

CEMVN-OD-SW

Application #: MVN-2015-02295-WII

MEMORANDUM FOR RECORD

SUBJECT: Department of the Army Environmental Assessment and Statement of Findings for Above-Numbered Permit Application

This document constitutes the Environmental Assessment, 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings.

Application as described in the public notice dated 3 October 2016.

APPLICANT: Bayou Bridge Pipeline, LLC

WATERWAY & LOCATION: Multiple waterways and wetlands within a 163-mile long pipeline corridor beginning at a tie-in point with the existing Phillips 66 pipeline in Carlyss, Louisiana, Calcasieu Parish, then proceeding east through Jefferson Davis, Acadia, Vermilion, Lafayette, Iberia, St. Martin, Iberville, Ascension, Assumption, and terminating in St. James, Louisiana, St. James Parish. Project crosses through the following eight USGS watersheds: Hydrologic Unit Codes 08080206 (Lower Calcasieu), 08080202 (Mermentau), 08080103 (Vermilion), 08080102 (Bayou Teche), 08080101 (Atchafalaya), 08070300 (Lower Grand River), 08090302 (West Central Coastal), and 08090301 (East Central Louisiana Coastal). The larger waterways are proposed to be crossed via Horizontal Directional Drilling (HDD). The proposed pipeline alignment and ancillary facilities are located as shown on the attached project drawings.

LATITUDE & LONGITUDE

Beginning of project
Latitude North: 30.09018
Longitude West: -93.32794

End of project
Latitude North: 30.00283
Longitude West: -90.85849

PROJECT PURPOSE:

Basic: Energy Development.

Overall: Construct and operate approximately 163 miles of 24-inch pipeline and associated facilities to transport crude oil from the Clifton Ridge Marine Terminal on the Calcasieu River, in Lake Charles, Louisiana to various crude oil terminals located near St. James, Louisiana.

WATER DEPENDENCY DETERMINATION: Construction activities for the proposed pipeline do not require access or proximity to, or siting within a special aquatic site to fulfill its basic purpose; therefore, the project is not a water-dependent activity.

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PROPOSED WORK: Clear rights-of-way, conduct trenching operations, temporarily stockpile approximately 1,525,897 cubic yards of native earthen material, dredge flotation ditches, dredge barge landings, install above-ground facilities and components, and perform horizontal directional drilling operations, all as necessary to install 163 miles of 24-inch crude oil pipeline. Project implementation would temporarily impact approximately 455.5 acres of jurisdictional wetlands and approximately 41.8 acres of other waters of the U.S. through temporary construction rights-of-way (ROWs) and workspaces. Approximately 142 acres of jurisdictional wetlands would be permanently converted from forested to herbaceous wetlands within the permanent right-of-way.

Following construction, areas temporarily impacted by the project will be restored to pre-construction elevations and allowed to revegetate and/or be replanted. Construction of the pipeline, two pump stations, and other ancillary facilities located along the pipeline route will not result in the permanent conversion of waters of the U.S., including wetlands, to uplands.

AVOIDANCE AND MINIMIZATION INFORMATION: Avoidance and minimization methods include multiple re-routes, the use of horizontal directional drilling, utilizing agricultural areas, paralleling existing ROWs, reducing the construction footprint in wetlands to a 75-foot wide construction ROW, and the use of existing access roads, as described in the permit application and drawings, resulting in avoidance and minimization of impacts to waters of the United States.

COMPENSATORY MITIGATION: The applicant proposes to mitigate for unavoidable wetland impacts, (temporary and conversion), by purchasing compensatory mitigation at Corps approved mitigation banks within each of the six Louisiana River Basins that the pipeline crosses.

EXISTING SITE CONDITIONS: The subject pipeline corridor will traverse approximately 163 linear miles across Louisiana through multiple parishes and watersheds, therefore numerous habitats and ecosystems will be located along and within its planned route. Habitats and systems expected to be affected include bottomland hardwoods, swampland, scrub shrub wetlands, wet pastures, herbaceous wetland areas, manipulated and unnatural systems, timbered areas, riverine and riparian zones, uplands, croplands, and waters.

1. Authority.

- ☒ Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403).
- ☒ Section 404 of the Clean Water Act (33 U.S.C. §1344).
- ☐ Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Scope of Analysis.

- a. National Environmental Policy Act (NEPA). *(Write an explanation of rationale in each section, as appropriate)*

(1) Factors.

- (i) Whether or not the regulated activity comprises "merely a link" in a corridor type project. The project is a corridor type project.
- (ii) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity. The Scope of Analysis includes the entire project route and appurtenant facilities. The pipeline's connection to existing facilities in Lake Charles, Louisiana, to include the tie-in with an existing Phillips 66 pipeline in Carlyss, Louisiana, and terminating at various existing crude oil terminals in St. James, Louisiana, directly affect the location and configuration of the Bayou Bridge Pipeline.
- (iii) The extent to which the entire project will be within the Corps jurisdiction. The project proposes construction in both waters of the US and navigable waters subject to Corps jurisdiction, as well as non-jurisdictional areas. The 163-mile long pipeline falls within the USACE, New Orleans District (CEMVN).
- (iv) The extent of cumulative Federal control and responsibility. The Federal control and responsibility by the USACE, CEMVN for this action is based on Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. The applicant's proposed activities are subject to these authorities. As the permitting agency, the USACE administers its responsibilities pursuant to these authorities in the decision-making process. Although USACE, CEMVN is evaluating the environmental impacts of the project over areas and for activities in which USACE has jurisdiction, the Federal Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA), has the primary responsibility for the issuance of DOT special permits and approvals for the operation of hazardous liquids and natural gas pipelines, including crude oil pipelines. PHMSA's mission is to protect people and the environment by advancing the safe transportation of energy and other hazardous materials. To do this, the agency establishes national policy, sets and enforces standards through regulation, educates, and conducts research to prevent incidents. It also prepare the public and first responders to reduce consequences if an incident does occur.

(2) **Determined scope.**

☐ Only within the footprint of the regulated activity within the delineated water.

☒ Over entire property. The proposed project site is composed of jurisdictional and non-jurisdictional areas. Scope of analysis evaluates the project's potential effects on jurisdictional waters and adjacent uplands resulting from project implementation authorized by a DA permit.

b. National Historic Preservation Act (NHPA) "Permit Area".

(1) Tests. Activities outside the waters of the United States ☒are/☐are not included because all of the following tests ☒are/☐are not satisfied: Such activity ☐would/☒would not occur but for the authorization of the work or structures within the waters of the United States; Such activity ☒is/☐is not integrally related to the work or structures to be authorized within waters of the United States (or, conversely, the work or structures to be authorized must be essential to the completeness of the overall project or program); and Such activity ☒is/☐is not directly associated (first order impact) with the work or structures to be authorized. The NHPA applies to the entire project area based on satisfaction of all the above tests. A Phase I cultural resources survey was conducted by Perennial Environmental Services for Bayou Bridge Pipeline (BBP), and encompassed all areas proposed to be disturbed by the project. The Draft Phase I Cultural Resources Report was submitted to the SHPO on 4 April 2016. The report stated that no historic properties would be adversely impacted by the proposed project. The report was reviewed and accepted by the SHPO on 14 April 2016. Subsequent addendum reports detailing additional Phase I cultural resources surveys were submitted to the SHPO on 1 July 2016, 11 November 2016, and 7 February 2017. The SHPO reviewed each of the addendum reports and issued letters stating that no historic properties would be adversely impacted by the proposed project on 12 July 2016, 22 November 2016, and 16 February 2017. USACE submitted a request for concurrence that the project is not likely to affect historic properties subsequent to formal and information consultations with federally recognized Native American tribes with interests within the proposed pipeline right-of-way.

(2) Determined scope. Section 106 of the NHPA mandates federal agencies undergo a review process for all federally funded and permitted projects that will impact sites listed on, or eligible for listing on, the National

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Register of Historic Places. Specifically it requires the federal agency to "take into account" the effect a project may have on historic properties. Scope of the proposed project under the NHPA would incorporate the entire project site, to include the clear, grade and fill areas, access routes, pipeline routes, structures, road crossings, fill areas, and excavation areas. The applicant has evaluated all areas associated with the project in its consultations with the appropriate agencies.

c. Endangered Species Act (ESA) "Action Area".

- (1) Action area means all areas to be affected directly or indirectly by the Federal action (including permit approvals) and not merely the immediate area involved in the action. Activities that may affect plant and animal species listed as threatened or endangered under the ESA, or may adversely impact designated critical habitat, require consultation with certain Federal trust agencies (United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS)) in the decision-making process.
- (2) Determined scope. Scope of the project under the ESA incorporate the entire project footprint, to include clear, grade and fill areas, access routes, pipeline routes, structures, road crossings, fill areas, and excavation areas.

d. Public notice comments. ☐ NA. A 20-day Public Notice was prepared by CEMVN and posted to the USACE public notice web site on 3 October 2016. The public notice was also run in The Advocate from 3-23 October 2016, the Lake Charles American Press from 3-23 October 2016, the Jennings Daily News from 4-23 October 2016, The Rayne Acadian-Tribune on 6, 13, & 20 October 2016, The Abbeville Meridional from 4-23 October 2016, The Daily Advertiser from 3-23 October 2016, The Daily Iberian from 3-23 October 2016, The Teche News on 5, 12, & 19 October 2016, Plaquemine Post South on 5, 12, & 19 October 2016, Gonzales Weekly Citizen on 6, 13, & 20 October 2016, Bayou Journal on 4, 11, & 18 October 2016, and the News Examiner-Enterprise from 3-23 October 2016. Several parties requested, and were granted a 10 day time extension to submit comments on the public notice.

- (1) The public also provided comments at ☒ public hearing, ☐ public meeting, and/or ☐. A joint public hearing was conducted with the Louisiana Department of Environmental Quality on 12 January 2017 in Baton Rouge, Louisiana. The public was allowed to provide additional comments from 12-31 January 2017. On 8 February 2017, Louisiana Department of Natural Resources (LDNR) held a separate public hearing for the project at Napoleonville, Louisiana.

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(2) Commentors and issues raised:

Federal Agencies:

The U.S. Fish and Wildlife Service (USFWS):

In a letter dated 2 November 2016, the USFWS stated that the project area is forested wetlands provide valuable habitat for fish and wildlife within Federal trusteeship, such as a variety of migratory non-game birds (i.e., little blue heron, worm-eating warbler, Kentucky warbler, Swainson's warbler, Louisiana waterthrush, and rusty black bird). Those migratory non-game bird species are considered species of conservation concern by the Service because they have exhibited substantial population declines over the last 30 years, primarily as the result of habitat loss and fragmentation. The project area jurisdictional wetlands also support mammals such as raccoon, opossum, swamp rabbit, eastern cottontail, fox squirrel, grey squirrel, and white-tailed deer. In addition to their habitat values, the project-area wetlands provide airborne pollutant filtration, atmospheric carbon dioxide removal, floodwater storage, and aid in water quality maintenance by reducing excessive dissolved nutrient levels and removing suspended sediments.

The USFWS noted that due to the importance of the project area as nesting habitat for bird species of conservation concern, the project should be constructed in a manner that would minimize bird impacts. The Migratory Bird Treaty Act prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the U.S. Department of the Interior. While the Act has no provision for allowing unauthorized take, the Service realizes that some birds may be harmed or killed as a result of project-related activities even when reasonable measures to protect birds are implemented. The Service's Office of Law Enforcement (LE) carries out its mission to protect migratory birds through investigations and enforcement, as well as by fostering relationships with individuals, companies, and industries that have taken effective steps to minimize their impacts on migratory birds, and by encouraging others to enact such programs. As such, LE focuses its resources on investigating and prosecuting individuals and entities that take migratory birds without regard for their actions or without effort to implement Service recommendations or conservation measures. In this case, they recommend that no habitat alteration work within mature forested areas be performed during the nesting period (March 1 to July 31).

They advised that the project is located in habitats which are commonly inhabited by colonial nesting waterbirds. Colonies may be present that are not currently listed in the database maintained by the Louisiana Department of Wildlife and Fisheries. That database is updated primarily by (1) monitoring previously known colony sites and (2) augmenting point-to-point surveys with flyovers of adjacent suitable habitat. Although several comprehensive coast-wide surveys have been recently conducted to determine

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the location of newly-established nesting colonies, we recommend that a qualified biologist inspect the proposed work site for the presence of undocumented nesting colonies during the nesting season because some waterbird colonies may change locations year-to-year. For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, and roseate spoonbills), anhingas, and/or cormorants, all activity occurring within 1,000 feet of a rookery should be restricted to the non-nesting period, depending on the species present. Below is a list of colonial nesting birds that may be found and the corresponding window during which the project may occur. Please note no part of the project should occur outside those windows within 1,000 feet of a rookery.

<i>Species</i>	<i>Project Activity Window</i>
Anhinga	July 1 to March 1
Cormorant	July 1 to March 1
Great Blue Heron	August 1 to February 15
Great Egret	August 1 to February 15
Snowy Egret	August 1 to March 1

In addition, the USFWS recommends that on-site contract personnel be trained to identify colonial nesting birds and their nests, and avoid affecting them during the breeding season (i.e., the time period outside the activity window).

The applicant proposes to clear and maintain a 30-foot right-of-way between directional drill entry and exit points. The USFWS does not support such actions within forested wetlands due to their high ecological value. Furthermore, authorization of this project component could be precedent setting thereby leading to cumulative impacts to jurisdictional forested wetlands from such actions in the future. Therefore, to avoid current and future forested wetland loss from this potentially precedent-setting proposal, the USFWS strongly opposes the clearing of forested wetlands between directional drill entry and exit areas. The USFWS does concur with the applicant's proposed use of a 75-foot temporary construction right-of-way within wetlands where directional drilling is not proposed. However, in an effort to reduce permanent wetland impacts, the USFWS recommends that permanent pipeline right-of-ways not exceed 30-feet in width within those non-directional-drill wetland areas.

The applicant proposes to restore all temporarily impacted jurisdictional wetlands to pre-project conditions without mitigating for those temporary impacts. While the USFWS is not opposed to this when those impacts occur within emergent or scrub-shrub habitats, the USFWS recommends the allowance of a one-year growing season prior to assessing permanent impacts to those vegetated wetlands areas. Should unanticipated permanent impacts be evident following that one-year growing season, the applicant should provide adequate and appropriate mitigation for those jurisdictional wetland impacts.

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The applicant proposes to mitigate for impacts to jurisdictional wetland resources through the purchase of in-basin/in-kind mitigation credits from Corps of Engineers-approved mitigation banks. While the USFWS tentatively supports this concept, the proposed project may impact habitats that were historically coastal prairie or longleaf pine savannah wetlands. If those historic wetland habitats were present within the proposed project area, the USFWS recommends including them as mitigation options and we request that all final compensatory mitigation options provided for this project be made available for agency review prior to the issuance of a Corps of Engineers permit.

USFWS did not express opposition to permit issuance. The issues raised by USFWS may be addressed through project modification and inclusion of relevant special conditions in the proffered Department of the Army permit.

The U.S. Environmental Protection Agency (EPA):

In an email dated 24 October 2016, the EPA noted that the proposed locations for HDD indicated on the project plans include the use of a 30-foot wide right-of-way between entry and exit of the HDD. The use of HDD for pipeline installation should allow for complete avoidance of waters of the U.S. in the areas in which it is implemented. Therefore, the EPA does not believe the applicant has minimized and avoided wetlands and other waters of the U.S. to the maximum extent practicable. The applicant should eliminate the cleared right-of-way and associated impacts to aquatic habitat in HDD areas.

They recommended that hydrologic connectivity should be maintained in wetland areas by installing adequately-spaced and appropriately-sized culverts through any access roads constructed in waters of the U.S. Furthermore, the EPA recommended that Best Management Practices (BMPs) such as the use of sediment/erosion control structures should be implemented throughout construction to reduce the flow of nonpoint source pollution into adjacent wetlands and waters of the U.S.

The EPA requested to review the final compensatory mitigation plan, including the mitigation ratios that are used and the mitigation banks at which credits are purchased, during this initial year of LRAM implementation. Mitigation should be performed for all direct, secondary, and temporary/conversion impacts associated with the proposed project. EPA recommended the applicant mitigate by purchasing in-kind credits from multiple mitigation banks (i.e. banks located in each of the impacted 8-digit HUCs, if appropriate credits are available).

The EPA also recommended that if any non-forested wetlands are temporarily impacted by the construction area and mitigation is not proposed for these areas, the applicant should be required to monitor these wetlands for five years or until they have been completely restored and revegetated to pre-impact conditions, and submit reports to the

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USACE on an annual basis. If full restoration of these wetlands is not achieved, additional mitigation and/or adaptive management may be required.

EPA did not express opposition to permit issuance. The issues raised by EPA may be addressed through project modification and inclusion of relevant special conditions in the proffered Department of the Army permit.

National Marine Fisheries Service (NMFS):

In an email dated 3 October 2016, the NMFS stated that they have no objection to the issuance of the permit.

State Agencies:

Louisiana Department of Wildlife and Fisheries (LDWF):

In a letter dated 6 October 2016, the LDWF stated that the applicant proposes to mitigate for impacts to wetland resources through the purchase of in-basin/in-kind mitigation credits from Corps of Engineers approved mitigation banks. While LDWF tentatively approves of this plan, it is requested that all final mitigation options provided for this project be made available for agency review prior to issuance of a Corps of Engineers Permit. Additionally, this project may impact habitat that historically supported coastal prairie or longleaf pine savannah habitat. It is the opinion of LDWF that the applicant's mitigation options should include coastal prairie and longleaf pine savannah mitigation options.

The applicant proposes to restore all temporarily impacted wetlands to pre-project conditions without mitigating for those temporary impacts. While LDWF is not opposed to this when those impacts occur within emergent or scrub-shrub habitats, LDWF recommends the allowance of a one year growing season prior to assessing permanent impacts to vegetated wetlands in these areas. Should unanticipated permanent impacts be evident following that one year growing season, the applicant shall provide adequate and appropriate mitigation for those impacts.

The applicant proposes to maintain a 30-foot right-of-way between directional drill entry and exit points. LDWF does not support such actions within forested wetlands as they provide valuable ecological services such as water quality improvement, natural resource production, the provision of wildlife habitat, airborne pollutant filtration, atmospheric carbon dioxide removal, floodwater retention and stormwater runoff reduction. To avoid the loss of this valuable resource, LDWF strongly maintains that there be no clearing of forested wetlands between directional drill entry and exit sites.

LDWF concurs with the applicant's proposed use of a 75-foot temporary construction right-of-way within wetlands where directional drilling is not proposed. However, in an

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effort to reduce permanent impacts, LDWF recommends that permanent pipeline right-of-ways not exceed 30-feet in width within wetlands where directional drilling is not proposed.

LDWF noted that their database indicates the presence of bird nesting colonies within one mile of the proposed project. Entry into or disturbance of active breeding colonies is prohibited by LDWF. In addition, LDWF prohibits work within a certain radius of an active nesting colony. Nesting colonies can move from year to year and no current information is available on the status of these colonies. If work for the proposed project will commence during the nesting season, conduct a field visit to the worksite to look for evidence of nesting colonies. This field visit should take place no more than two weeks before the project begins. If no nesting colonies are found within 400 meters (700 meters for brown pelicans) of the proposed project, no further consultation with LDWF will be necessary. If active nesting colonies are found within the previously stated distances of the proposed project, further consultation with LDWF will be required. In addition, colonies should be surveyed by a qualified biologist to document species present and the extent of colonies. Provide LDWF with a survey report which is to include the following information:

1. Qualifications of survey personnel;
2. Survey methodology including dates, site characteristics, and size of survey area;
3. Species of birds present, activity, estimates of number of nests present, and general vegetation type including digital photographs representing the site; and
4. Topographic maps and ArcView shapefiles projected in UTM NAD83 Zone 15 to illustrate the location and extent of the colony.

Please mail survey reports on CD to: Louisiana Natural Heritage Program
La. Dept. of Wildlife & Fisheries
P.O. Box 98000
Baton Rouge, LA 70898-9000

To minimize disturbance to colonial nesting birds, the following restrictions on activity should be observed:

- For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, roseate spoonbills, anhingas, and/or cormorants), all project activity occurring within 300 meters of an active nesting colony should be restricted to the non-nesting period (i.e., September 1 through February 15).
- For colonies containing nesting gulls, terns, and/or black skimmers, all project activity occurring within 400 meters (700 meters for brown pelicans) of an active

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nesting colony should be restricted to the non-nesting period (i.e., September 16 through April 1).

The Louisiana black bear (*Ursus americanus luteolus*) may occur in your general project area. It is a species of greatest conservation need in Louisiana and has a S3 state rank. The Louisiana black bear utilizes a variety of habitat types, including forested wetlands, marsh, spoil banks, and upland forests. The primary threats to the species are fragmentation of remaining forested tracts, and human-caused mortality. Louisiana black bears, particularly pregnant females, normally den from December through April. Bears den in tree cavities or ground nests. Bald cypress (*Taxodium distichum*) and tupelo gum (*Nyssa aquatica*) with visible cavities, having a diameter at breast height of 36 inches or greater, and occurring in or along rivers, lakes, streams, bayous, sloughs, or other water bodies should be protected. If construction is to be performed during the denning season, further consultation with this office will be necessary. We strongly urge workers and contractors to avoid bears, particularly if work is to be conducted during the non-denning season (April through December). Employees should be cautioned to not leave food or garbage in the field, as bears can become attracted and accustomed to human food easily. In addition, we recommend the use of bear proof garbage containers on site.

The applicant shall implement adequate erosion/sediment control measures to insure that no fill material or other activity related debris are allowed to enter into adjacent wetlands. Establishing long-term stands of grass on exposed soil surfaces, and installation of erosion and sediment control blankets, silt fences, and/or straw bale barriers are conceivable control measures. These measures should be implemented immediately upon placement of fill material and maintained until all loose soils have been stabilized.

One 24 inch culvert shall be installed approximately every 250 feet should access roads be constructed through wetlands. Priority for the placement of those culverts should be given to natural low areas and drainages. Those culverts shall be maintained to ensure that the existing flow of surface water is uncompromised.

LDWF did not express opposition to permit issuance. The issues raised by LDWF may be addressed through project modification and inclusion of relevant special conditions in the proffered Department of the Army permit.

Louisiana Department of Natural Resources (LDNR) – Atchafalaya Basin Program:

In a letter submitted via email on 2 November 2016, the LDNR – Atchafalaya Basin Program stated that as currently proposed, the pipeline would have approximately 3 feet of cover where it crosses through wetlands of the Atchafalaya Basin and would return ground elevations to pre-project conditions. In a properly functioning system, this would

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be sufficient to avoid damage to hydrological regimes; however, the location selected for the pipeline right-of-way (ROW) occurs near an existing ROW that was constructed with spoil banks that block north to south sheet flow in the Atchafalaya Basin. To compound the problem, flow through the existing pipeline canal has led to additional sedimentation at the margins of the canal that further impedes north to south flow. The proposed pipeline location would be located on that existing strip of unnaturally high land.

The LDNR – Atchafalaya Basin Program also noted that placing the pipeline in this location with the minimum required cover would add to the cumulative effect of ecologically detrimental hydrologic alteration, and the pipeline would obstruct planned efforts to restore hydrologic function. The ABP and St. Martin Parish are planning projects to restore north to south flow in the swamps bisected by the proposed ROW. Additionally, the pipeline traverses the USACE's recently completed Buffalo Cove water management unit, and adaptive management is ongoing.

They requested that the pipeline be installed at a depth at or below that of the adjacent natural swamp. This would require approximately 10 feet of cover, with the minimum required cover varying along the ROW according to local conditions. The LDNR – Atchafalaya Basin Program recommended coordination with the ABP, St. Martin Parish, and the USACE Buffalo Cove project manager to ensure that the proposed pipeline does not interfere with restoration plans in the Beau Bayou, East Grand Lake, and Buffalo Cove water management units.

The LDNR – Atchafalaya Basin Program stated that the USACE has authority to require that the pipeline be lowered in the event that it impedes hydrologic restoration activities. They also suggested that it would be appropriate to install the pipeline at the correct depth at the outset to avoid having to re-disturb wetlands to lower the pipeline in a year or two.

The LDNR comments were reviewed and the issue discussed with the applicant. It was determined to be impracticable to place the pipeline with approximately 10 feet of cover. This would require additional clearing and cause an increase in wetland impacts. However, a special condition requiring the applicant to modify the proposed pipeline to accommodate future hydrologic restoration projects would be required in the Department of the Army permit to deconflict activities.

