptible to colonization by a variety of invasive species of terrestrial plants. These plants often outcompete native plant species and establish monocultures, making the area less beneficial for wildlife and people and lowering aesthetic value of an invaded area. Invasive species of particular concern are Giant salvinia (*Salvinia molesta*), Common water hyacinth (*Eichhornia crassipes*), Alligatorweed (*Alternanthera philoxeroides*), Deep-rooted sedge (*Cyperus entrerianus*), Guineagrass (*Urochloa maxima*), Chinese tallow tree (*Triadica sebifera*), Chinaberry (*Melia*

*azedarach*), Brazilian peppertree (*Schinus terebinthifolius*), Trifoliate orange (*Poncirus trifoliata*), Salt cedar (*Tamarix ramosissima*), Chinese privet (*Ligustrum sinense*) and Japanese honeysuckle (*Lonicera japonica*).

**Recommendation:** To the greatest extent practicable, TPWD recommends avoiding and/or minimizing clearing native woody vegetation and native herbaceous communities (e.g., native grasslands) to construct new access roads or to accommodate heavy equipment access to project sites. Wherever possible, TPWD recommends locating new access roads in previously disturbed areas, including previously cleared ROWs, utility corridors, etc., or improving existing roads (e.g., private farm and ranch roads). Material and equipment staging areas should be located in previously disturbed upland areas that do not require vegetation clearing. Equipment used should be cleaned before entry to remove plants or seeds that may have been picked up at a previous construction site.

**Recommendation:** TPWD recommends the project proponent establish sanitation procedures to prevent the spread of invasive terrestrial plants. TPWD recommends such a plan include the following measures to minimize invasive plant spread: 1) Inspect the site for infestation prior to operations. 2) Avoid driving vehicles, mowers, all-terrain vehicles, or spray equipment through infestations in seed or fruit. 3) Brush and wipe all seeds and debris from clothes, boots, socks, and personal protective equipment. 4) Clean motorized equipment, especially the undercarriage and tire surfaces. 5) Cover loads or bag cut invasive plants before transport.

**Recommendation:** TPWD recommends the project proponent avoid utilizing invasive species in seed mixes or plantings for revegetation or soil stabilization purposes. More information and resources regarding revegetation and restoration with native plants may be found at TPWD's Wildlife Habitat Assessment Program: Planning Tools and Best Management Practices webpage at [https://tpwd.texas.gov/huntwild/wild/wildlife\\_diversity/habitat\\_assessment/tools.phtml](https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/habitat_assessment/tools.phtml) and at the Pollinator Partnership Planting Guides webpage at <https://pollinator.org/guides>. TPWD also recommends referring to the Lady Bird Johnson Wildflower Center Native Plant Database at <https://www.wildflower.org/plants> for regionally adapted native species that would be appropriate for post-construction landscaping of disturbed areas.

### *Vegetation*

The Texas Conservation Action Plan (TCAP) identifies several priority habitats within the Gulf Coast Prairies and Marshes Region and TPWD considers these of high conservation importance. According to the TCAP, coastal tallgrass and shortgrass prairie, palustrine emergent wetlands, forested wetlands, riparian corridors, oak mottes, and intertidal salt marsh are priority habitats. These habitats are deemed a conservation priority because of their productivity, ecosystem services, and/or rarity on the landscape. Conservation of these priority habitats is necessary to facilitate sustaining and improving wildlife species' populations, thereby preventing the need to list species as Threatened or Endangered.



Perhaps one of the most concerning potential impacts from the proposed project is to bottomland/riparian woodlands, documented as a conservation priority within the TCAP. Loss of bottomland woodlands is not easily mitigated; the hydrologic and temporal requirements of this habitat type make restoration of bottomland woodlands challenging. The formation of bottomland woodlands is primarily driven by hydrology, with the habitat developing within the low terraces of river floodplains, seepages, along creek channels, or other low-lying areas. The conditions within bottomland woodlands lead to a diverse flora that can tolerate periodic inundation and anaerobic conditions. Bottomland woodlands are highly productive; the habitat is important to fish and wildlife, and conservation of bottomland woodlands is important to local biodiversity. Bottomland and riparian woodlands serve as important corridors for wildlife movement, linking relatively scarce habitat over large areas. These habitats are of great importance to migratory birds. Bottomland woodlands also perform important ecosystem services such as erosion control, serving as recharge areas for groundwater, maintaining water quality, and preventing flood damage. Due to their high productivity and diverse biota, bottomland woodlands are also important for recreation opportunities such as hunting, fishing, and bird watching.