Other:**Tulane Environmental Law Clinic:**

In letters dated November 1, 2016, the Tulane Environmental Law Clinic, on behalf of the Atchafalaya Basinkeeper, the Sierra Club Delta Chapter, Bold Louisiana, the Bucket Brigade, and the Town of Henderson, requested a public hearing on the Bayou Bridge

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Pipeline, LLC application for a Clean Water Act Section 404 permit and Section 401 state water quality certification as well as a Rivers and Harbors Act Section 10 permit.

Tulane also stated that the Corps and LDEQ public notice does not disclose either the ownership interests or the connection to the Dakota Access Pipeline, and both of these issues are significant enough that failure to disclose these critical factors renders the public notice illegal. The public notice also fails to describe the project's purpose or intended use.

Tulane stated that the Corps must deny the application if there is a practicable alternative which would have less adverse impacts on the aquatic ecosystem, unless that alternative has other significant adverse consequences. Further, when the proposed location is in wetlands, as a large portion of this one is, and unless the proposed activity is water dependent, which this one clearly is not, the Guidelines require the Corps to presume that a practicable alternative site is available which has less adverse impacts.

Tulane stated that the Corps' inclusion in the public notice a discussion about avoidance and minimization exercises which are not even relevant until the applicant meets its alternatives burden causes significant concern that the Corps has already reached a conclusion about alternatives, before the comment period even opened. Yet the public notice says nothing about the applicant's alternatives analysis or the Corps' evaluation of the analysis.

In a letter dated January 31, 2017, the Tulane Environmental Law Clinic stated that due to the significance of the impacts of this project, particularly on the Atchafalaya Basin, and the inadequacy and illegality of the Corps' mitigation method and Bayou Bridge's mitigation proposal, the Corps may not proceed with this application until it conducts an Environmental Impact Statement.

Tulane also stated that the Corps provided insufficient notice to allow meaningful comment and Bayou Bridge's public hearing presentation did not remedy the inadequate notice. The Corps must provide a new public notice and comment period once it obtains all of the information from Bayou Bridge to allow the public to comment.

Tulane stated that the complexity of the information Bayou Bridge provided in the supplemental application renders the few days' notice even more inadequate. Additionally, despite including an LRAM application, the material still does not say where Bayou Bridge's mitigation will be, which is an essential aspect to allow for meaningful comment. Further, because Bayou Bridge substantially amended its application, which was also designated as a Corps application, it requires a new Corps and DEQ public notice.

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Tulane stated that the Corps must consider the loss of wetlands this project will cause as well as any other indirect impacts in light of the effects of all the other pipelines and projects that the Corps has permitted in this sensitive ecosystem. In particular, the Corps must consider the addition of yet another spoil bank to a Basin with numerous out-of-compliance spoil banks, and it must consider the fact that the Bayou Bridge pipeline will go in an area that already has an out-of-compliance spoil bank.

The Corps must factor in its long-standing failure to enforce Section 404 permit conditions and its inability to do so because of resource constraints when it assesses the significance of the impacts of this project and the efficacy of permit conditions to reduce those impacts to minimal.

Tulane stated that when deciding whether mitigation will compensate for any adverse environmental impacts of the project, which, unmitigated, would be significant, the Corps must assess the feasibility of success of the mitigation, the extent to which the mitigation will compensate for the particular values lost, and the connection between the particular mitigation which is implemented and the lost values. The Corps cannot rely on the LRAM because the Corps never promulgated it as a final decision and never analyzed its effectiveness and its impacts.

Bayou Bridge's proposed mitigation, developed according to the LRAM, does not render the effects of its project on the Atchafalaya Basin insignificant. Instead, it attempts to replace wetland values unique to the Atchafalaya Basin with dissimilar wetlands in wetland mitigation banks that do not share the unique values of the Basin.

Atchafalaya Basinkeeper

On November 2, 2016, the Atchafalaya Basinkeeper submitted a letter on behalf of itself and the Gulf Restoration Network, Waterkeeper Alliance, 350 Louisiana, Louisiana Bucket Brigade, Bold Louisiana, Sierra Club Delta Chapter, Louisiana Audubon Council, and Louisiana Crawfish Producers Association-West regarding the Joint Permit Application submitted by Bayou Bridge Pipeline, LLC. Atchafalaya Basinkeeper stated that the applicant fails to clearly demonstrate that there are no practicable alternatives to the proposed project that will have less adverse impact on the aquatic ecosystem as required by the Environmental Protection Agency requirements for CWA Section 404 permits. Furthermore, the applicant has not demonstrated that the project requires access or proximity to or siting within aquatic habitats. Without a demonstration of water dependence, it must be concluded that alternatives with less adverse impacts exist. Because the application fails to demonstrate a need for the project, Bayou Bridge Pipeline, LLC has not clearly demonstrated that a no-action alternative is impracticable and improper. The Atchafalaya Basinkeeper also stated that the applicant failed to demonstrate that it cannot transport crude oil using alternative methods, and that the applicant failed to consider a pipeline project with alternative point of origin, point of end, or both.

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The Atchafalaya Basinkeeper stated that the action of trenching, and associated discharge of the dredge material into the wetland, could be one of the most disruptive activities of the proposed project if not properly restored. The process of placing the material back into the trench is thus an essential aspect of reducing the harm caused by the initial disposition of material dredged from the trench. Because this permit application fails to provide any parameters that the inspector will apply in overseeing this process, it is impossible for the Corps to evaluate the effectiveness of the potential backfilling process.

The Atchafalaya Basinkeeper stated that the permit application must be denied because it is not in the public interest and is therefore inconsistent with the Corp's Section 404 permitting regulations. Furthermore, the applicant fails to provide basic information upon which the public interest balancing inquiry can be performed as required by 33 CFR §320.4(a)(1).

The Atchafalaya Basinkeeper expressed concern regarding the proposed crossing of Bayou Lafourche, and stated that the applicant must have a spill control plan and emergency shutoff valves on either side of Bayou Lafourche. They also stated that the applicant has yet to develop disaster-response plans.

The Atchafalaya Basinkeeper stated that given the information available in public documents, it does not appear that the Corps, LDEQ, or the applicant have fully weighed the costs and benefits relevant to the Project. Direct, indirect, secondary, and cumulative impacts of the proposed wetland fill and clearing remain overlooked. Furthermore, the direct impacts of the proposed project are not fully represented. The climate contribution from Bayou Bridge must be comprehensively quantified, from the point of oil extraction, to the climate costs of construction, to the pumping of oil through the pipe, all the way to the end-use of refined products. The agency must consider changes in carbon sequestration from loss of forested wetlands. According to CEQ, it is insufficient to merely state the impacts are small.

The Atchafalaya Basinkeeper stated that the Corps must deny this permit because Bayou Bridge Pipeline, LLC has failed to propose an appropriate compensatory mitigation option. Rather than paying into a mitigation bank, Bayou Bridge Pipeline, LLC should focus on preserving the unique and valuable areas in the Basin. Bringing the right-of-way bank into compliance by removing the spoil banks while their equipment is on site could be a great way to mitigate inside the Atchafalaya Basin and could restore the hydrology for thousands of acres of wetlands. Because the effects of this pipeline will be on sensitive and valuable wetland areas, a 1:1 mitigation ratio would not commensurate with the type of impact that would result from the pipeline installation. To assure that minimization and mitigation in the same watershed and for the correct type of wetlands are occurring, the Atchafalaya Basinkeeper requested that, at a minimum, mitigation banks and the avoidance and minimization statement used are included in the permit application.

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The Corps cannot grant this permit because it has not prepared an Environmental Impact Statement for the project pursuant to the National Environmental Policy Act (NEPA). The Corps must deny this permit because the applicant has failed to show that the project does not violate applicable state water quality standards.

The Atchafalaya Basinkeeper requested that two public hearings be held to consider material matters at issue in Bayou Bridge Pipeline, LLC's certification application.

The Corps' ability to enforce this permit is limited, due to the regulatory department of the New Orleans District of the Corps of Engineers lack of a boat and consequent inability to access water and ensure compliance. Enforcement of the permit would be impossible, and by issuing permits that cannot be enforced, the New Orleans District is failing to respect federal law.

The Atchafalaya Basinkeeper stated that the permit application should be denied because the proposed right-of-way is currently in violation of state and federal law and is causing irreparable harm to the basin.

In a letter dated January 30, 2017, the Atchafalaya Basinkeeper stated that prior to authorizing any additional projects in the Basin, the Corps should request that the state of Louisiana and the Congressional Delegation supply it with the necessary funds, staff, and infrastructure to perform its duties under the law.

Before granting any permits for use of an existing right-of-way, the Atchafalaya Basinkeeper formally request that the Corps of engineers:

- Conduct a thorough analysis of all existing violations on the proposed right-of-way.
- Conduct a complete Environmental Impact Statement to ascertain the total effects these existing violations, such as illegal dams and spoil banks, have on the wetlands, including the impacts to navigation on waters of the U.S., fisheries, ecology, and aesthetics of the wetlands.
- Conduct a study on the economic consequences that these violations have on fisheries, ecotourism, and any other industry affected by them.
- Designate the proposed right-of-way as out of commission until it is brought back into compliance and make existing violators along the right-of-way accountable by enforcing permits and requiring rehabilitation of the portions on which they are responsible.

Before granting a permit to the Bayou Bridge Pipeline, LLC to perform dredge and fill activities for the construction of a new pipeline in the Atchafalaya Basin, the Atchafalaya Basinkeeper formally request that the Corps of Engineers:

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- Review all existing pipeline permits by Energy Transfer Equity, LP and/or any of its subsidiaries (including but not limited to Energy Transfer Partners, LP; Sunoco LP; and Sunoco Logistics Partners LP).
- Identify all violations, incidents, and compliance issues related to those permits.
- Require Energy Transfer Partners to remedy all damages caused by its violations and failure to comply with permits issued to the company and/or its subsidiaries, including the rehabilitation of right-of-ways it is permitted to use and along which has contributed violations.

The Atchafalaya Basinkeeper stated that the LDEQ should base any decisions regarding the application by Bayou Bridge Pipeline, LLC for a Water Quality Certification on facts and data collected from all of the Corps' investigations and procured EIS regarding the proposed right-of-way. Furthermore, the Corps of Engineers and LDEQ should examine whether Bayou Bridge Pipeline, LLC can be made accountable for any future liabilities related to this pipeline, such as oil spills, damages to wetlands, and/or any other out of compliance issues. A limited liability company is a corporate structure whereby the members of the company cannot be held personally liable for the company's debts or liabilities. The applicant should disclose how risks will be borne and who will be responsible for remediation of the affected areas.

Sierra Club New Orleans Group, Delta Chapter:

In a letter dated February 13, 2017, the Sierra Club New Orleans Group, Delta Chapter stated that since the proposed pipeline crosses the Atchafalaya River and Bayou Lafourche, the project must be in compliance with Section 10 of the Rivers and Harbors Act of 1899. They also stated that an EIS must be performed before a DEQ water quality permit is issued.

The Sierra Club stated that it is common for such infrastructure projects to fail due to human causes regardless of the quality of design, the engineering, or the stated intentions. The history of failures is immense, and in fact, it is probably rare for projects to be built to specifications. Often leaks are noted and repairs are delayed or pipe replacement is put off way beyond safe limits of service so as not to interfere with profits until a significant failure occurs.

The Sierra Club stated that one of the most basic aspects of a proposed pipeline is the capacity. In both of the cover letters which were accessible to the agencies and public for review, the company stipulated that the crude oil capacity of the pipeline would be approximately 280,000 barrels per day. Yet to our great surprise in the Bayou Bridge Pipeline Fact Sheet of February 2017 Bayou Bridge stated, "to deliver an initial capacity of approximately 280,000 barrels per day with an ultimate design capacity of up to 480,000 barrels per day."

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In a letter sent via email on February 13, 2017, the Gulf Restoration Network stated the following concerns:

- Pipeline risks to National Security must be evaluated.
- Pipeline risks to state and federal restoration projects must be evaluated.
- The project is inconsistent with Louisiana's Comprehensive Master Plan for a Sustainable Coast and a 2016 Executive Order.
- Water dependence of the project has not been demonstrated by the applicant.
- Project alternatives have not been addressed.
- Direct, indirect, secondary, and cumulative impacts must be fully considered.
- The applicant must develop a spill-response plan, and local floodplain officials should be included in the notification of this permit, since the proposed site sits within an area vulnerable to flooding.
- The public notice fails to adequately describe the mitigation plan.
- The final plan, with mitigation plan included, should be made available to the public before any permits are granted.
- The Gulf Restoration Network questions whether any wetland mitigation could completely replace the functions and values lost.
- Neither Nationwide Permit 12 nor any other Nationwide Permit can be used for construction of any significant portion of the project.
- The project warrants a programmatic, or area-wide, Environmental Impact Statement.
- The project does not appear to offer any public benefit or be in the public interest.

Louisiana Environmental Action Network

In a letter submitted via email on February 22, 2016, the Louisiana Environmental Action Network stated that as the pipeline is buried below ground as a result of trenching and horizontal directional drilling operations under the waterbodies and the materials stockpiled along the pipeline route, the contaminated soils and sediments associated with each watershed will be disrupted, tracked into surrounding areas, and contaminate stormwater and shallow groundwater resources. The contaminated storm/groundwater will be allowed to be discharged unregulated along the right-of-way and into the surrounding environment and distribute contaminants into the surrounding area outside of the pipeline corridor and right-of-way and contaminate other waterbodies.

By DEQ granting this water quality certification, it would indicate a lack of need to monitor water that is discharged during the pipeline construction process. Based on the contaminants associated with each watershed, DEQ should deny the water quality certification and prohibit the discharge of contaminated stormwater and groundwater

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containing contaminated soil and sediment particles into the environment. As an alternative, DEQ should be required to establish discharge monitoring requirements for the contaminants in each watershed and require treatment of the water to remove the contaminants before allowing the water to be discharged into the environment along the pipeline corridor.

The Louisiana Environmental Action network also stated that the DEQ must comply with Federal Civil Rights Regulations. These regulations require DEQ to avoid the adverse impacts of the proposed pipeline terminus on the Environmental Justice community living along Burton Street. The pipeline project would disproportionately affect the EJ community on and around Burton Street.

Sierra Club, Delta Chapter – Baton Rouge

In a letter dated January 24, 2017, the Sierra Club, Delta Chapter – Baton Rouge stated that the Corps, LDEQ, and the applicant failed to present the possible cumulative impacts and full scope of this project. As a result, we believe that the concerned people were unable to understand the full impacts of this project. What was presented was a pipeline which will cross part of Louisiana which is in the area of the country under the jurisdiction of the New Orleans District of the U.S. Army Corps of Engineers.

The Sierra Club stated that the U.S. Army Corps of Engineers has failed to comply with federal laws and regulations by breaking down, or allowing the applicant Bayou Bridge Pipeline, to break down or disconnect the various parts of this massive proposed oil pipeline project from North Dakota to south Louisiana by Districts of the Corps of Engineers so that the real comprehensive picture of this entire project cannot be understood and commented on by interested parties. The Sierra Club also stated that the applicant, the LDEQ, and the Corps officials at the hearing did not explain where the oil will be coming from and where it will be going.

The Sierra Club believed that the officials at the DEQ have a responsibility as the lead state agency on the environment to do more than just certify that the work on the proposed pipeline will not adversely impact water quality during the construction of the pipeline. Many of the speakers during the public hearing in Baton Rouge spoke about problems caused by previous pipeline projects in the Atchafalaya River Basin, which obstruct water flows in the Atchafalaya Floodway and Atchafalaya River Basin. These levees caused by miles of dirt stacked up along pipelines have definitely adversely impacted water flows, water quality, and the habitats for wildlife and aquatic species. These adverse impacts are felt throughout the Atchafalaya River Basin and not just in the pipeline right of ways. The applicant, Bayou Bridge Pipeline, has failed to address how it will avoid this problem.

The Sierra Club stated that officials associated with the applicant, the U.S. Army Corps of Engineers, and the LDEQ have failed to adhere to Article 9, Section 1 of the

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Louisiana Constitution of 1974, which states, "The natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people. The legislature shall enact laws to implement this policy."

The Sierra Club saw little information in the application by Bayou Bridge Pipeline that alternative sites, projects, and processes were considered by the applicant for this project. Bayou Bridge officials have failed to provide adequate information about how their pipelines will be protected from the introductions of other materials into the oil being transported like hazardous waste.

Jean Dangler

In a letter dated January 27, 2017, Jean Dangler urged the Corps to prepare an Environmental Impact Statement for the proposed Bayou Bridge pipeline. The Corps and LDEQ are obligated to protect the environment, health, and safety of Louisiana residents. Permits cannot be issued to Bayou Bridge, as presently proposed.

Concerned Citizens via email form letters:

A number of form letters were submitted from concerned citizens during the public comment periods. The citizens stated their opposition to issuance of the Corps and LDEQ permits and asked the Corps and LDEQ to deny Bayou Bridge's request based on the following concerns:

- The pipeline right-of-way to be used by Bayou Bridge traverses the Atchafalaya Basin is out of compliance with prior permits, affecting the hydrology of thousands of acres of wetlands. No new permits should be issued on an out-of-compliance right-of-way until those rights-of-way are brought back into compliance
- No public need for the pipeline exists. With no project benefits apparent, it is essential for the Corps and LDEQ to weigh all project costs. Additionally, the regulatory branch of the New Orleans District of the Corps of Engineers lacks the resources to enforce the permits they issue.
- There presently exists no plan to mitigate the disruption commensurate with the scale and scope of the impacts. Degrading wetland habitat reduces buffer from regional flooding. Impeding the natural flow of the Atchafalaya Basin will block the drainage of floodwaters. The increased risks presented by this notion of water management are unacceptable.
- Bayou Bridge is inconsistent with Louisiana's Comprehensive Master Plan for a Sustainable Coast and Executive Order No. JBE 2016-09.
- There are alternative routes for the pipeline that would be less destructive to the environment and more protective of communities.

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- The Bayou Bridge project is a joint venture, where Energy Transfer Partners (ETP) possesses a majority interest. ETP wholly owns Sunoco as well as Southern Union Company. Since this merger in 2012, there have been repeated safety violations.
- Bayou Bridge has yet to develop disaster-response plans, despite the inherent vulnerabilities of pipelines and ETP's past incident record.
- As a federal agency, the Corps must consider climate change during its decision-making process. The climate contribution from Bayou Bridge must be comprehensively quantified, from the point of oil extraction all the way through the end-use of refined products. Conversely, the threats posed by climate change to the long-term viability of Bayou Bridge must also be evaluated.

(3) Site ☒ was/☐ was not visited by the Corps to obtain information in addition to delineating jurisdiction. A field visit was conducted on 20 April 2017, by representatives from CEMVN Regulatory Branch, CEMVN Archeologist/THPO/SHPO Liaison, U.S. Coast Guard, Bayou Bridge Pipeline and their agent, Perennial Environmental Services. The group started out in several airboats from the East Atchafalaya Guide Levee where the proposed pipeline would enter the Atchafalaya Basin and proceeded westward along the proposed pipeline route. The route followed existing pipeline right-of-ways. Several stops were made along the way to discuss the route, construction methods and issues with crossing through the basin. The field visit was a day long trip and terminated at the West Atchafalaya Guide Levee where the proposed pipeline would exit the basin.

(4) **Issues identified by the Corps.** A copy of the permit application was forwarded to the USACE Operations Division, Completed Works (OD-W), Calcasieu River (OD-F) Operations Manager, Atchafalaya River and Basin (OD-D) Operations Manager, and Gulf Intracoastal Waterway Port Allen to Morgan City (OD-H) Operations Manager for Section 408 review on 30 September 2016. By letter dated 14 December 2017, OD-W provided a Section 408 Letter of Permission, concluding the Section 408 review.

In a meeting held on 9 January 2017, **Real Estate Division** stated that the federal government has several real-estate interests associated with the proposed project and that a Real Estate instrument would be required from that office.

In letters dated 3 August 2016 and 27 March 2017, approved Preliminary Jurisdictional Determinations (PJD) (MVN-2015-02295-SY and MVN-2015-02295-1-SY) were issued for the proposed project.

(5) **Issues/comments forwarded to the applicant.** ☐ NA/☒ Yes. All public notice comments received during the 30 day public notice period; were forwarded to the applicant's agent, Perennial Environmental Services, LLC, in a letter dated 8 December 2016. All public comments received during the comment period after the public hearing

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(January 12-31, 2017) were forwarded to the applicant's agent in a letter dated 21 February 2017. This correspondence and communication can be further viewed within the Administrative Record.

(6) Applicant replied/provided views. ☐NA/☒Yes. The applicant's agent, provided responses in emails dated 6 January 2017 and 17 March 2017. The applicant's responses to all comments and issues identified during the review process are summarized below:

In regard to recommendations that the applicant fully address alternatives to ensure that the least environmentally damaging practicable alternative that avoids and minimizes impacts to wetlands resources is identified, the applicant stated that 40 CFR 230.10(a)(2) defines a practical alternative as an alternative that "is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes". A practicable alternative analysis using these considerations was provided as part of the application, and of the five route alternatives considered, the proposed route was determined to be the most environmentally sound, technically feasible, and cost-effective alternative. Furthermore, the applicant addressed comments regarding the evaluation of alternative transportation methods by stating that the transportation of crude oil using alternative methods, such as barge, truck, and rail, would likely incur significant adverse environmental consequences including adverse impacts to the environment and general public. According to the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA), "Pipelines are the safest and most cost-effective means to transport the extraordinary volumes of natural gas and hazardous liquid products that fuel our economy. To move the volume of even a modest pipeline, it would take a constant line of tanker trucks, 750 per day, loading and moving out every two minutes, 24 hours a day, seven days a week. The railroad-equivalent of this single pipeline would be a train of seventy-five 2,000-barrel tank rail cars every day. These alternatives would require many times the people, clog the air with engine pollutants, be prohibitively expensive, and many more vehicles on the roads and rails carrying hazardous materials unacceptably dangerous."

In regard to the comments that the project should not be permitted because it is not in the public interest and there is no public need for the project, the applicant stated that the purpose of the project is to provide an efficient, safe, and reliable transportation solution to move crude oil within the United States markets, which meets the need to improve United States energy independence and provide a more reliable supply of crude oil to United States refineries for processing to meet domestic needs for fuels and other petroleum derivatives. The need for the project is further demonstrated by the responses to BBP's open season process for common carrier pipelines which resulted in committed shippers entering into binding long-term transportation and deficiency contracts for 90% of the transportation capacity of the project.

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In regard to comments that the public notice may not have been adequate, the applicant stated that 33 CFR 325.3(a)(5) requires a public notice to include a "brief description of the proposed activity, its purpose and intended use, so as to provide sufficient information concerning the nature of the activity to generate meaningful public comments, including a description of the type of structures, if any to be erected on fills or pile or float-supported platforms, and description of the type, composition, and quantity of materials to be discharged or disposed of in the ocean." Therefore, the public notice that was issued for the project is commensurate with current regulations and guidelines providing an appropriate level of detail.

In response to the comments that the permit should not be issued because an Environmental Impact Statement was not prepared for the project under the National Environmental Policy Act, the applicant stated that it is the responsibility of the Corps to determine if an EIS is warranted after completing the review under Section 404(b)(1) guidelines and public interest review.

In regard to the recommendations that the applicant not install the pipeline within existing spoil banks along the proposed ROW within the Atchafalaya Basin and that the existing ROW is out-of-compliance, the applicant has stated that the pipeline will be installed in a manner and to a sufficient depth so as to not disrupt natural water flows in the basin. The applicant is not proposing to install the pipeline within any of the spoil banks, but is proposing to install it 4 feet below natural grade and would thus not preclude future spoil bank removal projects. Also, the proposed project will not involve the placement of excavated material on existing spoil banks which parallel the pipeline right-of-way. All excavated materials placed in temporary spoil piles in the workspace will be replaced in the trench and the area restored to pre-construction contours, which will not exacerbate existing flow conditions or preclude future spoil bank restoration activities. Some existing infrastructure BBP parallels in the utility corridor pre-date the Clean Water Act and Section 404 permitting, thus they are not out of compliance.

In regard to the comments that CEMVN, Regulatory Branch cannot enforce permits in the Atchafalaya Basin because they do not have a boat and the consequent inability to access water and ensure permit compliance, the Regulatory Branch in fact does have means to access the pipeline ROW to inspect work as it is proceeding and/or after project completion.

In regard to the comments that the proposed activity is not water dependent and should therefore be denied a permit, the applicant stated that the basic purpose of the project is to move an economical, abundant, reliable, and domestic supply of crude oil from Clifton Ridge Marine Terminal in Lake Charles, Louisiana to various crude oil terminals located near St. James, Louisiana. As defined by 40 CFR 230.10, water dependency is a project that "require[s] access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose." Because of the geographic location of the delivery

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points at St. James terminals in the Louisiana Coastal Zone, the route will require siting within and in proximity to coastal wetlands to meet the purpose of the project. Therefore, the project is water dependent as defined by applicable regulations.

In response to the requests for public hearings, the applicant stated that a joint public hearing with the LDEQ and Corps was held on January 12, 2017.

In regard to concerns about the proposed crossing of Bayou Lafourche and potential spills, the applicant stated that a permit was issued by the Bayou Lafourche Fresh Water District for the proposed crossing on October 25, 2016. BBP is preparing a Facility Response Plan to address potential spill response in accordance with PHMSA 49 CFR 194. Furthermore, remote actuated shut-off valves will be located at periodic intervals along the pipeline including upstream and downstream of Bayou Lafourche.

In response to the comment that neither the Corps, LDEQ, or the applicant have fully weighed the costs and benefits relevant to the project including the direct, indirect, secondary, and cumulative impacts, the applicant stated that the application includes all information necessary under the Section 404(b)(1) Guidelines for application review.

In regard to comments that the applicant failed to provide sufficient information for a Water Quality Certification, the applicant stated that the application includes all information necessary to initiate LDEQ's Section 401 Water Quality Certification review per the procedures described in LAC 33:IX, Chapter 15. After the initial review/public notice period, the LDEQ can request additional information from BBP as needed. LDEQ will analyze potential impacts to water quality and determine if the project will comply with site specific water quality standards prior to issuance of a Water Quality Certification.

In regard to comments questioning the adequacy of the applicant's proposed mitigation and the utilization of the LRAM to determine mitigation, the application stated that in accordance with 33 CFR 332.3, BBP proposes to purchase mitigation credits from Corps approved mitigation banks to offset unavoidable impacts to waters of the US. All mitigation banks must go through a formal vetting process as outlined in 33 CFR 332.8 before they are approved by the USACE. This process involves an Interagency Review Team as well as a public notice in which the public can provide comments. By approving a bank's mitigation banking instrument, the USACE has determined that the service area for the mitigation bank is appropriately sized to ensure that the aquatic resources provided will effectively compensate for adverse environmental impacts across the entire service area. The USACE, New Orleans District Regulatory Branch released the interim version of the LRAM for use in calculating compensatory mitigation requirements from wetland impacts associated with activities permitted under Section 404 of the Clean water Act and Section 10 of the Rivers and Harbors Act of 1899 via a Special Public Notice on February 29, 2016. On February 6, 2017, the USACE issued another Special Public Notice soliciting the public's input regarding any additions, updates, corrections, or clarifications to the LRAM. The LRAM will be finalized by the

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USACE upon review of any comments received during the public notice and the interim version is the dedicated instrument until the final version is available.

In response to concerns raised about potential impacts to floodplains, the applicant stated that it has designed the project to minimize impacts to floodplains to the greatest extent practicable. All temporarily disturbed areas will be returned to pre-construction contours and allowed to revegetate, in addition, all permanently maintained ROWs will also be restored to their pre-project contours, and will be maintained as emergent cleared areas. Above-ground facilities located within floodplains will be constructed in accordance with all applicable federal, state, and local floodplain regulations so as to minimize impacts to floodplain elevations and velocities. Furthermore, BBP will adhere to the project-specific construction plans provided in the application.

In response to comments that the project is inconsistent with Louisiana's Comprehensive Master Plan for a Sustainable Coast and a 2016 Executive Order, the applicant stated that the proposed project is consistent with Louisiana's Comprehensive Master Plan for a Sustainable Coast; in fact, one of the main objectives of the Master Plan is to ensure that the Louisiana coast continues to be a hub for commerce and industry. Construction of the project will contribute to the economic growth of the local communities located along and near the project route while resulting in minor impacts to the coastal zone, for which mitigation is proposed. Furthermore, all state agencies responsible for issuing permits for the proposed project will do so only if in accordance with Executive Order No. JBE 2016-09. The Louisiana Department of Natural Resources issued the Coastal Use Permit for the project on April 3, 2017 supporting the fact that the project is consistent with the master plan.

In response to comments regarding climate change and carbon emissions, the applicant stated that there is no current methodology or policy guidance to determine how the project's incremental contributions of greenhouse gases would translate into physical effects on the global climate. During construction, emissions from fuel-burning internal combustion engines (e.g. transportation trucks, heavy equipment, drill rigs, etc.) may temporarily increase the levels of atmospheric greenhouse gas in the immediate area, but because of the short-term duration and mobile nature of project construction, it would not result in a significant impact to climate change. Understanding that greenhouse gasses are also emitted from the refining of the crude oil and from combustion of end-use refined products, the emissions cannot be attributed solely to this project, because fuel supply is generally demand-driven rather than supply-driven. As such, regardless whether the project is constructed, end-users would still have a need for refined fuels. Therefore, it is purely speculative to assume that the project's contributions to climate change would be significant. Additionally, unavoidable temporary and permanent conversion of forested wetlands is proposed to be offset by appropriate compensatory mitigation. Changes in carbon sequestration associated with these impacts would also be mitigated for by implementation of an approved

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compensatory mitigation plan prior to authorization of the project. The project itself is a sealed underground pipeline with potential emission sources essentially only at pump stations, for which electric driven units are being installed and minor source permits are being pursued.

In response to concerns that the construction of the project will release contamination into the watershed and surrounding area, the applicant stated the construction methods proposed include the use of best management practices to avoid and minimize impacts relative to stormwater discharges. The project is a narrow corridor within a large watershed, some localized affects from turbidity would be seen, but would return to normal after project completion. BBP will implement measures outlined in the project-specific Unanticipated Discoveries of Contaminated Sediment Plan should any contaminated soils or groundwater be encountered during construction. These measures will avoid or minimize impacts to the surrounding areas. All contaminated media encountered during construction would be disposed of in accordance with federal, state, and local regulations.

In regard to concerns over impacts associated with backfilling activities, the applicant stated industry standards and best management practices will be implemented for backfilling operations; all construction activities will be completed in accordance with and/or exceedance of applicable federal and state regulations. The referenced historical construction methodologies predating current regulations are irrelevant to the proposed permit application.

In response to concerns over the applicant's liability should a spill occur given that it is a limited liability company, the applicant stated that a Limited Liability Company ("LLC") is one of the most common corporate formation types available to businesses operating in the United States. By definition, this corporate structure is utilized to protect "individual members" or "partners" from personal liability associated with the company and was developed to encourage business owners to invest in the U.S. economy via the formation of companies while protecting them as individuals from certain financial liabilities. The intent of a LLC is not to avoid liability to a company, but to limit the liability to its individual members on a personal level. This corporate structure is very common and is widely utilized in businesses of all types such as agricultural operations, other business where individual members own the asset and where protection to the individual is necessary. However, just like any company doing business under its normal course, the liability for actions of a company resides with the company itself. Therefore, under a scenario where a pipeline (and assuming the reference is to BBP) has a release or spill, the company, although a LLC, is not free from liability or responsibility, but rather the company is held liable under several Federal statutes and in particular the Oil Pollution Act (often called "OPA 90"), Natural Resource Damage Assessment ("NRDA") and the Clean Water Act ("CWA"). Under OPA 90 (and interrelated references under the CWA and NRDA), the responsibility to remediate and

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quantify/qualify a release or spill resides with the company or persons responsible for the spill and in the case or example if it was BBP, then BBP would be held responsible for the cleanup and remediation and any costs that may arise.

Additionally, under OPA 90, the liability under that Act assigns liability to the highest level of corporate structure or parent such that a LLC at an affiliate or subsidiary level is not immune to responsibility or accountability for a spill or release and in fact are directly accountable. Same is true if there is no parent, the company or LLC is accountable for any spill, release and any associated remediation or mitigation. Under OPA 90, it identifies and defines the lines of liability, limits of certain liability for certain causes of spills and the mechanism the Federal Government can take to assign the liability, how to remediate a spill or release, the extent in which the company and government would respond to a spill or release, the costs to mitigate/remediate and how the response efforts would be directed to insure minimization of impacts to the environment. In addition to the general nature of the Federal laws that govern and protect the public from spills and/or releases, companies such as BBP carry insurance which provide insurance coverage for liabilities associated with spills and releases and environmental remediation/mitigation.

These policies are also partially regulated under OPA 90 but are often much more substantial than the minimums required by statute. In the event that a company or insurance carrier cannot cover the costs of a spill remediation or mitigation, the Federal government would then trigger the Oil Spill Liability Trust Fund ("the Fund") under OPA 90, which has a \$1 billion value limit to cover the costs for clean-up and claims for which the Government would deploy but then recover any dollars spent from the company or party responsible for the spill. Money from a fee (\$.09/barrel) leveed on the transportation or importation of crude oil is used to fund and maintain the response equipment, staff, and replenishment of the Fund in the event the funds are deployed in response to a spill.

In response to the comment that the applicant, LDEQ, and the Corps have failed to adhere to Article 9, Section 1 of the Louisiana Constitution of 1974, the applicant stated that the regulations providing for the state permitting process in Louisiana were enacted in compliance with the state constitution. Therefore, the appropriate agencies evaluating the application in accordance with the applicable regulations comply with the constitution.

In response to concerns over the source of the crude oil proposed to be transported by the project and the link between the project and the Dakota Access Pipeline, the applicant stated that there is no component of the proposed project outside of Louisiana. This is a second phase of a pipeline transportation project; Phase 1 commenced in Nederland, Texas and terminated in Lake Charles, Louisiana and began operations the second quarter of 2016. This work was conducted under CEMVN permit (MVN-2014-02502-WII) issued to Phillips 66 Pipeline, LLC. While the companies that

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sponsor the BBP project have permitted and built other projects, BBP is not connected to nor is it dependent upon any other projects. Per the existing regulations, each crossing of a water of the U.S. is a separate and distinct project. BBP's application for an Individual Permit under the Clean Water Act is appropriate and follows existing regulations. Furthermore, as described in the application cover letter, the proposed project would deliver crude oil from a terminal in Lake Charles to a terminal in St. James that is connected to gulf coast refineries where the crude oil will be refined into products to meet consumers' need for fuels (e.g., gasoline, diesel, and kerosene), and after further processing, for crude oil derivative products (e.g., plastics, paints, and chemicals). In order for any crude to be transported via the proposed pipeline it must meet certain physical and chemical characteristics; however, the location of origin is not a factor.

In response to the comment that the project would disproportionately effect the minority community on and around Burton Street and that the LDEQ must comply with Federal Civil Rights Regulations, the applicant stated that the jurisdiction of the DEQ is limited to areas of jurisdiction under the USACE, as such the area mentioned does not contain waters of the U.S. and therefore is not jurisdictional; DEQ's evaluation of any component, including EJ does not apply to that area. Furthermore, the referenced community is located over 1 mile from the terminus of the project, which is a predefined location (the existing terminal) based on the purpose and need of the project.

In regard to recommendations that BMPs should be implemented throughout construction to reduce the flow of nonpoint source pollution into adjacent wetlands and waters of the U.S., the applicant stated that in compliance with the CWA, including Section 402, it will implement adequate erosion/siltation control measures as appropriate to avoid and minimize impacts to adjacent waters. Accepted measures include the proper use of silt fences, straw bales, or other Environmental Protection Agency construction site stormwater runoff control best management practices. These measures will be installed, maintained, and enhanced throughout construction as necessary.

In response to comments about the construction of access roads through aquatic resources and installation of culverts, the applicant stated that all access roads that are constructed by BBP above pre-construction contours and elevations in waters of the U.S. will be properly bridged or culverted to maintain surface water flows.

In response to recommendations that temporarily impacted non-forested wetlands should be monitored for five years or until they have been completely restored/revegetated, the applicant stated that temporary impacts to non-forested wetlands do not warrant mitigation, which is supported by regulations. Restoration of wetlands will be accomplished by restoring wetlands to pre-construction contours and allowing them to revegetate naturally. BBP has also proposed to utilize top-soil

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segregation in non-inundated wetlands in order to preserve the existing seed bank to facilitate natural revegetation. These measures have been demonstrated as an effective restoration measure throughout the industry.

In response to comments that the applicant should not exceed a permanent pipeline ROW width of 30 feet through wetlands where directional drilling is not proposed, the applicant has proposed a 30-foot-wide permanently maintained corridor through wetlands to minimize impacts to these resources.

In response to comments that the applicant should not impact wetlands located between HDD entry and exit points, the applicant has stated that it will not clear forested wetlands between HDD entry and exit locations except where necessary to facilitate construction of the proposed project. In certain areas, BBP must clear forested wetlands located between HDD entry and exit locations to allow the offloading and transportation of equipment and personnel from barges to the construction ROW. Upon completion of construction, BBP will restore the areas impacted between the HDD entry and exit locations to pre-construction contours and will allow the wetlands to revegetate naturally. The applicant will minimize the permanent conversion of forested wetlands by not permanently maintaining a 30-foot corridor between HDD entry and exit points except for five locations where it is imperative in order to gain access to portions of the trench installed pipe that is otherwise isolated between HDDs. Mobilizing maintenance equipment to these otherwise isolated areas is necessary for safe operation of the system. Each of the five areas where permanent maintenance over the HDDs will occur are limited to the Atchafalaya Basin. BBP has further minimized impacts by reducing the maintained corridor from 30 feet to 15 feet at these 5 locations. All forested wetlands that will be permanently maintained in an herbaceous state at these five HDD locations will be cleared for initial construction activities and permanently maintained for future access and ROW maintenance.

In regard to the potential presence of bird nesting colonies, the applicant stated that it conducted an aerial survey of the project route in April 2016 and a total of four active wading bird rookeries were identified during the survey. As documented in the survey report submitted to the LDWF in May 2016, the project will have no direct impacts on the identified rookeries. However, two of the rookeries are located within 1,000 feet of the proposed project. If work in these areas will occur during the nesting season (February 15th to August 1st), BBP will conduct an additional pre-construction survey no more than 2 weeks prior to the start of construction to determine if the rookeries are still present. Upon completion of the survey, BBP will provide an updated survey report that will include all data required by the LDWF. Furthermore, BBP will attempt to restrict construction activities in areas located within the buffer distances recommended for any active wading bird rookeries to the non-nesting period to the maximum extent practicable. BBP may move construction equipment through the restricted zone, but no active construction will occur in these areas. This will minimize the project's potential

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impacts on the rookeries. In the event restriction of construction is not feasible within 400 meter of any rookery during the nesting season, BBP will further consult with LDWF and USFWS as necessary.

In response to comments regarding potential impacts to the recently de-listed Louisiana black bear, the applicant stated that it is anticipated that construction will occur primarily outside of the black bear denning season (January - May). Furthermore, BBP has designed the project to avoid direct impacts to potentially suitable den trees identified within the project area. During construction, BBP will instruct all employees and contractors to avoid direct contact with black bears should one be observed within the project area. BBP will also ensure that all employees maintain a clean work environment to prevent black bears from becoming attracted and accustomed to human food.

In response to the recommendation that no habitat alteration work within mature forested areas be performed during the nesting period of migratory birds (March 1 to July 31), the applicant stated that it has minimized impacts to forested areas along the route and will make efforts to minimize clearing of mature forested areas during the nesting period. Additionally, the majority of construction is slated to be outside the nesting period.

Corps Analysis of Applicant's Responses to Comments from General Public:

CEMVN has considered comments received from the public in response to the Public Notice and Public Hearing. In reviewing the applicant's responses to the comments and supporting documentation, CEMVN has determined that the concerns presented and falling within Corps statutory authority (for example, minimizing and offsetting wetland impacts) may be addressed through modifications in project design and special permit conditions. However, comments such as those pertaining to potential impacts to surface and ground water resources through leakage or rupture, while clearly important factors, are specifically regulated by programs administered under the Pipeline and Hazardous Material Safety Administration, Office of Pipeline Safety, and LDEQ, and not within the defined purview of the Corps. From a broad perspective, when matters arise in the course of project reviews that are subject to oversight by other agencies, the Corps relies on those agencies, because they have delegated authority and specific experience, to ensure the project conforms with applicable standards, and enforce compliance of those criteria. Similarly, matters that fall within the Corps area of responsibility regarding impacts to aquatic resources and navigation (and Federal navigation and flood control projects pursuant to 33 USC 408) would be appropriately addressed via the DA permit and 408 permissions decisions.

CEMVN noted the applicant's assessment and perception that because of the location of product delivery points in St. James Parish within the Louisiana Coastal Zone, it is in proximity to coastal wetlands, thus evidencing that the project is a "water-dependent"

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activity. As concluded in Section 1 of this document, CEMVN has determined that the standard set forth in 40 CFR 230.10, of the project actually *requiring* access or proximity to, or being sited within, a special aquatic site to fulfill its basic purpose, has not been met; therefore, the project is not "water-dependent".

(7) The following comments are not discussed further in this document as they are outside the Corps purview. ☒ NA ☐ Yes

(4) Alternatives Analysis.

- a. **Basic and Overall Project Purpose (as stated by applicant and independent definition by Corps).**
☒ Same as Project Purpose in Paragraph 1.
☐ Revised:
- b. **Water Dependency Determination:**
☒ Same as in Paragraph 1.
☐ Revised:
- c. **Applicant preferred alternative site and site configuration.**
☒ Same as Project Description in Paragraph 1.
☐ Revised:

Criteria:

Preferred Alternative Route: Clear rights-of-way, conduct trenching operations, temporarily stockpile approximately 1,525,897 cubic yards of native earthen material, dredge flotation ditches, dredge barge landings, install pipeline, above-ground facilities and components, and perform horizontal directional drilling operations, all as necessary to install 163 miles of 24-inch crude oil pipeline. Project implementation would temporarily impact approximately 455.5 acres of jurisdictional wetlands and approximately 41.8 acres of other waters of the U.S. through temporary construction rights-of-way (ROW) and workspaces. Approximately 142 acres of jurisdictional wetlands would be permanently converted from forested to herbaceous wetlands within the permanent right-of-way.

Selected Route is approximately 163 miles long and begins at the Clifton Ridge Marine Terminal in Lake Charles, Louisiana and terminates at various crude oil terminals located near St. James, Louisiana. For this route, the majority of the proposed pipeline will follow existing rights-of-way. This alignment is the most environmentally sound, technically feasible, and cost-effective route. BBP has proposed to keep the construction ROW to 75 feet in wetland areas where the push-pull or open cut construction methods can be used with the use of additional work areas only as needed for safe construction. Additionally, the large waterway crossings are proposed to be

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installed using horizontal directional drilling techniques to avoid potential impacts to sensitive habitats and water resources.

d. Off-site locations and configuration(s) for each.

Four pipeline route alternatives (in addition to the Preferred Alternative) were considered prior to submittal of the permit application:

Alternative 1 was developed as the shortest pipeline route between the project origin at the Clifton Ridge Marine Terminal in Lake Charles and the project terminus at the existing facilities located near St. James. Alternative 1 is located south of the Preferred Alternative and would cross fewer roads and waterbodies than the Preferred Alternative. However, based on a desktop analysis, Alternative 1 would be considered a greenfield route as only 6% of the route is co-located with existing utility ROWs. The total wetland impacts associated with Alternative 1 would also be substantially greater than all other alternative routes, including the Preferred Alternative. Within the LCZ, Alternative 1 would cross the greatest number of waterbodies and would impact the most wetlands compared to all other alternative routes, including the Preferred Alternative. As a result of the increased impacts on environmental resources associated with Alternative 1 and the limited amount of co-location with other existing utility ROWs, BBP removed this alternative route from further consideration.

Alternative 2 was developed to avoid constructability issues associated with traversing through the densely populated area located south of Lake Charles. With the exception of the first 15.01 miles, Alternative 2 is the same route as the Preferred Alternative. Overall, Alternative 2 would be 1.68 miles longer than the Preferred Alternative as a result of the deviation to avoid residential areas south of Lake Charles. The additional 1.68 miles of pipeline would result in an increase in the overall project cost of approximately \$3,780,000. Furthermore, Alternative 2 would result in greater impacts to wetlands than the Preferred Alternative. Alternative 2 would also increase the project impacts on areas located within the LCZ. An additional 2 miles of the Alternative 2 route would be located within the LCZ, which would result in greater wetlands impacts in the LCZ than the Preferred Alternative. BBP removed Alternative 2 from further consideration due to the increase in overall project cost and the increase in impacts on both wetlands and areas located within the LCZ.

Alternative 3 was developed to evaluate an alternative route across the Atchafalaya Basin as it deviates from the Preferred Alternative at milepost (MP) 111.35 and rejoins the Preferred Alternative at MP 147.90. Overall, Alternative 3 would impact approximately 49.24 acres less wetlands than the Preferred Alternative, but would increase the project length by 2.24 miles. The increased length would result in additional land disturbance, more road crossings, and increased impacts on agricultural land compared to the Preferred Alternative. The additional 2.24 miles would also result

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in an increase in the overall project cost of approximately \$5,040,000. Alternative 3 would require an additional HDD to cross the Gulf Intracoastal Waterway (GIWW), which is also regulated by the USACE under Section 408. The additional HDD needed to cross the GIWW would result in an additional increase in the overall project cost by approximately \$1,050,000. The Preferred Alternative would cross the GIWW and the East Atchafalaya Basin Protection Levee with the same HDD; and therefore, would not incur this increased cost. BBP has removed Alternative 3 from further consideration due to the increase in land disturbance, increased number of HDDs under waterbodies regulated by the USACE under Section 10/404 and Section 408, and the increase of the overall project cost of approximately \$6,090,000.

Alternative 4 was developed to evaluate an alternative crossing of the LCZ near the eastern end of the project. Alternative 4 diverges from the Preferred Alternative at MP 144.06 and then converges with the Preferred Alternative at MP 158.53. Compared to the Preferred Route, Alternative 4 would reduce the overall crossing length of the LCZ from 16.50 miles to 9.83 miles. Furthermore, Alternative 4 would increase the amount of co-location within the LCZ, and would slightly reduce the potential impacts to wetlands by 2.27 acres compared to the Preferred Alternative. However, Alternative 4 would increase the overall project length by 0.54 mile, which would result in additional land disturbance and an increase in the overall project cost by \$1,215,000. Alternative 4 would also result in a greater number of waterbody crossings compared to the Preferred Alternative. Based on a review of information provided by the EPA, Alternative 4 would cross two areas (the Lapice Oil Field and the City of Donaldsonville Sewage System facility) that could potentially pose constructability issues. The Lapice Oil Field, located south of Donaldsonville, Louisiana, consists of many active and inactive wells. Construction through this area could require additional route modifications and specialized construction techniques to avoid impacts on existing infrastructure located at the Lapice Oil Field. Alternative 4 would also cross the adjacent to the City of Donaldsonville Sewage System facility approximately 1.5 miles north of the Lapice Oil Field. This facility is utilized as a wastewater treatment facility with existing infrastructure to transport wastewater to and from the facility. BBP has removed Alternative 4 from further consideration due to the increase land disturbance, the increased cost of the overall project, the potential constructability issues associated with the EPA-identified facilities located along the route, and the increase in potential impacts on waterbodies.

(e) (☐ NA) Site selected for further analysis and why. N/A

(f). **On-site configurations.**

Push-Pull, Conventional Lay Construction, Decreased ROW Width: By proposing to use a 75-foot construction ROW in wetlands and utilizing the push-pull method of construction in wetland areas along the proposed 163-mile pipeline route where

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practicable (soils/hydrology permitting), BBP has attempted to minimize potential impacts to wetlands.

Horizontal Directional Drills: BBP proposes to install the pipeline by means of horizontal directional drills (HDD) under all major waterbody crossings to avoid selected wetlands and other waters of the U.S. within the ROW along the proposed pipeline. Utilizing this construction method avoids impacting jurisdictional forested wetlands, riparian zones and water resources. Initially, BBP proposed to maintain a 30-foot corridor between each HDD along the route to allow for maintenance activities during operations.

The following is a summary of the meeting dates during which we discussed clearing between HDD entry/exit locations.

September 9, 2015 – Cary Farber (ETC), Joe Kolb (ETC), Marshall Olson (Perennial Environmental), Dave Beckmeyer (Perennial Environmental), James Little (USACE), Christine Charrier (LDNR – OCM), Stephanie Zumo (LDNR – OCM)

May 17, 2016 – Cary Farber (ETC), Joe Kolb (ETC), Dave Beckmeyer (Perennial Environmental), Marshall Olson (Perennial Environmental), James Little (USACE), and Darrell Barbara (USACE)

June 27, 2016 - Joey Mahmoud (ETC), Cary Farber (ETC), Joe Kolb (ETC), Dave Beckmeyer (Perennial Environmental), and various agency representatives including James Little, Darrell Barbara, and Martin Mayer from the USACE

February 21, 2017 - BBP (Cary Farber, Monica Howard), Perennial (Marshall Olson), and USACE (James Little, Darrell Barbara)

April 5, 2017 - BBP (Monica Howard, Cary Farber), Perennial (Marshall Olson), HDR (Steve Rowe), and USACE (James Little, Darrell Barbara, Martin Mayer)

As a result of this coordination, BBP reduced the number of areas that would be permanently maintained over HDDs to 5 locations where absolutely necessary. BBP then agreed to reduce the width of the ROW that would be permanently maintained at these locations from 30 feet to 15 feet to further minimize impacts to wetlands.