**Recommendation:** The Ecological Mapping Systems of Texas (EMST) provide recently mapped vegetative cover based on the NatureServe Ecological System Classification System as described by Comer et al. (2003). Additional information about the EMST, including a link to download shape files, can be found at the TPWD Geographic Information Systems webpage: <https://tpwd.texas.gov/gis>. TPWD recommends utilizing EMST and TXNDD data during project planning, design, and construction to assist in minimizing impacts to native vegetation to the maximum extent feasible. TPWD recommends the length of project through EMST habitat types be included in any analysis of project impacts presented in forthcoming documents.

**Recommendation:** TPWD recommends the project proponent avoid or minimize impacts to bottomland and riparian woodlands, and to other habitat types identified as priority habitats within the TCAP. Mitigation should be planned for unavoidable loss of native vegetation disturbed by project activities and should be developed in coordination with TPWD. TPWD recommends utilizing online resources concerning vegetation, clearing and revegetation, available at the TPWD Wildlife Habitat Assessment Program: Planning Tools and Best Management Practices webpage.

**Recommendation:** TPWD does not concur with the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) recommendation presented in the application for revegetation of upland or wetland areas and advises against planting Bermudagrass (*Cynodon dactylon*) or Bahiagrass (*Paspalum notatum*). TPWD recommends any revegetation plan to include native grasses and forbs. TPWD emphasizes this recommendation for areas of native prairie, rangelands, and pasture containing native grasses, and all public lands. TPWD recommends that revegetation using a native seed mix should be an option for restoration of private lands impacted by project development.

TPWD notes that the guidance letter provided by the USDA NRCS states that the typical USDA NRCS recommendation is to utilize native seed but goes on to say such seed is unavailable for the project area. TPWD is aware of sources for locally adapted native seed appropriate for use within Jefferson and Orange counties, Texas. Please contact Ms. Rachel Lange of the TPWD Wildlife Habitat Assessment Program by email at [Rachel.lange@tpwd.texas.gov](mailto:Rachel.lange@tpwd.texas.gov), or by phone at (979) 732-4213 for technical guidance.

TPWD notes that the project lies within two overlapping Critical Conservation Areas, as designated by the USDA NRCS. The project area is also located within migratory bird habitat targeted for conservation by the USDA NRCS Migratory Bird Habitat Initiative. Furthermore, the proposed route would cross designated conservation areas such as the Lower Neches WMA and the Sabine NWR. Planting of exotic grasses in such areas is not advisable.

**Recommendation:** For maintenance of the ROW in prairie areas, mowing should take place no more frequently than once per year. Mowing should be scheduled outside of the general nesting season, (see *Nongame Birds* section above).

#### **Other State Laws**

Additional state laws beyond what is mentioned above may apply to this application and proposed project. For terrestrial activities, a TPWD permit may be required for the handling of nongame (PWC section 67.0041) species of fish or wildlife. TPWD also issues permits for the take of state listed plants from public land for the purpose of propagation, education, or scientific studies (PWC section 88.005). While activities requiring these authorizations are not specifically identified in the application, there is potential for such activities to occur during all phases of the DWP project, from pre-construction to de-commissioning.

#### **Data Reporting and the Texas Natural Diversity Database**

As mentioned earlier in this letter, TPWD maintains records of occurrence for protected and rare species, or SGCN, within the TXNDD and these data are publicly available by request. The TXNDD is intended to assist users in avoiding harm to rare species or significant ecological features. The TXNDD is updated continuously, and relies partially on information submitted by private parties, such as developers or their consultants. Given the small proportion of public versus private land in Texas, the TXNDD does not include a complete inventory of rare resources in the state.

**Recommendation:** To aid in the scientific knowledge of a species' status and current range, TPWD encourages reporting observations of protected and rare species to the TXNDD according to the data submittal instructions found at the TPWD Texas Natural Diversity Database: Submit Data webpage: [https://tpwd.texas.gov/huntwild/wild/wildlife\\_diversity/txnodd/submit.phtml](https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/txnodd/submit.phtml).

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