As indicated below, there are five select locations within the Atchafalaya Basin where a minimum 15 foot wide cleared ROW will be required over HDD's to allow access to large sections of the pipeline in between the HDD's that will be installed via the push-pull method and the ROW will be required to be maintained.

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Locations where Permanent Maintenance will occur over a HDD				
Approximate Location (MP)	Corresponding Map Pages in Attachment 1 (Project Aerial / Plan View Maps)	Reason for Clearing Over HDD	Impact to Forested Wetlands (acres)	
			Previously Proposed 30-foot corridor	Currently Proposed 15-foot corridor
115.1	126	Gain access off of the west bank of Bayou Chene to conduct routine maintenance along a 3.6-mile section of pipe installed via the push-pull method that would otherwise be isolated by HDDs located at MP 111.5 and MP 115.1	0.54	0.27
120.7	132	Gain access off of the west bank of the Atchafalaya River to conduct routine maintenance along a 5.2-mile section of pipe installed via the push-pull method that would otherwise be isolated by HDDs located at MP 115.4 and MP 120.6	0.74	0.37
121.2	132	Gain access off of the east bank of the Atchafalaya River to conduct routine maintenance along a 0.4-mile section of pipe installed via the push-pull method that would otherwise be isolated by HDDs located at MP 121.3 and MP 121.7	0.66	0.33
127.0	138	Gain access off of the west bank of Cross Bayou to conduct routine maintenance along a 4.6-mile section of pipe installed via the push-pull method that would otherwise be isolated by HDDs located at MP 122.3 and MP 126.9	0.30	0.15
127.0	138	Gain access off of the east bank of Cross Bayou to conduct routine maintenance along a 3.8-mile section of pipe installed via the push-pull method that would otherwise be isolated by HDDs located at MP 127.1 and MP 130.9	0.31	0.16
Impact Totals			2.55	1.28
Net reduction of impacts as a result of minimizing corridor width from 30 feet to 15 feet over HDDs			1.27 acres	

**162.68-mile Bayou Bridge Pipeline Project
Constructability and Feasibility Report for Maintenance Clearing over select HDDs**

Bayou Chene HDD

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Field / Constructability Analysis:

Field surveys determined that the depth of Bayou Chene is approximately 20 feet at the proposed crossing location. Based on this information, it was determined that an HDD,

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rather than a conventional open cut, would be the most feasible and safe option to cross Bayou Chene. Furthermore, utilization of the HDD would avoid direct impacts to Bayou Chene. A 1,557-foot drill has been designed for this crossing.

Construction Method:

Once the contractor has cleared the workspace, the drilling rig and equipment as well as the pipeline materials will be offloaded from a barge on the northwest side of Bayou Chene. The drilling rig will be set approximately 777 feet northwest of the river at the HDD entry point, and the pipe will be strung in one segment within the ROW on the southeast side of Bayou Chene from the HDD exit point. Once the drilling operations are complete, the contractor will pull the section of pipe through the drill hole, and the segment will be tied-into the adjacent trench installed pipeline segment. Upon completion of the HDD, the contractor will disassemble and remove all equipment and materials. Another crew will then restore the site to pre-construction contours, and all areas disturbed during construction will be allowed to revegetate naturally.

Justification for clearing over HDD:

BBP proposes to maintain a corridor along the entirety of the pipeline, with the exception of most HDD segments. Permanent maintenance is necessary for the safe operation of the pipeline system to facilitate aerial patrols, conduct periodic corrosion/leak surveys, and to allow for equipment access as needed.

There are seven HDDs proposed within the Atchafalaya Basin due to various constructability issues and to avoid and minimize impacts to the vast amount of wetlands and waterbodies in the Basin. The pipeline segments outside of the HDDs will be installed via trench. The Basin is very remote and undeveloped with very few roads to access the ROW for maintenance activities. If there was no maintenance clearing over any of the forested wetland HDD segments, they would ultimately reforest and the system would have five segments of trench installed pipeline outside of the HDDs that would be isolated with no way for necessary maintenance equipment to maintain the trench ROW and would be out of compliance for safe operation of the system. Since the Basin is a remote and largely undeveloped setting, there are no roads or non-water conveyances that can be used to mobilize maintenance equipment to the ROW to these five isolated segments; therefore, maintenance equipment must be deployed via barge. All of the waterbodies capable of trafficking these barges are large and require the pipeline to be installed via HDD opposed to trench crossings.

Northwest of Bayou Chene is a 3.6 mile segment of conventionally installed segment from MP 111.5 to 115.1 that would be inaccessible without maintaining a corridor over the HDD at MP 111.5 (Bayou L'Embaras) or 115.1 (Bayou Chene). If the 777-foot segment over the HDD at MP 115.1 was not permanently maintained, then BBP would

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need to maintain an approximately 2,216-foot segment over the HDD located at MP 111.5, which would result in an increase in forested wetland impacts compared to the maintenance over the HDD at Bayou Chene.

Therefore, BBP proposes to permanently maintain a 777-foot-long by 15-foot-wide corridor centered over the pipeline between the northwest bank of Bayou Chene (where a barge would deploy maintenance equipment) and the HDD entry point (see attached map). Maintenance of the permanent easement would entail periodic vegetation clearing in accordance with PHMSA regulations for pipeline inspection and operation. This would involve selective tree cutting and periodic mowing. Marsh masters that are approximately 8 feet wide would be utilized to conduct this maintenance.

BBP has minimized impacts by reducing the maintained corridor from 50 feet as it is in uplands, to 30 feet in forested wetlands, down to only 15 feet over the HDD portion to be maintained. By reducing to 15 feet, BBP has reduced the impacts to the Bayou Chene forested wetlands from 0.54 acre to 0.27 acre. BBP cannot reduce the width of the corridor to be maintained over the HDD below 15 feet without impeding the ability of the marsh masters to safely maneuver along the corridor. It should be noted that the 0.27 acre of forested wetland to be permanently maintained in a herbaceous state over the HDD will have already been cleared for construction activities (i.e., the offloading of equipment, materials, and personnel from barges on Bayou Chene); therefore, the permanent maintenance will not result in any additional wetland impacts beyond construction. Additionally, the proposed clearing will not result in the permanent loss of wetlands as the areas maintained in a herbaceous state will continue to function as wetlands. BBP will mitigate for the forested wetland impacts through the purchase of appropriate mitigation credits from a Corps approved mitigation bank located within the Atchafalaya River Basin.

Atchafalaya HDD (west and east side)

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Field / Constructability Analysis:

Field surveys determined that the depth of the Atchafalaya River is approximately 57 feet at the proposed crossing location. Based on this information, it was determined that an HDD, rather than a conventional open cut, would be the most feasible and safe option to cross the Atchafalaya River. Furthermore, utilization of the HDD would avoid direct impacts to the Atchafalaya River, which is a federal civil works project regulated under 33 USC 408. A 3,400-foot drill has been designed for this crossing.

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Once the contractor has cleared the workspace, the drilling rig and equipment as well as the pipeline materials will be offloaded from a barge on the east side of Atchafalaya River. The drilling rig will be set approximately 981 feet east of the river at the HDD entry point, and the pipe will be strung in one segment within the ROW on the west side of the Atchafalaya River from the HDD exit point. Once the drilling operations are complete, the contractor will pull the section of pipe through the drill hole, and the segment will be tied-into the adjacent trench installed pipeline segment. Upon completion of the HDD, the contractor will disassemble and remove all equipment and materials. Another crew will then restore the site to pre-construction contours, and all areas disturbed during construction will be allowed to revegetate naturally.

Justification for clearing over HDD:

BBP proposes to maintain a corridor along the entirety of the pipeline, with the exception of most HDD segments. Permanent maintenance is necessary for the safe operation of the pipeline system to facilitate aerial patrols, conduct periodic corrosion/leak surveys, and to allow for equipment access as needed.

There are seven HDDs proposed within the Atchafalaya Basin due to various constructability issues and to avoid and minimize impacts to the vast amount of wetlands and waterbodies in the Basin. The pipeline segments outside of the HDDs will be installed via trench. If there was no maintenance clearing over any of the forested wetland HDD segments, they would ultimately reforest and the pipeline system would have five segments of trench installed pipeline outside of the HDDs that would be isolated with no way for necessary maintenance equipment to maintain the trench ROW and would be out of compliance for safe operation. Since the Basin is a remote and largely undeveloped setting, there are no roads or non-water conveyances that can be used to mobilize maintenance equipment to the ROW to these five isolated segments; therefore, maintenance equipment must be deployed via barge. All of the waterbodies capable of trafficking these barges are large and require the pipeline to be installed via HDD opposed to trench crossings.

West of the Atchafalaya River is a 5.2 mile segment of conventionally installed segment from MP 115.4 to 120.6 that would be inaccessible without maintaining a corridor over the HDD at MP 115.4 (Bayou Chene) or 120.6 (Atchafalaya River). Access to the ROW from the west side of the Atchafalaya River is necessary due to a permanent valve being located 4,230 feet west of the river.

East of the Atchafalaya River is a 0.4 mile segment of conventionally installed segment from MP 121.3 to 121.7 that would be inaccessible without maintaining a corridor over the HDD at MP 121.3 (Atchafalaya River) or 121.7 (unnamed canal). Access along the unnamed canal is limited to periods of high water as there is a rock dam that blocks access to the unnamed canal during periods of normal flow; therefore, access off of the

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Atchafalaya River is necessary.

BBP proposes to permanently maintain a 1,086-foot-long by 15-foot-wide corridor centered over the pipeline between the west bank of the Atchafalaya River (where a barge would deploy maintenance equipment) and the HDD exit point (see attached map). BBP also proposes to maintain a 974-foot-long by 15-foot-wide corridor centered over the pipeline between the east bank of the Atchafalaya River and the HDD entry point (see attached map). Maintenance of the permanent easement would entail periodic vegetation clearing in accordance with PHMSA regulations for pipeline inspection and operation. This would involve selective tree cutting and periodic mowing. Marsh masters that are approximately 8 feet wide would be utilized to conduct this maintenance.

BBP has minimized impacts by reducing the maintained corridor from 50 feet as it is in uplands, to 30 feet in forested wetlands, down to only 15 feet over the HDD portion to be maintained. By reducing to 15 feet, BBP has reduced the impacts to forested wetlands on the west side of the Atchafalaya River from 0.74 acre to 0.37 acre and from 0.66 acre to 0.33 acre on the east side of the Atchafalaya River HDD. BBP cannot reduce the width of the corridor to be maintained over the HDD below 15 feet without impeding the ability of the marsh masters to safely maneuver along the corridor. It should be noted that the 0.37 acre of forested wetland on the west side of the Atchafalaya River HDD and the 0.33 acre of forested wetland on the east side of the Atchafalaya River HDD to be permanently maintained in a herbaceous state over the HDD will have already been cleared for construction activities (i.e., the offloading of equipment, materials, and personnel from barges on Atchafalaya River); therefore, the permanent maintenance will not result in any additional wetland impacts beyond construction. Additionally, the proposed clearing will not result in the permanent loss of wetlands as the areas maintained in a herbaceous state will continue to function as wetlands. BBP will mitigate for the forested wetland impacts through the purchase of appropriate mitigation credits from a Corps approved mitigation bank located within the Atchafalaya River Basin.

Cross Bayou HDD (west and east side)

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Field / Constructability Analysis:

Field surveys determined that the depth of Cross Bayou is approximately 16 feet at the proposed crossing location. Based on this information, it was determined that an HDD, rather than a conventional open cut, would be the most feasible and safe option to cross Cross Bayou. Furthermore, utilization of the HDD would avoid direct impacts to Cross Bayou. A 1,100-foot drill has been designed for this crossing.

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Once the contractor has cleared the workspace, the drilling rig and equipment as well as the pipeline materials will be offloaded from a barge on the east side of Cross Bayou. The drilling rig will be set approximately 457 feet east of the bayou at the HDD entry point, and the pipe will be strung in one segment within the ROW on the west side of Cross Bayou from the HDD exit point. Once the drilling operations are complete, the contractor will pull the section of pipe through the drill hole, and the segment will be tied-into the adjacent trench installed pipeline segment. Upon completion of the HDD, the contractor will disassemble and remove all equipment and materials. Another crew will then restore the site to pre-construction contours, and all areas disturbed during construction will be allowed to revegetate naturally.

Justification for clearing over HDD:

BBP proposes to maintain a corridor along the entirety of the pipeline, with the exception of most HDD segments. Permanent maintenance is necessary for the safe operation of the pipeline system to facilitate aerial patrols, conduct periodic corrosion/leak surveys, and to allow for equipment access as needed.

There are seven HDDs proposed within the Atchafalaya Basin due to various constructability issues and to avoid and minimize impacts to the vast amount of wetlands and waterbodies in the Basin. The pipeline segments outside of the HDDs will be installed via trench. The Basin is very remote and undeveloped with very few roads to access the ROW for maintenance activities. If there was no maintenance clearing over any of the forested wetland HDD segments, they would ultimately reforest and the system would have five segments of trench installed pipeline outside of the HDDs that would be isolated with no way for necessary maintenance equipment to maintain the trench ROW and would be out of compliance for safe operation of the system. Since the Basin is a remote and largely undeveloped setting, there are no roads or non-water conveyances that can be used to mobilize maintenance equipment to the ROW to these five isolated segments; therefore, maintenance equipment must be deployed via barge. All of the waterbodies capable of trafficking these barges are large and require the pipeline to be installed via HDD opposed to trench crossings.

West of Cross Bayou is a 4.6 mile segment of conventionally installed segment from MP 122.3 to 126.9 that would be inaccessible without maintaining a corridor over the HDD at MP 122.3 (unnamed canal) or 126.9 (Cross Bayou). Access along the unnamed canal is limited to periods of high water as there is a rock dam that blocks access to the unnamed canal during periods of normal flow; therefore, access off Cross Bayou is necessary. Additionally, if the 444-foot segment over the HDD at MP 122.3 was not permanently maintained, then BBP would need to maintain an approximately 2,932-foot segment over the HDD located at MP 122.3, which would result in an increase in forested wetland impacts.

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East of Cross Bayou is a 3.8 mile segment of conventionally installed segment from MP 127.1 to 130.9 that would be inaccessible without maintaining a corridor over the HDD at MP 127.1 (Cross Bayou) or 130.9 (Gulf Intracoastal Waterway). If the 457-foot segment over the HDD at MP 127.1 was not permanently maintained, then BBP would need to maintain an approximately 709-foot segment over the HDD located at the Gulf Intracoastal Waterway, MP 130.9, which would result in an increase in forested wetland impacts compared to the maintenance over the HDD at Cross Bayou.

BBP proposes to permanently maintain a 444-foot-long by 15-foot-wide corridor centered over the pipeline between the west bank of Cross Bayou (where a barge would deploy maintenance equipment) and the HDD exit point (see attached map). BBP also proposes to maintain a 457-foot-long by 15-foot-wide corridor centered over the pipeline between the east bank of Cross Bayou and the HDD entry point (see attached map). Maintenance of the permanent easement would entail periodic vegetation clearing in accordance with PHMSA regulations for pipeline inspection and operation. This would involve selective tree cutting and periodic mowing. Marsh masters that are approximately 8 feet wide would be utilized to conduct this maintenance.

BBP has minimized impacts by reducing the maintained corridor from 50 feet as it is in uplands, to 30 feet in forested wetlands, down to only 15 feet over the HDD portion to be maintained. By reducing to 15 feet, BBP has reduced the impacts to forested wetlands on the west side of the Cross Bayou HDD from 0.30 acre to 0.15 acre and from 0.31 acre to 0.16 acre on the east side of the Cross Bayou HDD. BBP cannot reduce the width of the corridor to be maintained over the HDD below 15 feet without impeding the ability of the marsh masters to safely maneuver along the corridor. It should be noted that the 0.15 acre of forested wetland on the west side of the Cross Bayou HDD and the 0.16 acre of forested wetland on the east side of the Cross Bayou HDD to be permanently maintained in a herbaceous state over the HDD will have already been cleared for construction activities (i.e., the offloading of equipment, materials, and personnel from barges on Cross Bayou); therefore, the permanent maintenance will not result in any additional wetland impacts beyond construction. Additionally, the proposed clearing will not result in the permanent loss of wetlands as the areas maintained in an herbaceous state will continue to function as wetlands. BBP will mitigate for the forested wetland impacts through the purchase of appropriate mitigation credits from a Corps approved mitigation bank located within the Atchafalaya River Basin.

(g). Other alternatives not requiring a permit, including No Action: Avoids direct impacts to wetlands and other waters; however, under the No Action Alternative, the objectives of the project would not be met because the pipeline would not be constructed to transport the contracted crude oil from the Clifton Ridge Marine Terminal to the facilities located near St. James, Louisiana. Jobs for the local and state economies would not be created. Tax revenues for the local, state and federal governments would not be realized. The pipeline will provide the facilities with crude oil

that will be refined into gasoline and other petroleum products, therefore, contributing to the country's energy security, enhance downstream manufacturing capacity and diversify the utilization of domestic crude oil resources.

(h). Alternatives not practicable or reasonable.

Alternative 1 – Modification of Existing Infrastructure

Although there are a number of pipelines that traverse southern Louisiana, there currently are no pipelines operated by Energy Transfer (the overall Bayou Bridge Pipeline project developer) with available capacity to transport the required volume of crude oil from the Clifton Ridge Marine Terminal in Lake Charles, Louisiana to various crude oil terminals located near St. James, Louisiana. Modifications to existing Energy Transfer infrastructure to increase capacity would require the replacement of the existing infrastructure with new, larger diameter pipe and the construction/upgrade of appurtenant facilities along the existing infrastructure to ensure the existing pipeline is capable of transporting the required volume of crude oil. Additional pipelines would also need to be constructed to connect origin and terminus of the proposed Bayou Bridge Pipeline Project to the existing infrastructure. The upgrades and modifications to the existing Energy Transfer infrastructure would result in additional environmental impacts similar to those of the applicant's preferred alternative. Furthermore, Energy Transfer would be required to build new infrastructure to continue to fulfill the purpose and need of the pipeline(s) that would be taken out-of-service and modified to transport crude oil. Construction of the new pipeline(s) would also result in additional environmental impacts. Therefore, modifications to existing Energy Transfer infrastructure is not a viable alternative to the proposed Bayou Bridge Pipeline project.

A detailed analysis of potential system alternatives that do not involve pipelines owned and operated by Energy Transfer cannot be conducted as BBP does not have access to any proprietary information related to these other pipeline systems as they are owned and operated by separate and distinct entities. Furthermore, BBP cannot speculate on available capacity to transport the required volume of crude oil from the Clifton Ridge Marine Terminal in Lake Charles, Louisiana, to various crude oil terminals located near St. James, Louisiana, or where a suitable interconnect would be located and/or what system modifications would be required to accommodate the necessary capacity to meet the purpose and need of the proposed project.

Alternative 2 – Trucking Transportation Alternative

While trucking is instrumental in the gathering and distribution of crude on a limited scale, trucking as an alternative for transporting the volume of crude oil the distances planned for the proposed pipeline is not viable. Factors such as road safety, roadway capacity, and other logistical issues involving availability of labor force, trailer truck capacity, and economics, all contribute to truck transportation not being a realistic alternative.

Assuming the average oil tanker truck is capable of holding about 220 barrels of oil, the transportation of the capacity of the proposed project (480,000 bpd), would require a

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total of 2,181 (480,000/220) full trucks to depart the proposed tank terminals daily, and more than 90 (2,181/24) trucks would have to be filled every hour within a 24-hour/day operation. Time spent in transit, loading/offloading, and additional time for maintenance would add to the number of trucks needed to offset the proposed project. An increase in daily truck traffic would lead to an increase in the degradation of public roads as well as contribute to the noise pollution adjacent to the roads.

An increase in exhaust would be anticipated due to the combustion diesel fuel in the truck engines, which would lead to an increase in air pollution from emissions of criteria pollutants such as volatile organic compounds (VOCs), carbon monoxide (CO), nitrogen dioxide (NO_x), sulfur dioxide (SO₂), and particulate matter (PM₁₀ and PM_{2.5}). The estimated on-road vehicle emissions associated with the truck alternative are presented below:

Potential Emissions Associated with Trucking Alternative							
Emission Source Description	Pollutant Emissions (tons per year)						
	NO _x	CO	SO ₂	VOC	PM ₁₀	PM _{2.5}	GHG (CO ₂ e)
On-road Truck Engine Emissions	1,852	734.4	4.2	196.3	72.9	67.0	496,289
Emissions are calculated based on 289,900,520 vehicle miles traveled per year.							
Transport of crude oil in trucks will result in particulate matter from the trucks driving on paved roads, which is not included in the calculated emissions.							
The truck engine values include both driving and idling emissions.							

Analysis of infrastructure considerations (e.g., the burden of thousands of additional trucks on county, state, and interstate highways, as well as the loading and off-loading facilities that would have to be constructed which would incur their own environmental impacts), economic considerations (e.g., labor costs, purchase and maintenance of hauling equipment, fuel, public infrastructure, etc.), and reliability considerations (e.g., weather, mechanical, manpower, road closures) all contribute to making the truck transportation alternative unviable.

Alternative 3 – Rail Transportation Alternative

Transportation of crude oil via rail is not a viable alternative to the requester's proposed project due to issues associated with rail capacity, safety, and the environment.

Assuming a carrying capacity of 600 barrels per car, a total of 800 rail cars would be required to depart the tank terminal daily to transport 480,000 barrels of crude oil to its final destination. Loading and offloading 800 rail cars in a day would require servicing more than 33 rail cars per hour. With an assumption of 125 rail cars per train, approximately seven trains would have to depart the tank terminal every day.

Rail operations on the scale of the proposed project do not exist in the U.S. An oil-by-rail facility designed to handle an average of 360,000 bpd has been proposed in the Port of Vancouver, Washington. Known as the Vancouver Energy proposal, the project would

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be the largest rail terminal in the country (Florip, 2014). A rail transportation alternative to handle the volumes of the proposed project would require the design and construction of approximately 135% of the Vancouver Energy proposal. A facility of this size would incur its own environmental consequences.

From a safety standpoint, railroad transport consistently reports a substantially higher number of transportation accidents than pipelines (U.S. Department of Transportation [USDOT], 2015). A series of major accidents taking place in 2013 to 2014 in Canada and the U.S. has heightened concern about the risks involved in shipping crude by rail (Fritelli, 2014).

Increases in rail traffic necessary to transport the volume of crude oil proposed by the project would increase the emissions of combustion products due to the use of diesel engines which could have an adverse impact on air quality in the region. Construction of rail transfer terminals would result in emission of criteria pollutants such as VOCs, CO, NOx, SO₂, PM₁₀, and PM_{2.5}. The estimated emissions associated with the rail alternative are presented below:

Potential Emissions Associated with Rail Transportation Alternative							
Emission Source Description	Pollutant Emissions (tons per year)						
	NOx	CO	SO ₂	VOC	PM ₁₀	PM _{2.5}	GHG (CO ₂ e)
Railroad Diesel Emissions	290.3	67.7	4.8	11.7	7.4	7.4	26,021
Emissions are calculated based on 2,310,450 gallons of diesel per year.							

This alternative would also directly affect communities along utilized rail lines by increasing noise and creating transportation delays due to the substantial increase in rail traffic across railroad crossings of roads. Nationwide increases in oil production has led to increased transportation of oil through railways, which in turn, has led to increased traffic congestion. There have been documented cases across the country, where public safety and emergency services have been delayed because of traffic congestion caused by railroad delays and delays in public safety services (GAO, 2014). If railroad shipments continue to increase, the congestion and safety issues will continue to be exacerbated.

While rail tanker cars are a vital part of the short-haul distribution network for crude oil, pipelines are a more reliable, safer, and more economical alternative for the large volumes transported and long distances covered by the project. This alternative would create delays on the rail lines due to the substantial increase in rail traffic, resulting in shipping delays in other industries such as agriculture that cannot rely on pipeline transportation. For example, an increase in shipment of petroleum products via rail has contributed to difficulties for agricultural producers to ship produce and agricultural products to customers and consumers, and can increase the costs of shipping these products (U.S. Department of Agriculture [USDA], 2015). Furthermore, the purpose and

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need of the project would not be attainable with the current oil-by-rail infrastructure in the country, because rail loading facilities of sufficient size do not exist. As such, rail transportation is not considered a viable alternative.

(i). **Least environmentally damaging practicable alternative.** Based on careful analysis of the information provided, the project, as proposed by the applicant, after implementing measures to avoid and minimize impacts to wetlands and the aquatic environment, has been determined to be the least environmentally damaging practicable alternative.

(5) Evaluation of the 404(b)(1) Guidelines. (☐NA)

a. Factual determinations.

Physical Substrate.

☒ See Existing Conditions, paragraph 1

☒ Project implementation would cause some surface soil disturbance during ROW clearing due to equipment impacting the area. Trenching activities during pipeline construction will impact topsoil and subsoil within the trench area and this material will be temporarily side-cast while the pipeline is being welded, inspected and placed within the trench. Once this is completed, the soil will be placed back within the trench over the pipeline in reverse order, subsoil first then the topsoil last. The area will be placed back to pre-project contours and allowed to naturally revegetate as emergent habitat, within the permanent ROW. Temporary work areas will have contours restored and be allowed to revegetate naturally or be planted to restore to prior site conditions and habitat. There will be some wetlands filled for appurtenant structures along the pipeline. Any fill material placed within wetlands and below ordinary high water must be, to the best of the applicant's knowledge, free of pollutants, contaminants, toxic materials, trash, and other waste materials. The filling of wetlands and other waters with excavated and/or hauled-in fill material, while modifying the characteristics of the substrate of the site, should not result in any adverse effects on this criterion within the larger system.

Water circulation, fluctuation, and salinity.

☐ Addressed in the Water Quality Certification.

☒ Project implementation will have a temporary effect on water circulation patterns during construction, but is expected to gradually return to normal after construction and the ROW is returned to pre-project contours. The project proposes installation of the pipeline at an elevation four feet below natural ground elevation, including those reaches located in proximity to existing spoil banks. The restoration of pre-existing surface elevations over the pipeline will ensure no increased ground heights potentially affecting water movement are established by this action. Therefore, long-term measurable alterations to water flow and circulation patterns are not anticipated.

Suspended particulate/turbidity.

☐ Turbidity controls in Water Quality Certification.

☒ Construction activities required for project implementation may result in some localized increase in suspended sediment concentration and/or turbidity levels in area water bodies. The process of depositing earthen and aggregate fill involves exposing and disturbing soil material. Stormwater runoff from the site may contribute sediments to the water column until the disturbance is fully stabilized upon project completion. Appropriate and adequate erosion and sediment control measures must be implemented and maintained in effective operating condition during construction of the disposal area. Upon completion of the construction work, all disturbed areas shall be stabilized as soon as practicable by an appropriate seed mix. To the maximum extent practicable, the applicant should perform the work during dry conditions by separating flow waters from active work areas through the use of cofferdams, berms, temporary channels, or pipes in order to minimize downstream impacts due to the mobilization, transport, or deposition of sediments into waters beyond the areas indicated on the approved drawings. Any reduction in water quality resulting from the proposed construction activities is anticipated to be of short duration, and localized to an area immediately surrounding the construction site. The proposed project should have little short-term and no long-term effect.

Contaminant availability.

☒ General Condition requires clean fill. See also State WQC

☒ There are no known contaminated sites along the project route. There is a known Superfund site located approximately 0.5 mile north of the proposed Mermentau River crossing. Project area sediments are not expected to contain higher than normal background levels of contaminants. Neither the hauled-in material nor the sediments on site are expected to contain higher than normal background levels of contaminants. In the unlikely event that contamination is encountered during construction, measures outlined in the project-specific Unanticipated Discoveries Plan would be implemented to protect people and the environment by avoiding or minimizing any effects. The Louisiana Department of Environmental Quality determined that the placement of the fill material will not violate the water quality standards of Louisiana provided for under LAC 33:IX.Chapter11, and offered no objection to the proposed project, by letter dated 12 December 2017. All fill material that is to be placed within the project site should come from an approved location and have no known contaminants. No records of spills or hazardous substances are known or available for the project area.

Aquatic ecosystem and organisms.

☒ Wetland/wildlife evaluations, paragraphs 5, 6, 7 & 8.

☒ Short-term impacts to humans and wildlife from the proposed work would include increased turbidity levels due to excavation and spoil placement, visual affects of machinery, noise and human presence would occur during construction and some wildlife would relocate during construction activities.

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The subject pipeline corridor will traverse approximately 163 linear miles across Louisiana through multiple parishes and watersheds, therefore numerous habitats and ecosystems will be located along and within its planned route. Habitats and systems which are expected to be affected, would include but may not be limited to bottomland hardwoods, swampland, farmed wetlands, scrub shrub wetlands, wet pastures, emergent wetland areas, manipulated and unnatural systems, timbered areas, riverine and riparian zones, uplands, and waters.

While there are no permanent fill impacts proposed for the pipeline installation and overall project, there will be permanent conversion and green impacts associated with construction and maintenance of the pipeline ROW. For the proposed permanent pipeline ROW, areas of existing forested wetlands will be cleared of all tree stratum and hence be converted and maintained as predominantly a cleared herbaceous habitat. With that, typical habitats that will be affected throughout the Atchafalaya Basin in particular, which is a notable portion of subject route, would primarily include bottomland hardwoods and swamp habitats, along with multiple small and large waterway crossings. Bottomland hardwoods are forested alluvial wetlands occupying broad floodplain areas that typically are near river systems. These forests are found throughout Louisiana in all parishes, but are the predominant natural community type of the Mississippi River Alluvial Plain. Bottomland hardwood forests are characterized and maintained by a natural hydrologic regime of alternating wet and dry periods generally following seasonal flooding events. These forests can support distinct communities of plants and animals associated with particular landforms, hydric soils, and hydrologic regimes. They are important natural communities for maintenance of water quality, providing a very productive habitat for a variety of fish and wildlife species, and are important in regulating flooding and stream recharge.

Bottomland hardwoods are productive areas due in part to periodic flood-transported and deposited particulate and dissolved organic matter and nutrients. Bottomland hardwood forests contain a number of species which can be aggregated into specific associations or communities based on environmental factors such as physiography, topography, soils, and moisture regime (Allen 1997, The Nature Conservancy 2004). Swamplands throughout Louisiana and within the Atchafalaya Basin, are bog-like and wet. Louisiana swamps are conducive to growing trees such as cypress trees, because these trees grow in shallow water as well as on land. In addition, Spanish moss, vines, marsh grasses and palmettos, thrive in aquatic environments. The water found in Louisiana swamps moves so slightly that it is barely noticeable, though water levels can fluctuate due to changes in river stage. Many plants, like cypress and tupelo trees, are specifically adapted to wetland habitats. There are relatively few vertebrates, however, that can survive in this habitat, although several species spend at least part of their lives in swamps. Some fish, like gar

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and bowfin, are permanent swamp residents. The most common species in stillwater swamps are fish that can gulp oxygen and otherwise tolerate low oxygen levels.

Many other species of fish use the swamp as a nursery for juvenile fish, or move into swamps to feed during periods of high water levels. Reptiles and amphibians such as alligator, cottonmouth and other snakes, lizards like the skink, and numerous frog species thrive in the swamp. Birds are also important swamp fauna. Raptors such as Barred Owl, Marsh Hawk, and Red-Tailed Hawk are common in these habitats. Several passerine species occur in the swamp, including various species of warblers, woodpeckers, as well as cardinal and wren. Wading birds, ducks, and other water birds are specifically adapted to a wetlands environment. Wading birds commonly locate their nesting colonies in the swamp, where many potential predators can't reach them. Other mammals that do well in swamps include beaver, otter, muskrat, and nutria. Invertebrates such as oligochaete worms, clams, snails, shrimp, insects, and crawfish are among the large community of annelids, mollusks, and arthropods that live in swamps. The base of the invertebrate food chain in the swamp is the detritus, or leaf litter that covers the floor of the swamp. This litter supports a thriving community of detritivores, organisms that feed on detritus, particles of dead and decaying organic matter.

In addition to providing habitat for numerous species, freshwater wetlands also act as filters to remove excess nutrients and toxic pollutants from the water. They are tremendous filters for human sewage, toxic metals, and other types of pollutants. Wetlands also buffer coastal areas against wind and waves, and hold excess floodwater to help protect towns and cities during hurricanes and heavy rains. Cypress-Tupelo swamps are seasonally flooded, and only dry out during the severe droughts. Permanently waterlogged soils are relatively poor in oxygen, which makes swamps a very difficult place for plants to grow in. Normal soils are very porous, and these pores are usually filled with oxygen. But in waterlogged soils, water replaces the air in these pores, and the soils become anaerobic. This affects soil chemistry by shifting the pH balance from an oxidizing environment to a reducing environment. The reducing environment affects normal respiration in the roots of the plant, and interferes with the root's ability to take up certain nutrients. The reducing environment also creates sulfides, like hydrogen sulfides, and ferrous ions of iron, both of which are toxic to plants. Swamp species can typically tolerate high levels of these toxic chemicals. The waterlogged soils also make it hard for plants, especially large trees, to remain upright.

Following initial construction of the permanent pipeline ROW, it is expected that the maintained corridor will rapidly begin to convert into a scrub shrub habitat within the first to second growing season following construction activities. Scrub shrub is known to occur across a range of soils throughout Louisiana, and can be

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an important component and benefit to existing habitats and ecosystems. Lowland wet scrub shrub in Louisiana would generally be dominated by species of vegetation such as immature black willow, button bush, red maple and green ash, along with other native or introduced varieties of emergent vegetative coverage. If left unmanaged, scrub shrub will continue through its natural successional stages and likely develop into woodland.

Characteristically, pipeline and utility ROWs are mowed and maintained approximately every 2 to 5 years depending on the speed of vegetative growth in an area, environmental conditions, logistics, and local, state, and federal requirements. With that, it is expected that a typical ROW corridor will exist as more of a scrub shrub habitat during its life span, but will be continually converted back into an emergent/grassy habitat, following a maintenance cycle. Scrub shrub of varying age, vegetative species and setting can support a wide range of wildlife and aquatic organisms, in which some species depend on specific growth stages of certain plants, from bare ground through young and old growth, to detritus and decaying wood, to utilize for a favorable food source. With that, the cycle of rotating onsite habitats within the ROW, can provide a beneficial habitat diversity, food production, and bedding for native and migrant wildlife and aquatic organisms known to Louisiana, such as deer, bobcat, coyote, beaver, turkey, bear, small native mammals, birds, waterfowl, reptiles, amphibians, and even some fisheries that may be located within inundated areas of a ROW.

With that, scrub shrub can be an important part of both wetland and upland woodland ecosystems. As well as being important to a range of invertebrates, its setting can provide shelter and warmth within more open area systems such as farmlands, mature bottomland hardwoods and open swampland habitats. The high humidity of wet scrub shrub can favor the growth of mosses, lichens and fungi, and systems of four to five years old can support very high numbers of insects, which will benefit certain bird, reptile, and amphibian species in need of a food source.

As per USFWS documentation, scrub shrub wetlands typically occur at elevations that are just high enough to support woody plants, but in certain inundated areas and situations, are too low and too frequently submerged to support large trees. Scrub shrub wetlands usually occur from about mean higher high water to slightly above, and often form a nearly impenetrable thicket, where vegetation such as willow, tallow, and maple can be the dominant species, which would be a typical expectation for most of this utility line ROW. As with marshes, scrub shrub can provides nutrients for the estuary food chain. Dead leaves, branches, and flowering shrubs feed detritivores, which in turn feed fish and other organisms. Juvenile fish may find food and shelter from strong currents in the web of narrow channels that wind through the scrub shrub. Passerine birds may forage and nest in the young willows and tallows, and ducks will likely feed on invertebrates and herbaceous plant seeds during high tides or extreme water events. Beaver would also be known to eat the bark of the willows and other immature tree species.

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Nonetheless, as some potential benefits would be expected and accrued from providing this diversity of habitat, it is anticipated that the ongoing maintenance cycle and machinery disturbance will also have some long term minor negative effects to species in the area, as most species and wildlife will temporarily evacuate the areas during these maintenance clearing events.

Proposed disposal site.

- ☒ Public interest, paragraph 7.
- ☒ Approximately 1,525,897 cubic yards of fill material will be temporarily side cast onsite in order to construct the pipeline. Approximately 29,365 cubic yards of crushed stone/gravel and concrete will be used to construct two pumping stations, 23 mainline valves, and 21 permanent access roads, all of which are located wholly outside of any waters of the U.S.

Cumulative effects on the aquatic ecosystem.

- ☒ See Paragraph 7.e
- ☒ The proposed project will change and/or reduce wetland functional quality along the proposed ROW by conversion of forested habitat types and temporary clearing during construction. Since the project is larger in function and size when compared to the extent of other wetlands directly and/or secondarily affected by previous development activities, it would contribute cumulatively to wetland alteration and loss within all watersheds that it crosses. Based on the evaluation of human activities and land use trends in this region, it is reasonable to anticipate that future activities will further contribute to cumulative degradation of wetland resources. In the past, many actions were taken with little consideration given to project related impacts on the wetland ecosystems. However, a greater realization of the importance of wetlands to the public has resulted in critical evaluation of the need to impact wetlands for residential, commercial or industrial developments. With gained knowledge comes technological advancement in developing more environmentally sensitive project designs and construction methods, as well as requirement to functionally compensate unavoidable project-related impacts to wetlands so as to meet the Nation's goal of no net loss of wetland resources. As with this project, wetlands will continue to be impacted by a progressive society. However, in having a greater awareness of the importance of wetlands, impacts associated with this and future development activities will be evaluated to assure a balance is maintained between development and impacts on the environment. It is anticipated that through the efforts taken to avoid and minimize effects on the project site wetlands and the mandatory implementation of a mitigation plan that functionally compensates unavoidable remaining impacts, permit issuance will not result in substantial direct, secondary or cumulative adverse impact on the aquatic environment.

Secondary effects on the aquatic ecosystem.

☒ See Paragraph 7.e.

☒ A majority of the proposed activity is located adjacent to existing pipeline ROW's. The surrounding area is a mixture of some residential, agricultural and forest land. The proposed activity could result in secondary water quality water quality impact through the mobilization and release of any contaminants occurring within the excavated and/or fill material; however, the material to be excavated on-site is not known or expected to contain substantially elevated contaminant concentrations. Proposed project related clearing, trenching and backfilling activities are not expected to result in substantial direct mortality of any aquatic species inhabiting the project area, or expected loss of aquatic habitats, hydrology, or wetland contours. Restoration of pre-existing contours and elevations along the pipeline ROW will minimize it's potential to incur long-term changes in drainage and flow patterns, flooding and sediment distribution and accretion in environmentally sensitive areas such as the Atchafalaya Basin.

b. Restrictions on discharges (230.10).

- i. It ☒has/☐has not been demonstrated in paragraph 5 that there are no practicable nor less damaging alternatives which could satisfy the project's basic purpose. The activity ☒is/☐is not located in a special aquatic site (wetlands, sanctuaries, and refuges, mudflats, vegetated shallows, coral reefs, riffle & pool complexes). The activity ☐does/☒does not need to be located in a special aquatic site to fulfill its basic purpose.
- ii. The proposed activity ☐does/☒does not violate applicable State water quality standards or Section 307 prohibitions or effluent standards (☐based on information from the certifying agency that the Corps could proceed with a provisional determination). The proposed activity ☐does/☒does not jeopardize the continued existence of federally listed threatened or endangered species or affects their critical habitat. The proposed activity ☐does/☒does not violate the requirements of a federally designate marine sanctuary.
- iii. The activity ☐will/☒will not cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms' ecosystem diversity, productivity and stability; and recreation, esthetic, and economic values.
- iv. Appropriate and practicable steps ☒have/☐have not been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (see Paragraph 8 for description of mitigative actions).

- (6) **Public Interest Review:** All public interest factors have been reviewed as summarized here. Both cumulative and secondary impacts on the public interest were considered. Public interest factors that have had additional information

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relevant to the decision are discussed in number 7.

				+ Beneficial effect
				0 Negligible effect
				- Adverse effect
				M Neutral as result of mitigative action
+	0	-	M	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Conservation.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Economics.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Aesthetics.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	General environmental concerns.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Wetlands.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Historic properties.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fish and wildlife values
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flood hazards.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain values.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Land use.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Navigation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shore erosion and accretion.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recreation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water supply and conservation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water quality.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Energy needs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Food and fiber production.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mineral needs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Considerations of property ownership.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Needs and welfare of the people.

(7) Effects, policies and other laws.a. ☐ N/A**Public Interest Factors.**

Economics: The proposed project is estimated to generate an economic benefit of over \$829 million in economic output for the state, represented by the direct, indirect, and induced impacts from construction spending in Louisiana. Further, the proposed project could create over 1,500 temporary construction jobs. These temporary construction jobs could create considerable labor income and state income tax revenue during approximately 8 months of construction. Operation of the proposed project is estimated to generate a total of \$9.5 million in economic output for the state during the first 5 years of operation. During the same 5 years, operation of the proposed project is estimated to generate \$7 million in total wages for permanent employees and over \$200,000 in state/local tax revenue. Indirect and induced economic growth associated with the

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construction and operation of the overall project could result in the creation of over 2,500 additional jobs, which would generally be temporary and of variable duration.

General Environmental Concerns, Wetlands: These concerns were brought up during the public notice and public hearing comment periods. The applicant fully addressed these concerns through project minimization. The applicant is also providing compensatory mitigation at eleven Corps approved mitigation banks within watersheds of impact. The compensatory mitigation plan was coordinated with EPA, USFWS and LDWF. EPA concurred by email dated 25 July 2017 and LDWF concurred by email dated 21 June 2017. By email dated 2 November 2017, USFWS stated that due to their recently reduced role in the wetland regulatory program, they would not provide input on the final mitigation plan and they therefore defer to the other natural resource management agencies regarding the final mitigation plan.

Flood Hazards, Floodplain Values: The applicant also minimized the project as much as feasibly practicable and has provided compensatory mitigation at multiple approved mitigation banks within each of the Louisiana River Basins impacted. With the restoration of pre-project contours, it is not anticipated that the project will increase flood hazards over pre-project conditions.

Food and Fiber Production: Aside from wetlands, the proposed pipeline also traverses lands currently in cultivation for a variety of crops, such as sugar cane, as well as in use as pasture for cattle grazing. Construction activities will temporarily affect agricultural uses of land due to trenching, placement of excavated material and movement of construction personnel and equipment. However, once the pipeline is installed and surface contours restored, pre-existing uses as cropland and pasture will resume with minimal disruption to overall agricultural productivity.

Water Supply & Conservation: There are two main sources of drinking water along the proposed pipeline route: groundwater and surface waters. The Chicot aquifer, which underlies the first approximately 96 miles of the proposed pipeline, is designated as a sole source aquifer by the Environmental Protection Agency (EPA) because it is the principal source of fresh groundwater for the southwest region of Louisiana (Louisiana Department of Transportation and Development [DOTD], 2004). The mean screen bottom depth for wells that withdraw potable water from this aquifer is generally located between 36 and 98 feet below ground surface (DOTD, 2004). The remaining approximately 67 miles of the proposed pipeline is underlain by the Lower Mississippi River alluvial aquifer. This aquifer is utilized primarily for industrial and agricultural purposes (U.S. Geological Survey [USGS], 2017a). The primary source of drinking water for people living in communities underlain by the Lower Mississippi River alluvial aquifer is surface waters. As outlined below, construction of the proposed project is not expected to have impacts on water supply and conservation.

Installation of the proposed pipeline via traditional open-cut methods would, in general, avoid direct or indirect impacts on the Chicot aquifer due to the depth at which the pipeline

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is installed. Installation of the pipeline using the HDD method is likely to interface with groundwater. However, due to the nature of HDD methodology, this construction method is inherently not a risk to groundwater resources as it uses benign substances (bentonite and water) to remove cuttings and maintain the integrity of the hole. Further, any obstruction to the flow of groundwater would be negligible and limited to the area immediately surrounding the pipeline. With the exception of the permanent aboveground facilities and access roads, all disturbed areas will be returned to pre-existing conditions and allowed to revegetate upon completion of construction. Therefore, the proposed project is not expected to have impacts on the recharge of the Chicot aquifer once construction is complete.

Impacts on large surface waters utilized for drinking water (e.g., Bayou Lafourche) would be avoided by utilizing the HDD method to install the proposed pipeline. Impacts on other surface waters crossed utilizing the traditional open-cut method would be temporary and of short-duration. Once construction is complete, the surface waters would return to pre-construction conditions and there would be no expected impacts on water supply to downstream communities.

Impacts on the water quality of surface waters, including those utilized for drinking water, are regulated by the LDEQ under Section 401 of the *Clean Water Act*. BBP is required to obtain a Water Quality Certification from the LDEQ prior to commencing construction of the proposed project. Additionally, the Bayou Lafourche Fresh Water District (BLFWD) regulates activities that directly impact Bayou Lafourche, which, as stated above, is utilized as a source of drinking water. The proposed crossing of Bayou Lafourche was approved by the BLFWD Board on October 25, 2016. Per Section 1424(e) of the *Safe Drinking Water Act* of 1974, potential impacts on sole source aquifers by projects that receive federal financial assistance are reviewed and approved by the EPA. The proposed project does not require review/approval from the EPA regarding potential impacts to the Chicot aquifer as it does not involve federal funding. However, as stated previously, it is anticipated that construction of the project would not have any impacts to the Chicot aquifer.

Once construction is complete, BBP has stated that they would maintain and inspect the pipeline in accordance with or in exceedance of regulations, industry codes, and prudent pipeline operating protocols and techniques. Therefore, operation of the proposed pipeline would, in general, not result in direct or indirect impacts on groundwater. Should a spill occur during operations, BBP would implement measures outlined in the project's Facility Response Plan (FRP) to minimize and mitigate any potential impacts. The project's FRP is required to be approved by the PHMSA prior to the start of operations.

Energy Needs: The project would improve overall safety to the public and environment by providing a safe and efficient means of transporting crude oil and reducing the amount of crude oil shipped via rail, truck, and waterborne means. The project would contribute to increasing America's energy independence by transporting domestically produced crude oil to support United States consumers' energy demands. Also, Gulf

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Coast refineries would have better access to more reliable United States crude oil production to be used to meet United States consumers' need for gasoline, diesel fuel, and other petroleum products.

Needs and Welfare of the people: Constructing this proposed project will enable BBP to transport crude oil from the Clifton Ridge Terminal in Lake Charles, Louisiana to existing facilities located near St. James, Louisiana via a pipeline as opposed to alternative methods determined less safe by PHMSA. In addition, products derived from the refining of crude oil will be utilized by the public for diverse purposes, such as energy, petrochemical products, etc.

Land Use: The proposed pipeline ROW will cross multiple landowners along the route. It is expected that the ROW across all lands will be cleared, pipe trench dug, fill temporarily side-cast, pipeline constructed, installed in the trench, and backfill over the pipeline. The permanent and temporary ROW will be returned to pre-project contours after the project is completed. The permanent ROW will be maintained free of trees and woody scrub-shrub species and the temporary ROW will be allowed to re-vegetate or will be re-planted. The pipeline ROW will maintain its wetland functions, however, will lose the forested habitat on some areas of the permanent ROW.

b. Endangered Species Act. ☐ NA.

A field investigation was conducted by the applicant's agent, Perennial Environmental Services, LLC, to identify any threatened and endangered species, designated critical habitat, or potentially suitable habitat within the project footprint. At the time of the surveys, the following species were federally listed as threatened or endangered: piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), red-cockaded woodpecker (*Leuconotopicus borealis*), Atlantic sturgeon (*Acipenser oxyrinchus desotoi*), pallid sturgeon (*Scaphirhynchus albus*), West Indian manatee (*Trichechus manatus*), Louisiana black bear (*Ursus americanus luteolus*), green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricata*), Kemp's Ridley sea turtle (*Lepidochelys kempii*), leatherback sea turtle (*Dermochelys coriacea*), loggerhead sea turtle (*Caretta caretta*), and Alabama heelsplitter (*Potamilus inflatus*). The complete results of the survey were provided in the Threatened and Endangered Species and Sensitive Resource Report. The applicant determined that the project would cross potentially suitable habitat for the pallid sturgeon, specifically the Atchafalaya River and the Gulf Intracoastal Waterway (GIWW). Furthermore, the applicant proposes to withdraw water from these waterbodies to conduct hydrostatic testing of the pipeline once construction is complete. In order to avoid and minimize potential impacts on pallid sturgeon, the applicant will utilize HDDs to cross both the Atchafalaya River and GIWW, will implement measures to minimize/avoid the entrainment and entrapment of pallid sturgeon during water withdrawals, and will implement measures outlined in the project-specific Spill Prevention and Response Plan and the Plan for Containment of Inadvertent Release of Drilling Mud During Horizontal Directional Drilled Wetland and Waterbody Crossings. As a result of the implementation of these measures, it was

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determined that the proposed project is not likely to adversely affect the pallid sturgeon. On February 19, 2016, the applicant submitted the Threatened and Endangered Species and Sensitive Resources Report to the USFWS Louisiana Ecological Field Office. On March 14, 2016, the USFWS Louisiana Ecological Field Office issued a letter indicating that they concur with the no effect and not likely to adversely affect determination. The USFWS also indicated that no further consultation with the USFWS under Section 7 of the Endangered Species Act would be required unless there are significant changes in the scope or location of the proposed project, or if it has not been initiated within one year of the date of the letter. In accordance with this stipulation, the applicant submitted a letter to the USFWS Louisiana Ecological Field Office on February 1, 2017 requesting the reissuance of a concurrence letter for the project as it had not been initiated within one year of the original concurrence letter. On February 27, 2017, the USFWS Ecological Field Office reissued a concurrence letter for the proposed project. The USFWS Ecological Field Office also noted in a letter dated May 10, 2017 that the proposed water withdrawals from the Atchafalaya River and GIWW are not likely to adversely affect pallid sturgeon.

The Threatened and Endangered Species and Sensitive Resource Report also provides analysis of the project's potential impacts on other protected resources, such as bald eagles (*Haliaeetus leucocephalus*) and colonial wading birds and their rookeries. Bald eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Aerial surveys conducted in April 2016 documented eight bald eagles within the 2,000-foot-wide aerial survey corridor. However, the applicant has designed the project to minimize impacts on the species by co-locating the pipeline with existing utilities through a majority of the forested areas and by utilizing the HDD crossing method to limit the disturbance of potentially suitable habitat located along major rivers and bayous. The aerial surveys of the proposed project route did not document any bald eagle nests within the 2,000-foot-wide aerial survey corridor. In the event that a bald eagle nest is observed in the project area during or prior to construction, the applicant will adhere to the buffer requirements established in the USFWS National Bald Eagle Management Guidelines to avoid/minimize potential impacts. Colonial wading birds and their rookeries are protected under the Migratory Bird Treaty Act, and suitable habitat was identified along the proposed project route. Furthermore, the aerial surveys documented a total of four rookeries in the project area; however, only two rookeries were located within 1,000 feet of the proposed construction footprint. The applicant will conduct pre-construction surveys to determine if the rookeries are still present prior to the start of construction if work in these areas will occur during the nesting season. Additionally, the applicant will attempt to restrict construction activities in areas located within 300 meters of active rookeries to the non-nesting period to the maximum extent practicable. The applicant may move equipment through the restricted zone, but no active construction would occur in these areas.

As of April 11, 2016, the Louisiana black bear (*Ursus americanus luteolus*), was delisted from the Endangered Species list, however, it is still regulated by the LDWF. A special condition of the DA permit will be included to address black bear concerns.

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The USFWS-SLOPES Agreement of 22 October 2014 - Determination Key was conducted on 3 October 2016 and resulted in a "Not likely to Adversely Affect" for the Pallid sturgeon (*Scaphirhynchus albus*) and would have no effect on all other listed species.

The proposed project:

- i. Will not affect these threatened or endangered species:
☐ Any/☒ Piping plover, Red knot, Red-cockaded woodpecker, Atlantic Sturgeon, Pallid sturgeon, West Indian manatee, Green sea turtle, Hawksbill sea turtle, Kemp's ridley sea turtle, Leatherback sea turtle, Loggerhead sea turtle, and the Alabama heelsplitter mussel.
- ii. May affect, but is not likely to adversely affect:
Species:
 - (3) ☐ Will/☐ Will not likely adversely affect:
 - (4) ☐ Is/☐ Is not likely to jeopardize the continued existence of the: N/A
 - (5) The Services ☒ concurred/☐ provided a Biological Opinion(s). By letters dated February 19, 2016, February 27, 2017, and May 10, 2017, the USFWS concurred that the proposed project is not likely to adversely affect the Pallid sturgeon and will have no effect on all other federally listed species that could potentially occur within the project area.

c. Essential Fish Habitat. Adverse impacts to Essential Fish Habitat ☐ will/☒ will not result from the proposed project. The proposed project will cross estuarine habitat identified as essential fish habitat in Calcasieu Parish. The EFH is comprised of both open water habitat within non-vegetated soft mud substrates and estuarine emergent/estuarine scrub-shrub wetlands. The applicant proposes to avoid direct impacts on the estuarine scrub-shrub wetlands, the main channel of the Calcasieu River, and the areas classified as open water habitat through the use of the HDD crossing method. Impacts on estuarine emergent wetlands would result from workspace needed to successfully install the pipeline via the HDD crossing method. All impacts would be temporary and upon completion of construction, the applicant will restore the temporarily impacted areas to pre-construction contours to the maximum extent possible, which will minimize long-term impacts on EFH. The National Marine Fisheries Service stated that they have no objection to the issuance of the permit in an email dated October 3, 2016.

d. Historic Properties. The proposed project ☐ will/☒ will not have any effect on any sites listed, or eligible for listing, in the National Register of Historic Places, or otherwise

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of national, state, or local significance based on ☒ letters from SHPO/☐ the lack of any comments or objections by the SHPO. A Phase 1 Cultural Resources Survey Report was submitted by the applicant's agent Perennial Environmental Services, LLC, for to the SHPO on April 4, 2016. Subsequent addendum reports were submitted on July 1, 2016, November 11, 2016, and February 7, 2017. The cultural resource surveys documented a total of 30 archeological sites within the survey area. The SHPO issued concurrence letters stating that the proposed project would have no impact on sites eligible for listing on the National Register of Historic Places on April 14, 2016, July 12, 2016, November 22, 2016, and February 16, 2017.

e. Cumulative & Secondary Impacts. Cumulative and secondary impacts/affects were assessed in our review. Significant secondary and cumulative impacts are not anticipated provided the applicant adheres to the special conditions in the Department of the Army permit. The geographic area for this assessment are the eight USGS HUC's that the pipeline route crosses.

(1). Baseline. The proposed project crosses 8, 8-digit HUC's with wetlands comprising varying percentages of land types in each basin. There are also numerous miles of streams contained within the watershed comprised of perennial, intermittent, and ephemeral tributaries. Similar CEMVN permits for the period 1970-present has authorized impacts to numerous acres of wetlands and many linear feet of stream. The projection is that authorizations will continue to ☐decrease/☒increase/☐ at the current rate because population growth, energy needs, industrial development and infrastructure activity appear to be increasing based on reasonably foreseeable market demands within these watersheds. Natural resource issues of particular concern [from Corps & non-Corps activities] are permanent loss of wetlands (of which this project constitutes primarily temporary and/or conversion impacts, not permanent wetland loss), loss of fish and wildlife habitat, and impacts to water quality.

Methodology – The percentages listed below are the sum total of features in USGS HUCs (Lower Calcasieu, Mermentau, Vermilion, Bayou Teche, Atchafalaya, Lower Grand, West Central Louisiana Coastal, and East Central Louisiana Coastal). Data to calculate percentages were derived from USGS 2011 National Land Cover Dataset (wetlands) and USGS 2014 National Hydrography Dataset (intermittent and perennial streams). National Wetlands Inventory maps do not cover all the watersheds impacted by the proposed project, therefore USGS data was used instead. No remote dataset exists for ephemeral tributaries; therefore, this % has been left blank. The following tables provide a breakdown by individual 8-digit HUC watershed.

Lower Calcasieu (HUC 8: 08080206)**National Land Cover Classification****Percentage of Impacts**

Barren Land	<1%
Cultivated Crops	34%
Deciduous Forest	0%

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Developed, Low Intensity	7%
Developed, Medium Intensity	<1%
Developed, Open Space	18%
Emergent Herbaceous Wetlands	3%
Evergreen Forest	8%
Grassland/Herbaceous	2%
Mixed Forest	<1%
Open Water	2%
Pasture/Hay	23%
Shrub/Scrub	1%
Wood Wetlands	1%
NHD Stream Crossings	Miles
Perennial	0.75
Intermittent	0.15

Mermentau (HUC 8: 08080202)

National Land Cover Classification	Percentage of Impacts
Barren Land	<1%
Cultivated Crops	80%
Deciduous Forest	<1%
Developed, Low Intensity	4%
Developed, Medium Intensity	<1%
Developed, Open Space	1%
Emergent Herbaceous Wetlands	<1%
Evergreen Forest	<1%
Grassland/Herbaceous	2%
Mixed Forest	<1%
Open Water	<1%
Pasture/Hay	7%
Shrub/Scrub	2%
Wood Wetlands	3%
NHD Stream Crossings	Miles
Perennial	0.36
Intermittent	1.70

Vermilion (HUC 8: 08080103)

National Land Cover Classification	Percentage of Impacts
Barren Land	0%
Cultivated Crops	63%
Deciduous Forest	0%

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National Land Cover Classification	Percentage of Impacts
Developed, Low Intensity	6%
Developed, Medium Intensity	<1%
Developed, Open Space	5%
Emergent Herbaceous Wetlands	<1%
Evergreen Forest	<1%
Grassland/Herbaceous	1%
Mixed Forest	<1%
Open Water	<1%
Pasture/Hay	21%
Shrub/Scrub	<1%
Wood Wetlands	3%
NHD Stream Crossings	Miles
Perennial	0.20
Intermittent	1.01

Bayou Teche (HUC 8: 08080102)

National Land Cover Classification	Percentage of Impacts
Barren Land	0%
Cultivated Crops	64%
Deciduous Forest	<1%
Developed, Low Intensity	8%
Developed, Medium Intensity	<1%
Developed, Open Space	4%
Emergent Herbaceous Wetlands	<1%
Evergreen Forest	0%
Grassland/Herbaceous	1%
Mixed Forest	<1%
Open Water	2%
Pasture/Hay	5%
Shrub/Scrub	1%
Wood Wetlands	14%
NHD Stream Crossings	Miles
Perennial	0.26
Intermittent	0.32

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National Land Cover Classification	Percentage of Impacts
Barren Land	0%
Cultivated Crops	0%
Deciduous Forest	0%
Developed, Low Intensity	0%
Developed, Medium Intensity	0%
Developed, Open Space	<1%
Emergent Herbaceous Wetlands	7%
Evergreen Forest	0%
Grassland/Herbaceous	0%
Mixed Forest	0%
Open Water	6%
Pasture/Hay	0%
Shrub/Scrub	0%
Wood Wetlands	86%
NHD Stream Crossings	Miles
Perennial	4.18
Intermittent	0.04

Lower Grand (HUC 8: 08070300)

National Land Cover Classification	Percentage of Impacts
Barren Land	0%
Cultivated Crops	8%
Deciduous Forest	0%
Developed, Low Intensity	1%
Developed, Medium Intensity	0%
Developed, Open Space	1%
Emergent Herbaceous Wetlands	1%
Evergreen Forest	0%
Grassland/Herbaceous	0%
Mixed Forest	0%
Open Water	2%
Pasture/Hay	0%
Shrub/Scrub	0%
Wood Wetlands	87%
NHD Stream Crossings	Miles
Perennial	0.40
Intermittent	0.06

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National Land Cover Classification	Percentage of Impacts
Barren Land	0%
Cultivated Crops	57%
Deciduous Forest	0%
Developed, Low Intensity	7%
Developed, Medium Intensity	<1%
Developed, Open Space	<1%
Emergent Herbaceous Wetlands	3%
Evergreen Forest	0%
Grassland/Herbaceous	0%
Mixed Forest	0%
Open Water	1%
Pasture/Hay	0%
Shrub/Scrub	0%
Wood Wetlands	31%
NHD Stream Crossings	Miles
Perennial	0.40
Intermittent	0.19

East Central Louisiana (HUC 8: 08090301)

National Land Cover Classification	Percentage of Impacts
Barren Land	1%
Cultivated Crops	56%
Deciduous Forest	<1%
Developed, Low Intensity	2%
Developed, Medium Intensity	<1%
Developed, Open Space	3%
Emergent Herbaceous Wetlands	1%
Evergreen Forest	0%
Grassland/Herbaceous	0%
Mixed Forest	0%
Open Water	<1%
Pasture/Hay	0%
Shrub/Scrub	0%
Wood Wetlands	36%
NHD Stream Crossings	Miles
Perennial	0.30
Intermittent	0.45

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(2). Context. The proposed project is ☐typical of ☐a precedent ☒very large compared to ☒other pipeline activities within the watersheds. Developments similar to the proposal have occurred since the 1930's and earlier, when large scale cross-country pipelines began to be constructed through Louisiana, Texas and the United States. Future conditions are expected to be similar to current conditions. Besides CEMVN authorized projects, other activities include forestry, agriculture, coastal restoration, dredging, residential/commercial development, infrastructure (transportation, electric transmission) etc. Resulting natural resource challenges and stresses include permanent loss of wetlands (of which this project constitutes temporary or conversion impacts, not permanent wetland loss), loss of wildlife habitat, and impacts to water quality. A key issue(s) of concern in this watershed is loss of wetland function and value.

(3) Mitigation and Monitoring. The project affects the following key issue(s): conversion of forested wetlands to emergent wetlands in the permanently maintained pipeline right-of-way and temporary impacts from the construction right-of-way. The proposed project does not have any permanent fill within waters of the U.S. Approximately 639.30 acres of wetlands and other waters will be impacted as part of the proposed project. Of the 639.30 acres, approximately 597.48 acres are comprised of wetlands and the remaining 41.82 acres are comprised of other waters. Of the 597.48 acres proposed to be impacted, approximately 142.03 acres are proposed to be permanently converted from either a scrub-shrub habitat or forested habitat to an herbaceous habitat and approximately 455.45 acres will be temporarily impacted through project construction. The 455.45 acres of wetlands that are temporarily impacted is comprised of E2EM1 wetlands (4.18 acres), PEM1 wetlands (144.21 acres), PFO1 wetlands (138.11 acres), PFO2 wetlands (161.41 acres), and PSS1 wetlands (7.54 acres).

For the proposed project, temporary fill and conversion impacts are the most prevalent wetland impacts. These impacts are dependent upon the wetland type, their location within the construction footprint. When the construction is completed, both the permanent ROW and temporary workspace (TWS) will be returned to pre-construction contours and the temporary work areas will be allowed to revegetate naturally and/or be replanted. Impacts associated with maintenance activities along the permanent ROW that will not preclude the return of the previous vegetation types have been classified as temporary. The breakdown of the temporary impacts by workspace for the proposed project was comprised of the following. The following are abbreviations for the areas of impacts in the below tables, AR-Access Roads, TWS-Temporary Workspace, MLV-Mainline Valve:

	E2EM1	E2SS1	PEM1	PFO1	PFO2	PSS1	PUB3	Grand Total
ROW	1.18	0	65.19	0	0	0	23.99	90.36
AR	0	0	1.23	0.14	0.12	0	0.85	2.34
TWS	3.00	0	77.79	137.97	161.29	7.54	16.93	404.52
MLV	0	0	0	0	0	0	0.05	0.05

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TOTALS	4.18	0	144.21	138.11	161.41	7.54	41.82	497.27
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The conversion impacts were determined based on the type of wetland, the wetland's position within the construction footprint, and the intended maintenance activities over the life of the pipeline. Permanent conversion typically applies to wetlands identified as scrub/shrub or forested. The breakdown of the conversion impacts by workspace for the proposed project was comprised of the following:

	E2EM1	E2SS1	PEM1	PFO1	PFO2	PSS1	PUB3	Grand Total
ROW	0	0	0	59.08	77.96	4.51	0	141.55
AR	0	0	0	0	0	0	0	0
TWS	0	0	0	0	0	0	0	0
MLV	0	0	0	0.27	0.21	0	0	0.48
TOTALS	0	0	0	59.35	78.17	4.51	0	142.03

The proposed Project will not result in the placement of permanent fill within wetlands or waters of the U.S.

f. **Corps Wetland Policy.** Based on the public interest review herein, the beneficial effects of the project outweigh the detrimental impacts of the project.

g. ☐ NA) **Water Quality Certification under Section 401 of the Clean Water Act**
☒ has/ ☐ has not yet been issued by ☐ / ☒ State/ ☐ Commonwealth. The Louisiana Department of Environmental Quality Water Quality Certification (WQC 160921-03) was issued on 12 December 2017.

h. **Coastal Zone Management (CZM) consistency/permit:** Issuance of a State Coastal Use Permit certifies that the project is consistent with the CZM plan. There is no evidence or indication from the Louisiana Department of Natural Resources that the project is inconsistent with their CZM plan. The LA Department of Natural Resources, Office of Coastal Management issued their state Coastal Use Permit (P20160166) on 3 April 2017.

i. **Other authorizations.**

j. (☒ NA) **Significant Issues of Overriding National Importance.**

8. Compensation and other mitigation actions.

a. **Compensatory Mitigation**

(1) Is compensatory mitigation required? ☒ yes ☐ no [If "no," do not complete the rest of this section]

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(2) Is the impact in the service area of an approved mitigation bank? ☒ yes ☐ no

The Louisiana Wetland Rapid Assessment Method was utilized to determine the acquisition of a total of 714.5 acres of suitable habitat credits, from approved mitigation banks within the watershed of impact. To satisfy the requirements of compensatory mitigation, the applicant purchased a total of 578.2 acres of bottomland hardwood from nine mitigation banks across the six river basins in which the project impacts occur. The banks included Moss Lake, Caney Creek, Bayou Choupique, Bayou Fisher, Rosedale, Bayou Grand Coteau-Addendum 1, Ponderosa Ranch, Ponderosa Ranch Amendment 1, and Laurel Valley. A total of 134.6 acres of cypress/tupelo gum swamp were purchased from eight mitigation banks across five river basins in which the project impacts occur. The mitigation banks included Caney Creek, Bayou Choupique, Bayou Fisher, Big Darbonne, Bayou Grand Coteau-Addendum I, Ponderosa Ranch, Ponderosa Ranch Amendment 1 and Laurel Valley. A total of 1.7 acres of coastal prairie were purchased from two mitigation banks across three river basins in which the project impacts occur. The mitigation banks included Moss Lake and Lacassane. The remaining 193.93 acres of temporary impacts have been granted a 1 year growing season, to assess site restoration, further remediation measures, or additional compensatory mitigation needs. The following mitigation summarization by Basin and associated spread sheet were provided by the applicant's agent, in order to clearly explain and portray the approved method and hierarchy of mitigation, compensation, and credits acquired.

The project impacts occur within six river basins and the service area of eleven approved mitigation banks. Appropriate compensatory mitigation was purchased at these banks to offset unavoidable impacts to wetlands that would result from permit issuance. In summary, all impacts were offset utilizing either in-kind / in-basin credits or a combination of in-kind / in-basin credits and out-of-kind / in-basin credits. For example, there were not enough in-kind credits to offset the project's impacts to SWP wetlands within both the Atchafalaya River and Terrebonne Basins. Therefore, in accordance with the preferred mitigation hierarchy as set forth by the USACE, the applicant purchased out-of-kind credits (i.e., BLH credits) to offset those portions of the SWP impacts that could not be offset by in-kind credits within the respective basins. The applicant did not purchase any out-of-basin credits to offset the project impacts.

In summary, there are four river basins (Calcasieu, Mermentau, Atchafalaya, and Terrebonne) where the proposed mitigation acres outlined in the mitigation plan do not match what was eventually purchased by BBP. **Table 1**, which was included in the final Compensatory Mitigation Plan, has been revised to better show where the differences actually occur and is provided below. Those cells that are highlighted red indicate where the acres/LRAM credits to be purchased as outlined in the final Compensatory Mitigation Plan differ from what was actually purchased by BBP from the respective banks. An explanation of the differences for each of the four river basins is provided in the following sections.

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In the Calcasieu River Basin, the final Compensatory Mitigation Plan had indicated that BBP would purchase 3.0 acres of BLH credits from the Moss Lake Mitigation Bank. However, the final mitigation letter issued by the USACE on August 11, 2017 indicated that BBP was only required to purchase 2.9 acres per the LRAM spreadsheet. Therefore, BBP purchased 2.9 acres of BLH credits from the Moss Lake Mitigation Bank rather than the originally proposed 3.0 acres.

Mermentau River Basin

In the Mermentau River Basin, the final Compensatory Mitigation Plan had indicated that BBP would purchase 1.4 acres of coastal prairie credits from the Lacassane Mitigation Bank. Prior to the issuance of the final mitigation letter by the USACE, BBP had agreed to purchase a total of 5.0 acres of coastal prairie credits from the Lacassane Mitigation Bank based on initial impact estimates, and the Lacassane Mitigation Bank debited their ledger on October 26, 2016. However, as a result of subsequent route adjustments in the Mermentau River Basin, the mitigation required to offset the project's impacts on wetlands characterized as coastal prairie was reduced from 5.0 acres to 1.4 acres. As a result, BBP has over-mitigated for the project's impacts on wetlands characterized as coastal prairie within the Mermentau River Basin by 3.6 acres.

Atchafalaya River Basin

In the Atchafalaya River Basin, BBP had proposed to purchase 56.0 in-kind acres and 172.8 out-of-kind acres from the Bayou Fisher Mitigation Bank to offset the project's impacts to wetlands characterized as bald cypress/tupelo swamp. However, due to a credit release, the Bayou Fisher Mitigation Bank had a total of 65.0 in-kind acres available for purchase. Therefore, BBP purchased additional in-kind acres and less out-of-kind acres from the Bayou Fisher Mitigation Bank to be consistent with the USACE's mitigation policy (i.e., in-kind mitigation is preferred over out-of-kind mitigation).

Terrebonne Basin

In the Terrebonne River Basin, BBP had proposed to purchase BLH and/or bald cypress/tupelo swamp credits from three different banks: Rosedale Mitigation Bank, Bayou Grand Coteau – Addendum I Mitigation Bank, and Ponderosa Ranch Mitigation Bank. BBP ultimately purchased the same number of BLH credits (i.e., 50.0 acres) from the Rosedale mitigation as was proposed in the final Compensatory Mitigation Bank. Similarly, BBP purchased the same number of BLH credits (i.e., 4.8 acres) and bald cypress/tupelo swamp credits (i.e., 30.8 acres) from the Bayou Grand Coteau – Addendum I Mitigation Bank as was proposed in the final Compensatory Mitigation Bank. As for the Ponderosa Ranch Mitigation Bank, the number of BLH and bald cypress/tupelo swamp acres ultimately purchased by BBP differs than what was proposed in the final Compensatory Mitigation Plan, because the Ponderosa Ranch Mitigation Bank did not have enough BLH and bald cypress/tupelo swamp acres available to offset the remaining impacts within the basin.

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BBP purchased additional BLH and bald cypress/tupelo swamp acres from the Ponderosa Ranch – Amendment Mitigation Bank. It should be noted that the Ponderosa Ranch – Amendment Mitigation Bank has a higher mitigation potential for both BLH and cypress/tupelo swamp credits compared to the Ponderosa Ranch Mitigation Bank. For example, the Ponderosa Ranch – Amendment Mitigation Bank's BLH mitigation potential is 6.5, while the Ponderosa Ranch Mitigation Bank's BLH mitigation potential is 5.8. Similarly, the Ponderosa Ranch – Amendment Mitigation Bank's bald cypress/tupelo swamp mitigation potential is 6.3 compared to the Ponderosa Ranch Mitigation Bank's mitigation potential of 5.6. Therefore, the total number of mitigation acres purchased within the Terrebonne Basin decreased compared to what was originally proposed in the final Compensatory Mitigation Plan.

Overall, BBP purchased a total of 708.0 mitigation acres, which was comprised of 564.0 acres of BLH, 138.6 acres of bald cypress/tupelo swamp, and 5.4 acres of coastal prairie. These overall totals are different than what was presented in the final Compensatory Mitigation Plan. However, as outlined in **Table 2** below, the total LRAM credits actually purchased by BBP meets or exceeds what is required based on the project's impacts.

Table 1. Summary of Mitigation Banks and Credits to be purchased by BBP							
Mitigation Bank	Credit Type	LRAM Credits Required	Acres to be Purchased	Actual ly Purchased	LRAM Credits to be Purchased	LRAM Credits Purchased	Mitigation Type
Calcasieu River Basin							
Moss Lake	Coastal Prairie ^a	1.8	0.4	0.4	2.0	2.0	In-kind / In-basin
	BLH	16.0	3.0	2.9	16.5	15.95	In-kind / In-basin
Mermentau River Basin							
Lacassane	Coastal Prairie ^a	8.6	1.4	5.0	9.1	32.5	In-kind / In-basin
Caney Creek	BLH	58.5	12.2	12.2	58.5	58.5	In-kind / In-basin
	Bald Cypress/Tupelo Swamp	21.2	3.5	3.5	21.7	21.7	In-kind / In-basin
Vermilion-Teche River Basin							
Bayou Choupique	BLH	120.4	20.8	20.8	120.6	120.6	In-kind / In-basin
	Bald Cypress/Tupelo Swamp	33.6	5.6	5.6	33.6	33.6	In-kind / In-basin
Atchafalaya River Basin							
Bayou Fisher	BLH	519.7	80.0	80.0	520.0	520.0	In-kind / In-basin

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Table 1. Summary of Mitigation Banks and Credits to be purchased by BBP

Mitigation Bank	Credit Type	LRAM Credits Required	Acres to be Purchased	Actual ly Purchased	LRAM Credits to be Purchased	LRAM Credits Purchased	Mitigation Type
Big Darbonne	Bald Cypress/Tupel o Swamp	1,499.0	4.0	4.0	12.0	12.0	In-kind / In-basin
Bayou Fisher			56.0	65.0	364.0	422.5	In-kind / In-basin
			172.8 ^b	163.8 _b	1,123.2 _b	1,064.7 _b	Out-of-kind / In-basin ^b
Terrebonne River Basin							
Rosedale	BLH	529.1	50.0	50.0	225.0	225.0	In-kind / In-basin
Bayou Grand Coteau – Addendum I			4.8	4.8	25.4	25.4	
Ponderosa Ranch			48.1	8.9	278.7	51.6	
Ponderosa Ranch – Amend			0.0	35.0	0.00	227.5	
Bayou Grand Coteau – Addendum I	Bald Cypress/Tupel o Swamp	406.7	30.8	30.8	77.0	77.0	In-kind / In-basin
Ponderosa Ranch			23.3	4.4	130.4	24.6	Out-of-kind / In-basin ^b
			34.4 ^b	0.0	199.5 ^b	0.0	
			0.0	13.9	0.0	87.5	
Ponderosa Ranch - Amend	0.0	33.5 ^b	0.0	217.7 ^b	Out-of-kind / In-basin ^b		
Barataria River Basin							
Laurel Valley	BLH	441.0	152.1	152.1	441.0	441.0	In-kind / In-basin
	Bald Cypress/Tupel o Swamp	58.0	11.4	11.4	58.1	58.1	In-kind / In-basin
Project Totals		3,713.6	714.5	708.0	3,716.3	3,738.8	

^a Coastal prairie impacts are comprised of permanent impact to scrub-shrub wetlands.^b BBP proposes to utilize BLH credits to offset impacts to bald cypress/tupelo swamp, because there are not enough SWP credits available for purchase in the basin.

CEMVN-OD-SW**APPLICATION #:** MVN-2015-02295-WII**SUBJECT:** Department of the Army Environmental Assessment and Statement of Findings for the Above-Numbered Permit Application**Table 2. Total LRAM Credits Purchased by Bayou Bridge**

River Basin	Credit Type	LRAM Credits Required	Total LRAM Credits Required by Basin	LRAM Credits Actually Purchased	Total LRAM Credits Purchased by Basin
Calcasieu	Coastal Prairie	1.8	17.8	2.0	18.0
	BLH	16.0		16.0	
Mermentau	Coastal Prairie	8.6	88.3	32.5	112.7
	BLH	58.5		58.5	
	Bald Cypress/Tupelo Swamp	21.2		21.7	
	BLH	120.4		120.6	
Vermilion-Teche	Bald Cypress/Tupelo Swamp	33.6	154.0	33.6	154.2
	BLH	519.7		1,584.7 ^a	
Atchafalaya	Bald Cypress/Tupelo Swamp	1,499.0	2,018.7	434.5	2,019.2
	BLH	529.1		747.2 ^b	
Terrebonne	Bald Cypress/Tupelo Swamp	406.7	935.8	189.1	936.3
	BLH	441.0		441.0	
Barataria	Bald Cypress/Tupelo Swamp	58.0	499.0	58.1	499.1
	BLH	441.0		441.0	

^a 1,064.7 BLH credits were purchased as out-of-kind/in-basin credits to offset impacts to bald cypress/tupelo swamp credits

^b 217.7 BLH credits were purchased as out-of-kind/in-basin credits to offset impacts to bald cypress/tupelo swamp credits

During the public notice period, EPA, USFWS, and LDWF requested coordination with the USACE on the compensatory mitigation. Coordination was conducted with these agencies. EPA concurred by email dated 25 July 2017 and LDWF concurred by email dated 21 June 2017. By email dated 2 November 2017, USFWS stated they will defer to the other natural resource management agencies regarding the final mitigation plan.

- (i) Does the mitigation bank have appropriate number and resource type of credits available? ☒ yes ☐ no (See explanation above.)

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(3) Is the impact in the service area of an approved in-lieu fee program?

☐ yes ☒ no

(i) Does the in-lieu fee program have appropriate number and resource type of credits available? ☐ yes ☐ no

(4) Check the selected compensatory mitigation option(s):

- ☒ mitigation bank credits
- ☐ in-lieu fee program credits
- ☐ permittee-responsible mitigation under a watershed approach
- ☐ permittee-responsible mitigation, on-site and in-kind
- ☐ permittee-responsible mitigation, off-site and out-of-kind

(5) If a selected compensatory mitigation option deviates from the order of the options presented in §332.3(b)(2)-(6), explain why the selected compensatory mitigation option is environmentally preferable. Address the criteria provided in §332.3(a)(1) (i.e., the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project): The order of mitigation pursued for the project followed the preferred hierarchy as set forth by the USACE. The order followed was:

- a. In River Basin, In Kind
- b. In River Basin, Out-of-Kind
- c. Out of River Basin, In Kind
- d. Out of River Basin, Out of Kind

(6) Other Mitigative Actions. (See Department of the Army permit Special Conditions.) The applicant has avoided and minimized impacts to wetlands through co-locating the proposed project with other utility ROW's, the use of horizontal directional drills, restrictions in construction ROW width in wetlands, and restrictions in the width of permanently maintained ROW in wetlands. These avoidance and minimization measures will result in avoided wetland impacts.

9. General evaluation criteria under the public interest review. We considered the following within this document:

- a. **The relative extent of the public and private need for the proposed structure or work.** The proposed Bayou Bridge Pipeline project would allow Bayou Bridge to transport crude oil from the Clifton Ridge Marine Terminal to existing facilities located near St. James, Louisiana. During construction, local economies will benefit from construction crews, including clearing, trenching, stringing, welding, backfill, grading, restoration and inspection, who will patron local hotels, restaurants, fuel stations, suppliers, etc. for the proposed construction schedule. Installation of the pipeline will result in multiple jobs to support pipeline

maintenance and operations, as well as increased tax revenue to local taxing authorities. The project would contribute to increasing America's energy independence by transporting domestically produced crude oil to support United States consumers' energy demands. Also, Gulf Coast refineries would have better access to more reliable United States crude oil production to be used to meet United States consumers' need for gasoline, diesel fuel, and other petroleum products.

- b. ☒ **There are no unresolved conflicts as to resource use.**
- c. ☒ **The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public, and private uses to which the area is suited.** Detrimental impacts, to the immediate project site environment, although minor, are expected to be permanent. The beneficial effects associated with utilization of the property would be long-term. Permanent impacts to jurisdictional wetlands and waters of the U.S. have been avoided and minimized to the greatest extent through changes in project layout designs. All unavoidable permanent wetland impacts will be offset by purchasing the required mitigation from approved mitigation banks.

10. Determinations.

- a. **Public Hearing Request:** Public hearings were requested by various non-government organizations and private citizens during the initial public notice comment period. A USACE/LDEQ joint public hearing was held on January 12, 2017. The hearing was held at the Louisiana Department of Environmental Quality Headquarters in Baton Rouge, Louisiana. Approximately 500 people attended the public hearing, with approximately 87 speakers. The public hearing was chaired by a LDEQ Hearing Officer and the Regulatory Branch Chief, New Orleans District. In addition to the Regulatory Branch Chief, New Orleans District attendees included several representatives from Regulatory Branch, the New Orleans District Archaeologist/SHPO/THPO Liaison, representative from the Office of Counsel, and the New Orleans District PAO Office. Representatives from the LDEQ were also in attendance. Further information concerning the public hearing can be acquired from the official hearing transcript from LDEQ.
- b. **Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act.** It has been determined that the activities proposed under this permit will not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility

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and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

c. Relevant Presidential Executive Orders.

(1) **EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians.** ☒ This action has a direct effect on one or more Federally recognized Indian tribes. Special Conditions #48 and #49 of the Department of the Army permit are included in order to mitigate any potential effects to any Federally recognized Indian Tribes with known interests in the project area.

Final Review: 10 October 2017

Final Effect Determination: No Historic Properties Affected 36 CFR 800.4(d)(1) with special condition that allows Tribal monitoring for the presence of previously unidentified or unknown cultural, archaeological, or human remains during construction.

Consultation and Coordination with Indian Tribal Governments, and Section 106 of the National Historic Preservation Act.

In partial fulfillment of responsibilities under Executive Order 13175, the National Environmental Policy Act, and Section 106 of the National Historic Preservation Act, CEMVN initiated consultation pursuant to 36 CFR § 800.3(c) with Federally recognized Indian Tribes with a known interest in CEMVN boundaries in letters dated March 1, 2017 regarding the proposed undertaking. In that letter, CEMVN provided a description of the proposed undertaking and project area and enclosed project shapefiles, reports of the cultural resources investigations completed to date, and copies of correspondence between the SHPO and the requestor regarding the undertaking and its potential effects on historic properties. In addition, CEMVN requested information concerning the proposed undertaking and its potential to significantly affect cultural resources, protected tribal resources, tribal rights, Traditional Cultural Properties, or Indian lands.

In response to CEMVN's March 1, 2017 letter initiating consultation, the Coushatta Tribe of Louisiana requested a face-to-face meeting with USACE and Bayou Bridge Pipeline under Executive Order 13175 directly related to the Bayou Bridge Pipeline and its potential effects on lands for which the Coushatta Tribe has a traditional cultural affiliation. A consultation meeting was convened on April 28, 2017 in which the Coushatta Tribe requested that a Tribal monitoring program be implemented as a permit condition to alleviate concerns expressed by the Tribe regarding potential issues with the Phase I survey results, especially as they relate to the accuracy of the Culture History components of the survey reports. On May 5, 2017, a document prepared by the Coushatta Heritage Department and Tribal Energy Resource, LLC titled

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"Recommended Permit Conditions" was hand delivered to CEMVN.

In response to CEMVN's March 1, 2017 letter initiating consultation, the Seminole Nation of Oklahoma stated in an email dated March 9, 2017 that they wish to defer to the Chitimacha Tribe of Louisiana for final comment and that they request a listing of flora in the project area. In an email dated April 25, 2017, CEMVN provided the Seminole Nation of Oklahoma a list of flora encountered during the pipeline survey. In an email dated April 26, 2017, the Seminole Nation of Oklahoma requested that if populations of Giant Cane, Yaupon Holly, and Coastal Plain Willow are disturbed during the project that they be replanted. In an email dated August 21, 2017, CEMVN provided a detailed description of the potential effects to these plant species, concluding that the project will have no impact to Giant Cane and that both Yaupon Holly and Coastal Plain Willow will reestablish naturally via natural succession from adjacent, non-disturbed populations. In addition, non-inundated disturbed areas will be reseeded with a native seed mix to complement natural succession. No additional comment was received on this issue.

In consultation letters to SHPO and Federally recognized Indian Tribes dated June 2, 2017, CEMVN documented the finding of "No Historic Properties Affected" with special conditions for the proposed undertaking. This letter stated that a special condition would be attached to the permit that ensures that Bayou Bridge Pipeline, LLC allows Tribal monitoring for the presence of previously unidentified or unknown cultural, archaeological, or human remains during construction. The Tribal Monitoring Plan is provided as Appendix F. The Special Condition #49 states that the Coushatta Tribe of Louisiana and Bayou Bridge Pipeline have entered into an agreement to provide qualified tribal monitors on the pipeline ROW during construction.

An additional special condition would be attached to the permit that specifically addresses unanticipated discovery of human remains within the permit area. This special condition would stipulate a process to be followed by the applicant. The condition would include specific language to provide notification to Federally-recognized Indian Tribes and proper treatment of unanticipated human remains. If human remains are encountered, the applicant would be required to immediately cease work in the vicinity of the discovery and contact CEMVN. CEMVN would then contact federally-recognized Indian Tribes, SHPO, and conduct other Federal coordination requirements under 33CFR325 (Appendix C) and 36CFR800. The USACE, with Federally recognized Indian Tribes and the SHPO, would consult on the treatment and final disposition of the remains.

Concurrence with the CEMVN effect determination was received via emails from SHPO on June 7, 2017, the Coushatta Tribe of Louisiana on June 14,

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2017, the Muscogee (Creek) Nation on June 20, 2017, the Jena Band of Choctaw Indians on June 27, 2017, the Choctaw Nation of Oklahoma on June 30, 2017. No other comments were received.

(2) **EO 11988, Floodplain Management.** ☐ Not in a floodplain. ☒ Alternatives to location within the floodplain, minimization, and compensation of the effects were considered above

(3) **Executive Order 12898, Environmental Justice** (Feb. 16, 1994) requires that Federal agencies, when making permit decisions, consider the proposed project's potential impacts on minority and low-income populations:

**Environmental Justice Analysis
Bayou Bridge Pipeline Project**

Executive Order 12898 of 1994 (E.O. 12898) and the Department of Defense's Strategy on Environmental Justice of 1995, directs federal agencies to identify and address any disproportionately high adverse human health or environmental effects of federal actions to minority and/or low-income populations. Minority populations are those persons who identify themselves as African American, Hispanic, Asian, American Indian/Alaskan Native, Pacific Islander, one or more race, or two or more races. A minority population exists where the percentage of minorities in an affected area either exceeds 50 % or is meaningfully greater than in the general population. The U.S. Census Bureau defines a "poverty area" as a census tract with 20 % or more of its residents below the poverty threshold and an "extreme poverty area" as one with 40 % or more below the poverty level.

A potential disproportionate impact may occur when the percent minority in the study area exceeds 50 % and/or the percent low-income exceeds 20 % of the population. In addition, a disproportionate impact may occur when the percent minority and/or percent low-income are meaningfully greater than those in the reference community.

Additionally, it should be noted that project impacts may be both positive and negative. Routing the Project away from a particular EJ community could be perceived as intentionally depriving the subject EJ community of a potential commercial opportunity. According to BBP, construction of the proposed Bayou Bridge Pipeline Project could result in an economic benefit of over \$829 million in economic output for the state, over 4,000 jobs, more than \$420 million dollars of total wages and over \$50 million in state and local tax revenues (Louisiana State University Center for Energy Studies [at the request of Energy Transfer, the overall Bayou Bridge Pipeline Project developer], 2017). The Project potentially offers some positive economic benefit to local communities as construction workers could utilize local gas stations, convenience stores, and restaurants that are along existing access roads to the respective construction areas.

Methodology

The methodology, consistent with E.O. 12898, to accomplish this Environmental Justice (EJ) analysis includes identifying low-income and minority populations within the proposed Bayou Bridge Pipeline Project (Project) area using up-to-date economic statistics, aerial photographs, and U.S. Census Bureau 2011-2015 American Community Survey (ACS) estimates. The newly released ACS estimates provide the latest socioeconomic community characteristic data released by the U.S. Census Bureau and are based on data collected between January 2011 and December 2015. There are numerous geographic levels at which U.S. Census Bureau data is typically available. Potentially relevant geographic levels for this project include: state level, parish level, block group level, and block level. For the purposes of this EJ analysis, census block group data was selected as the appropriate level due to the overall rural setting of the proposed Project.

To determine whether the proposed Project has any disproportionate negative impacts on minority and/or impoverished communities, a three-step analysis was utilized. First, those census block groups impacted by construction and/or operation of the proposed Project that meet the statutory requirements for low-income and minority communities were identified. Second, the census block group population was compared to the parish level data, which was utilized as the reference community for this analysis. If there was a meaningful difference between the census block group impacted by the proposed Project and the parish in which it is located, a third step was taken to determine if the routing of the proposed Project would cause a disproportionate adverse impact on minority and/or impoverished communities.

There is no accepted standard for the spatial limit for the analysis of impacts on EJ communities associated with the construction of oil pipelines. However, transportation projects, such as under the Federal Transit Administration (a division of DOT), and natural gas pipeline projects under the Federal Energy Regulatory Commission (e.g., Docket Nos. CP12-507-000 and CP12-508-000, DOE FE 12-97-LNG, and FERC/EIS-0252F), typically use a 0.5-mile buffer area to examine EJ effects for linear construction projects. Although the project is not a transportation project or natural gas project, the design and operation of oil pipelines (and natural gas pipelines) are under the jurisdiction of PHMSA, which is also a division of the DOT. Census block groups in rural areas, such as those covered by this Project, may cover a larger area because of the lower density of population and may include large areas without any communities. Therefore, the additional review of the census block groups under the third step included a determination if there are any communities located within 0.5 mile of the Project.

An analysis was also performed to determine the potential effects that a worse case release during operation of the proposed pipeline could have on EJ communities located downstream of the pipeline. The extent of the analysis took into account the census block groups located within the plume limits as determined by the PHMSA model, which modeled the resulting plume from a release located every 200 feet along the proposed

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pipeline route.

Results

Overall, there are 61 census block groups that are either potentially affected by construction and/or operation. Of these, 41 census block groups would potentially be affected by construction and/or operation, while the remaining 20 census block groups would potentially be affected in the event of a release. Demographic information for all census block groups potentially impacted by the proposed Project are presented in Table 1. Areas impacted by the Project and identified as EJ communities are indicated by the red italicized text and are discussed further below.

Table 1. Summary of Demographic Conditions for Areas Potentially Impacted by Construction and/or Operation of the Project							
Census Tract and Block Group	Pipeline Crossing Length (miles)	% of Project	Total Population	Persons Below Poverty Level (%)	Minority (%)	Highest Minority (%)	Native American (%)
Calcasieu Parish	24.75	15.21	195,887	17.11	31.28	24.67 (African American)	0.35
Tract 32, Block Group 1	0.23	0.14	2,426	13.44	9.84	5.19 (African American)	0
Tract 18.01, Block Group 2	2.24	1.38	1,912	0.73	7.38	4.03 (Hispanic)	0
Tract 18.01, Block Group 1	1.61	0.99	2,286	6.08	7.92	7.31 (African American)	0
Tract 18.01, Block Group 3	0.10	0.06	2,170	8.51	16.78	11.66 (African American)	0
Tract 18.01, Block Group 4	0.77	0.47	1,949	20.32	36.07	12.67 (African American)	0.92
Tract 18.01, Block Group 5	1.74	1.07	2,109	10.72	16.12	10.24 (Two or More Races)	0
Tract 19.03, Block Group 3	0.53	0.33	2,550	4.90	8.78	6.00 (African American)	0
Tract 13, Block Group 1	1.12	0.69	2,360	7.08	10.04	5.64 (African American)	0
Tract 17, Block Group 2	1.27	0.78	2,157	25.94	36.49	26.29 (African American)	0.88
Tract 17, Block Group 3	1.27	0.78	1,304	12.65	26.00	21.55 (African American)	0
Tract 17, Block Group 4	3.66	2.25	2,255	4.75	27.89	25.19 (African American)	0
Tract 20, Block Group 4	10.21	6.28	2,181	14.56	1.61	1.61 (Two or More Races)	0

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Table 1. Summary of Demographic Conditions for Areas Potentially Impacted by Construction and/or Operation of the Project							
Census Tract and Block Group	Pipeline Crossing Length (miles)	% of Project	Total Population	Persons Below Poverty Level (%)	Minority (%)	Highest Minority (%)	Native American (%)
Tract 19.01, Block Group 1	N/A *	N/A *	1,646	16.40	1.28	1.28 (African American)	0
Jefferson Davis Parish	22.33	13.73	31,434	21.06	21.82	17.10 (African American)	0.36
Tract 2, Block Group 2	10.52	6.47	990	21.82	4.14	3.23 (Two or More Races)	0
Tract 2, Block Group 3	2.70	1.66	2,182	16.64	9.67	7.52 (African American)	0
Tract 4, Block Group 1	2.20	1.35	1,376	18.60	11.56	5.16 (Two or More Races)	0.8
Tract 4, Block Group 5	6.91	4.25	1,670	15.78	16.05	12.40 (African American)	0.72
Acadia Parish	19.68	12.10	62,163	20.63	22.30	17.42 (African American)	0.16
Tract 9611, Block Group 1	6.24	3.84	1,240	17.04	12.10	6.45 (Two or More Races)	0.32
Tract 9611, Block Group 2	5.72	3.52	1,434	10.99	10.26	8.72 (African American)	0.35
Tract 9612, Block Group 1	1.39	0.85	1,987	7.19	9.00	5.64 (African American)	0.55
Tract 9612, Block Group 2	6.33	3.89	1,556	12.40	5.27	5.27 (African American)	0
Tract 9611, Block Group 3	N/A *	N/A *	1,259	15.58	9.05	8.18 (Hispanic)	0.55
Tract 9612, Block Group 3	N/A *	N/A *	390	0	0	N/A	0
Vermilion Parish	12.77	7.85	59,110	17.81	21.24	14.09 (African American)	0.57
Tract 9501, Block Group 2	5.34	3.28	3,753	11.72	20.36	9.54 (African American)	0
Tract 9501, Block Group 3	4.04	2.48	1,182	8.80	1.61	1.61 (Hispanic)	0
Tract 9501, Block Group 4	3.39	2.08	1,514	35.92	0	N/A	0
Tract 9501, Block Group 1	N/A *	N/A *	3,368	8.52	8.02	4.51 (African American)	0
Tract 9509.02, Block Group 1	N/A *	N/A *	2,724	14.53	10.68	9.69 (African American)	0
Tract 9502, Block Group 3	N/A *	N/A *	992	5.85	0	N/A	0
Lafayette Parish	9.73	5.98	231,811	16.02	33.38	25.48 (African American)	0.19
Tract 14.02, Block Group 1	1.81	1.11	2,105	2.52	4.56	4.56 (African American)	0

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Table 1. Summary of Demographic Conditions for Areas Potentially Impacted by Construction and/or Operation of the Project							
Census Tract and Block Group	Pipeline Crossing Length (miles)	% of Project	Total Population	Persons Below Poverty Level (%)	Minority (%)	Highest Minority (%)	Native American (%)
Tract 14.02, Block Group 3	2.69	1.65	2,544	10.40	13.29	4.91 (Asian)	0
Tract 14.10, Block Group 2	5.23	3.21	5,504	8.08	16.97	12.83 (African American)	0
Tract 19.05, Block Group 3	N/A ^a	N/A ^a	1,721	19.17	25.78	21.32 (African American)	0
Tract 14.10, Block Group 3	N/A ^a	N/A ^a	2,524	10.14	9.31	3.92 (African American)	0
Tract 14.01, Block Group 3	N/A ^a	N/A ^a	3,260	8.71	11.32	4.79 (African American)	0
Tract 19.01, Group 1	N/A ^a	N/A ^a	1,776	13.51	13.18	6.64 (African American)	0
Iberia Parish	1.44	0.89	73,938	19.59	40.26	31.41 (African American)	0.10
Tract 303.01, Block Group 1	0.65	0.40	2,838	16.11	38.83	28.72 (African American)	0
Tract 303.02, Block Group 1	0.79	0.49	1,943	20.07	21.15	15.95 (Asian)	0
Tract 302, Block Group 1	N/A ^a	N/A ^a	1,845	2.66	28.73	15.99 (African American)	0
Tract 305, Block Group 4	N/A ^a	N/A ^a	896	13.50	14.96	5.13 (Two or More Races)	0
Tract 306, Block Group 1	N/A ^a	N/A ^a	1,708	1.05	18.03	12.65 (African American)	0
Tract 303.02, Block Group 2	N/A ^a	N/A ^a	2,377	28.53	39.42	17.84 (African American)	0
Tract 302, Block Group 2	N/A ^a	N/A ^a	1,490	18.19	14.09	14.09 (African American)	0
Tract 301, Block Group 1	N/A ^a	N/A ^a	2,134	18.32	29.10	29.10 (African American)	0
St. Martin Parish	36.32	22.33	53,126	17.86	35.28	29.59 (African American)	0.30
Tract 206, Block Group 4	5.99	3.68	1,023	9.48	37.15	19.94 (African American)	0
Tract 208, Block Group 2	7.05	4.33	1,868	9.65	56.70	41.65 (African American)	0
Tract 209, Block Group 2	0.57	0.35	966	9.42	21.12	13.56 (African American)	0
Tract 201, Block Group 2	22.71	13.96	743	36.61	0	N/A	0
Tract 210, Block Group 1	N/A ^a	N/A ^a	177	40.68	0	N/A	0
Tract 208, Block Group 1	N/A ^a	N/A ^a	1,146	3.14	37.52	34.82 (African American)	0

CEMVN-OD-SW**APPLICATION #:** MVN-2015-02295-WII**SUBJECT:** Department of the Army Environmental Assessment and Statement of Findings for the Above-Numbered Permit Application**Table 1. Summary of Demographic Conditions for Areas Potentially Impacted by Construction and/or Operation of the Project**

Census Tract and Block Group	Pipeline Crossing Length (miles)	% of Project	Total Population	Persons Below Poverty Level (%)	Minority (%)	Highest Minority (%)	Native American (%)
Tract 206, Block Group 2	N/A ^a	N/A ^a	2,162	36.08	81.87	67.78 (African American)	0
Iberville Parish	16.28	10.01	33,229	19.10	52.15	48.01 (African American)	0.36
Tract 9529, Block Group 4	4.46	2.74	1,400	20.43	0	N/A	0
Tract 9530, Block Group 1	11.82	7.27	657	5.94	2.89	2.28 (Two or More Races)	0
Ascension Parish	1.76	1.08	114,738	11.83	30.23	21.82 (African American)	0.10
Tract 309, Block Group 2	1.76	1.08	1,202	32.20	73.08	57.34 (African American)	0
Assumption Parish	9.21	5.66	23,057	15.97	33.76	29.86 (African American)	0.65
Tract 501, Block Group 1	5.97	3.67	1,509	19.09	76.93	70.31 (African American)	0
Tract 501, Block Group 2	0.58	0.36	1,722	10.96	54.58	53.02 (African American)	0
Tract 501, Block Group 3	2.58	1.59	634	4.73	8.20	8.20 (Hispanic)	0
Tract 503, Block Group 1	0.08	0.05	1,338	20.40	49.25	49.03 (African American)	0.22
St. James Parish	8.41	5.17	21,650	17.99	52.13	50.05 (African American)	0.03
Tract 405, Block Group 1	3.53	2.17	568	29.58	85.39	84.86 (African American)	0
Tract 405, Block Group 2	4.88	3.00	1,755	31.65	96.92	96.81 (African American)	0
St. Mary Parish	N/A ^a	N/A ^a	53,441	22.43	43.45	31.06 (African American)	1.15
Tract 410, Block Group 1	N/A ^a	N/A ^a	882	5.79	6.24	3.17 (African American)	2.04

Source: U.S. Census Bureau, 2015

N/A = Not Applicable

Note: Red italicized text indicates minority population or poverty population in respective columns. Reference parish level data are not demarcated utilizing red italicized text, but instead are shown in bold text.

^a Census block group is located downstream of the pipeline and could be affected by a release during operation.**Construction**

A total of 41 census blocks groups are crossed or otherwise impacted by construction of the proposed Project. These 41 census block groups were subsequently evaluated to

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determine if minority and/ impoverished communities were present along the Project route. Of the 41 census block groups, 14 contain EJ communities: 8 contain impoverished populations, three contain minority populations, and three contain both impoverished and minority communities. A review of each of the 14 census block groups was performed to determine if there are any communities located within 0.5 mile of the proposed Project route. If there are no communities within 0.5 mile of the Project, then further analysis to determine if the Project would have a disproportionate impact on low income and/or minority populations was not performed. For those census block groups with communities within 0.5 mile of the proposed Project, additional analysis was performed to determine if the statistics for the census block groups are meaningfully different from their respective reference communities (i.e., parishes). If the differences were meaningful, then an analysis was performed to determine if the Project would have a disproportionate impact on the minority and/or impoverished communities.

It should be noted that the Project is a sealed steel pipeline that is buried beneath the ground surface, and according to BBP, it is a state of the art system being designed, installed, and operated/maintained to meet or exceed all federal standards.

An analysis of incident frequencies within the active 2004 to 2016 database maintained by PHMSA (PHMSA, 2017) indicates that the calculated incident frequency for "onshore pipeline, including valve sites" is 0.00079 incidents per mile-year. Additionally, if any release did occur, it is likely that the total release volume of a spill would be 4 barrels (bbls) or less based on historical spill volumes.

Based on the information provided in the Risk Assessment, it was determined that the risk of a release resulting in significant adverse environmental impacts to any particular community was not determined to be significant and the requester has safeguards in place to reduce the likelihood and severity of a release. Therefore, it is reasonable to determine that the Project is not anticipated to have releases to the air, water, or soils that would result in high adverse human health or environmental impacts to any populations.

A detailed discussion of each of the 14 census block groups that contain EJ communities is provided below.

Census Tract 18.01, Block Group 4

Census Tract 18.01, Block Group 4 contains an impoverished population that is greater than 20%. However, at 20.32%, this census block group is less than one half percent above the poverty level. As provided in Table 1, the reference community, Calcasieu Parish, contains an impoverished population that is only 3.21% less than the community impacted by the Project. Therefore, the proposed Project does not cross an impoverished population that is meaningfully greater than the reference community.

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Furthermore, construction of the Project potentially offers some positive economic benefit to all local communities as construction workers could utilize local gas stations, convenience stores, and restaurants that are along existing access roads to the construction area. As documented in an economic study conducted by the Louisiana State University Center for Energy Studies (2017), construction of the proposed Bayou Bridge Pipeline Project could benefit the state and local communities by generating over \$50 million in state and local tax revenues.

Because of these reasons, it was determined that the Project would not disproportionately affect the EJ community in Census Tract 18.01, Block Group 4.

Census Tract 17, Block Group 2

Census Tract 17, Block Group 2 contains an impoverished population that is greater than 20% and is meaningfully different than the reference community, Calcasieu Parish. However, these impacts are not disproportionate when considering other factors that influenced the routing of the Project. The Project was routed to be co-located with other existing utilities and/or existing roadways to the greatest extent practicable in order to reduce the overall Project's impacts. By co-locating the proposed route through Census Tract 17, Block Group 2, BBP attempted to minimize impacts on environmental resources (i.e., wetlands/waterbodies), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses. Additionally, the proposed Project would cross through four census block groups identified as non-EJ communities that surround Census Tract 17, Block Group 2.

Furthermore, the construction of the Project potentially offers some positive economic benefit to all local communities as construction workers could utilize local gas stations, convenience stores, and restaurants that are along existing access roads to the construction area. As documented in an economic study conducted by the Louisiana State University Center for Energy Studies (2017), construction of the proposed Bayou Bridge Pipeline Project could benefit the state and local communities by generating over \$50 million in state and local tax revenues.

Because of these reasons, it was determined that the Project would not disproportionately affect the EJ community in Census Tract 17, Block Group 2.

Census Tract 2, Block Group 2

Census Tract 2, Block Group 2 contains an impoverished community that is greater than 20%. However, at 21.82%, it is only 0.76% greater than that of the reference community, Jefferson Davis Parish, which has an impoverished level of 21.06%. Therefore, the Project does not cross an impoverished population that is meaningfully greater than the reference community and would not have a disproportionate impact on this EJ community.

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Census Tract 9501, Block Group 4 contains an impoverished community that is meaningfully greater than the reference community, Vermilion Parish. However, these impacts are not disproportionate when considering other factors that influenced the routing of the Project. The Project was routed to be co-located with other existing utilities to the greatest extent practicable in order to reduce the overall Project's impacts. By co-locating the proposed route through Census Tract 9501, Block Group 4, BBP attempted to minimize impacts on environmental resources (i.e., wetlands/waterbodies), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses. Additionally, the proposed Project would cross through three census block groups that surround Census Tract 9501, Block Group 4 which are identified as non-EJ communities. Therefore, the Project would not have a disproportionate impact on the impoverished community located within Census Tract 9501, Block Group 4.

Census Tract 303.02, Block Group 1

Census Tract 303.02, Block Group 1 contains an impoverished population that is greater than 20%. However, at 20.07%, this census block group is less than one percent above the impoverished level. As provided in Table 1, the reference community, Iberia Parish, contains an impoverished population that is only 0.48% less than the community impacted by the Project. Therefore, the proposed Project does not cross an impoverished population that is meaningfully greater than the reference community and it would not disproportionately affect EJ communities in Census Tract 303.02, Block Group 1.

Census Tract 208, Block Group 2

Census Tract 298, Block Group 2 contains a minority population that is meaningfully greater than the reference community, St. Martin Parish. However, these impacts are not disproportionate when considering other factors that influenced the routing of the Project. The Project was routed to be co-located with other existing utilities and/or existing roadways to the greatest extent practicable to reduce the overall Project's impacts. By co-locating the proposed route through Census Tract 208/Block Group 2, BBP attempted to minimize impacts on environmental resources (i.e., wetlands/waterbodies), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses. Additionally, routing the proposed Project to the south to avoid the EJ community would result in additional environmental impacts associated with potential crossings of Spanish Lake and Lake Fausse Pointe.

Furthermore, the construction of the Project potentially offers some positive economic benefit to all local communities as construction workers could utilize local gas stations, convenience stores, and restaurants that are along existing access roads to the construction area. As documented in an economic study conducted by the Louisiana State University Center for Energy Studies (2017), construction of the proposed Bayou Bridge Pipeline Project could benefit the state and local communities by generating over

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\$50 million in state and local tax revenues.

Because of these reasons, it was determined that the Project would not disproportionately affect the EJ community in Census Tract 208, Block Group 2.

Census Tract 201, Block Group 2

Census Tract 201, Block Group 2 contains an impoverished population that is meaningfully greater than the reference community, St. Martin Parish. With the exception of the first 1.0 mile of the proposed route through Census Tract 201, Block Group 2, there are no communities located within 0.5 mile of the proposed Project. Impacts on the impoverished community are not disproportionate when considering other factors that influenced the routing of the Project. The Project was routed to be co-located with other existing utilities to the greatest extent practicable to reduce the overall Project's impacts. By co-locating the proposed route through Census Tract 201, Block Group 2, BBP attempted to minimize impacts on environmental resources (i.e., wetlands/waterbodies), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses.

Furthermore, the construction of the Project potentially offers some positive economic benefit to all local communities as construction workers could utilize local gas stations, convenience stores, and restaurants that are along existing access roads to the construction area. As documented in an economic study conducted by the Louisiana State University Center for Energy Studies (2017), construction of the proposed Bayou Bridge Pipeline Project could benefit the state and local communities by generating over \$50 million in state and local tax revenues.

Because of these reasons, it was determined that the Project would not disproportionately affect the EJ community in Census Tract 201, Block Group 2.

Census Tract 9529, Block Group 4

Census Tract 9529, Block Group 4 contains an impoverished population that is greater than 20%. However, at 20.43%, this census block group is less than one half percent above the impoverished level. As provided in Table 1, the reference community, Iberville Parish, contains an impoverished population that is only 1.33% less than the community impacted by the Project. Additionally, there are no communities located within 0.5 mile of the proposed Project route in Census Tract 9529, Block Group 4. Therefore, the proposed Project does not cross an impoverished population that is meaningfully greater than the reference community, and would not have a disproportionate impact on the EJ community.

CEMVN-OD-SW**APPLICATION #:** MVN-2015-02295-WII**SUBJECT:** Department of the Army Environmental Assessment and Statement of Findings for the Above-Numbered Permit Application**Census Tract 309, Block Group 2**

Census Tract 309, Block Group 2 contains both impoverished and minority communities that is greater than 20% and 50%, respectively. These communities are also meaningfully greater than the reference community, Ascension Parish. However, these impacts are not disproportionate when considering other factors that influenced the routing of the Project. The Project was routed to be co-located with other existing utilities and/or existing roadways to the greatest extent practicable to reduce the overall Project's impacts. By co-locating the proposed route through Census Tract 309, Block Group 2, BBP attempted to minimize impacts on environmental resources (i.e., wetlands/waterbodies), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses. For example, if BBP had routed the Project south through the adjacent non-EJ community (Census Tract 501, Block Group 3), the Project's impacts on wetlands would increase by approximately 24.54 acres compared to the currently proposed route based on a review of NWI data. Additionally, the proposed Project would cross through two census block groups surrounding Census Tract 309, Block Group 2 that are identified as non-EJ communities.

Because of these reasons, it was determined that the Project would not disproportionately affect the impoverished and minority communities in Census Tract 309/Block Group 2.

Census Tract 501, Block Group 1

Although the Project would impact an EJ community at the Census Tract 501, Block Group 1 crossing, the impacts are not disproportionate when considering other factors that influenced the routing of the Project Route. The Project was routed to be co-located with other existing utilities to the greatest extent practicable in order to reduce the overall Project's impacts. By co-locating the proposed crossing, the requester attempted to minimize impacts on environmental resources (i.e., Bayou Lafourche), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses.

Additionally, there is a predefined beginning and end of the Project as a result of the overall Project's purpose and need. As such, a crossing of Census Tract 501, Block Group 1 in the same general area as the Project would be required. However, three of the four census block groups located immediately to the north (Census Tract 309, Block Group 3 and Census Tract 310, Block Group 2) and south (Census Tract 503, Block Group 2 and Census Tract 503, Block Group 1) of the proposed crossing are considered EJ communities with greater than 50% minority populations and/or greater than 20% impoverished populations. Therefore, a reroute to the north or south of the proposed alignment to avoid impacting Census Tract 501, Block Group 1 would result in impacts to other EJ communities.

Furthermore, the construction of the Project potentially offers some positive economic benefit to all local communities as construction workers could utilize local gas stations,

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convenience stores, and restaurants that are along existing access roads to the construction area. Details regarding the potential economic benefits of the Project are provided in the Louisiana State University economic study. As documented in an economic study conducted by the Louisiana State University Center for Energy Studies (2017), construction of the proposed Bayou Bridge Pipeline Project could benefit the state and local communities by generating over \$50 million in state and local tax revenues.

Because of the reasons above, it was determined that the Project would not disproportionately affect the EJ community at Census Tract 501, Block Group 1.

Census Tract 501, Block Group 2

Although the Project would impact an EJ community at the Census Tract 501, Block Group 2 crossing, the impacts are not disproportionate when considering other factors that influenced the routing of the Project Route. The Project was routed to be co-located with other existing utilities to the greatest extent practicable in order to reduce the overall Project's impacts. By co-locating the proposed crossing, the requester attempted to minimize impacts on environmental resources (i.e., Bayou Lafourche), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses.

Additionally, there is a predefined beginning and end of the Project as a result of the overall project's purpose and need. As such, a crossing of Census Tract 501, Block Group 3 in the same general area as the Project would be required. However, three of the four census block groups located immediately to the north (Census Tract 309, Block Group 3 and Census Tract 310, Block Group 2) and south (Census Tract 503, Block Group 2 and Census Tract 503, Block Group 1) of the proposed crossing are considered EJ communities with greater than 50% minority populations and/or greater than 20% impoverished populations. Therefore, a reroute to the north or south of the proposed alignment to avoid impacting Census Tract 501, Block Group 2 would result in impacts to other EJ communities.

Furthermore, the construction of the Project potentially offers some positive economic benefit to all local communities as construction workers could utilize local gas stations, convenience stores, and restaurants that are along existing access roads to the construction area. Details regarding the potential economic benefits of the Project are provided in Attachment 1. As documented in an economic study conducted by the Louisiana State University Center for Energy Studies (2017), construction of the proposed Bayou Bridge Pipeline Project could benefit the state and local communities by generating over \$50 million in state and local tax revenues.

Because of the reasons above, it was determined that the Project would not disproportionately affect the EJ community at Census Tract 501, Block Group 2.

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Census Tract 503, Block Group 1 contains an impoverished population that is greater than 20%. However, at 20.40%, this census block group is less than one half percent above the impoverished level. As provided in Table 1, the reference community, Assumption Parish, contains an impoverished population that is only 4.43% less than the community impacted by the Project. Therefore, the proposed Project does not cross an impoverished population that is meaningfully greater than the reference community.

Furthermore, construction of the Project potentially offers some positive economic benefit to all local communities as construction workers could utilize local gas stations, convenience stores, and restaurants that are along existing access roads to the construction area. As documented in an economic study conducted by the Louisiana State University Center for Energy Studies (2017), construction of the proposed Bayou Bridge Pipeline Project could benefit the state and local communities by generating over \$50 million in state and local tax revenues.

Because of these reasons, it was determined that the Project would not disproportionately affect the EJ community in Census Tract 503, Block Group 1.

Census Tract 405, Block Group 1

Census Tract 405, Block Group 1 contains both impoverished and minority communities that are meaningfully greater than the reference community (St. James Parish). However, the terminus of the proposed Project, which is located in Census Tract 405, Block Group 1, dictates that this EJ community will be impacted by construction of the Project. Additionally, the Project was routed to be co-located with other existing utilities to the greatest extent practicable in order to reduce the overall Project's impacts. By co-locating the proposed crossing, the requester attempted to minimize impacts on environmental resources (i.e., wetlands and waterbodies), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses.

Furthermore, the construction of the Project's alternative potentially offers some positive economic benefit to all local communities as construction workers could utilize local gas stations, convenience stores, and restaurants that are along existing access roads to the construction area. As documented in an economic study conducted by the Louisiana State University Center for Energy Studies (2017), construction of the proposed Bayou Bridge Pipeline Project could benefit the state and local communities by generating over \$50 million in state and local tax revenues.

Because of the reasons above, it was determined that the Project would not disproportionately affect the EJ community in Census Tract 405, Block Group 1.

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Census Tract 405, Block Group 1 contains both impoverished and minority communities that are meaningfully greater than the reference community (St. James Parish). However, the Project was routed to be co-located with other existing utilities to the greatest extent practicable in order to reduce the overall Project's impacts. By co-locating the proposed crossing, the requester attempted to minimize impacts on environmental resources (i.e., wetlands and waterbodies), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses.

Furthermore, the construction of the Project's alternative potentially offers some positive economic benefit to all local communities as construction workers could utilize local gas stations, convenience stores, and restaurants that are along existing access roads to the construction area. As documented in an economic study conducted by the Louisiana State University Center for Energy Studies (2017), construction of the proposed Bayou Bridge Pipeline Project could benefit the state and local communities by generating over \$50 million in state and local tax revenues.

Because of the reasons above, it was determined that the Project would not disproportionately affect the EJ community in Census Tract 405, Block Group 2.

Conclusion

In summary, construction of the Project would impact both minority and/or impoverished communities as well as non-minority and/or not impoverished communities along the Project route. Of the 41 census block groups that would be impacted by construction of the Project, 14 are considered EJ communities, which equate to 34% of the total number census block group crossings. Conversely, 27 of the census block group crossings (66%) potentially impacted by construction do not impact EJ communities. For the reasons stated in the above EJ analysis, there are no disproportionate impacts on minority and/or impoverished communities from construction of the pipeline.

Operation

A separate analysis was performed to determine if an inadvertent release of crude oil from the pipeline during operations would disproportionately impact communities where the poverty level is greater than 20% or the minority population exceeds 50%. As discussed above, 41 census block groups would be affected during construction of the Project, only 14 are considered EJ communities. In the event of a release during operation, these same 41 block groups could be affected, as well as an additional 20 block groups located downstream of the Project, as indicated in Table 1.

Because the results of an EJ analysis of the 41 census blocks crossed during construction would be the same as noted above, only the additional 20 block groups located downstream of the Project are discussed in detail below.

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Of the additional 20 block groups that would not be impacted by construction of the Project, but could be impacted as a result of a worst-case scenario release during operation, three are considered EJ communities (St. Martin Parish, Census Tract 210, Block Group 1; St. Martin Parish, Census Tract 206, Block Group 2; and Iberia Parish, Census Tract 303.02, Block Group 2). This equates to 15% of the additional census block group crossings added to the potential impact area due to an inadvertent release of crude oil from the pipeline during operations. Conversely, the 17 of the additional census block group crossings (85%) added to the potential impact area due to an inadvertent release of crude oil from the pipeline during operations are non-EJ communities. When considering the census block groups crossed by the Project, as well as those downstream communities potentially impacted by a release, the overall impacts to EJ communities would be 28% relative to 72% non-EJ communities.

Additional analysis was performed on each of the three EJ communities that would be impacted if an inadvertent release of crude oil from the pipeline occurred during operations to determine if the statistics for the census block groups are meaningfully different from their respective reference communities (i.e., parishes). If the differences were meaningful, then an analysis was performed to determine if the Project would have a disproportionate impact on the minority and/or impoverished communities. Each of these communities is further discussed below.

Census Tract 210, Block Group 1

Census Tract 210, Block Group 1 contains an impoverished community in which greater than 20 % of the population is below the poverty level. An estimated 40.68 % of this block group is below the poverty level, which is meaningfully greater than the 17.86 % of the population of St. Martin Parish that is below the poverty level; therefore, this block group is considered an EJ community.

Potential impacts on this community are not disproportionate when considering other factors that influenced the routing of the Project in the block group north of Census Tract 210, Block Group 1 that would be directly impacted by construction of the Project and the likely location of a release that could impact Census Tract 210, Block Group 1.

First, the Project was routed to be co-located with other existing utilities and/or existing roadways to the greatest extent practicable in order to reduce the overall Project's impacts. By co-locating the proposed route through to the maximum extent practicable, BBP attempted to minimize impacts on environmental resources (i.e., wetlands/waterbodies), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses. As noted above, the construction of the pipeline through this area was not determined to have a disproportionately high adverse impact on EJ communities.

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Second, these same four block groups would not only be impacted by construction, they would also be the likely location of a small release in this area that may not even reach Census Tract 210, Block Group 1.

Third, these same four block groups impacted by construction would also likely be impacted by any larger potential release scenario that could impact Census Tract 210, Block Group 1 downstream.

Therefore, it was determined that the impacts of an inadvertent release during operations would not have a disproportionately high adverse impact on the EJ community Census Tract 210, Block Group 1.

Census Tract 206, Block Group 2

Census Tract 206, Block Group 2 contains both impoverished and minority communities that are meaningfully greater than the reference community (St. Martin Parish). However, potential impacts on these communities are not disproportionate when considering other factors that influenced the routing of the Project in the block group south of Census Tract 206, Block Group 2 (Census Tract 206, Block Group 4) that would be directly impacted by construction of the Project.

First, the Project was routed to be co-located with other existing utilities and/or existing roadways to the greatest extent practicable in order to reduce the overall Project's impacts. By co-locating the proposed route through to the maximum extent practicable, BBP attempted to minimize impacts on environmental resources (i.e., wetlands/waterbodies), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses. As noted above, the construction of the pipeline across Census Tract 206, Block Group 4 was not determined to impact an EJ communities.

Second, this block group (Census Tract 206, Block Group 4) would not only be impacted by construction, it would also be the likely location of a small release in this area that may not even reach Census Tract 206, Block Group 2.

Third, this same block group would also likely be impacted by any larger potential release scenario that could impact Census Tract 206, Block Group 2.

Therefore, it was determined that the impacts of an inadvertent release during operations would not have a disproportionately high adverse impact on the EJ community Census Tract 206, Block Group 2.

Census Tract 303.02, Block Group 2

Census Tract 303.02, Block Group 2 also contains an impoverished community in which greater than 20 % (28.53 %) of the population is below the poverty level. An estimated

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28.53 % of this block group is below the poverty level, which is meaningfully greater than the 19.59 % of the population of Iberia Parish that is below the poverty level; therefore, this block group is also considered an EJ community.

Potential impacts on this community are not disproportionate when considering other factors that influenced the routing of the Project in the block groups north of Census Tract 303.02, Block Group 2 (Census Tract 303.02, Block Group 1 and Census Tract 303.01, Block Group 1) that would be directly impacted by construction of the Project.

First, the Project was routed to be co-located with other existing utilities and/or existing roadways to the greatest extent practicable in order to reduce the overall Project's impacts. By co-locating the proposed route through to the maximum extent practicable, BBP attempted to minimize impacts on environmental resources (i.e., wetlands/waterbodies), avoid the creation of a new ROW through the affected communities, and reduce impacts on current land uses. As noted above, the construction of the pipeline through this area was not determined to have a disproportionately high adverse impact on EJ communities.

Second, these same two block groups (Census Tract 303.02, Block Group 1 and Census Tract 303.01, Block Group 1) would not only be impacted by construction, they would also be the likely location of a small release in this area that may not even reach Census Tract 303.02, Block Group 2.

Third, these same two block groups would also likely be impacted by any larger potential release scenario that could impact Census Tract 303.02, Block Group 2 downstream.

Therefore, it was determined that the impacts of an inadvertent release during operations would not have a disproportionately high adverse impact on the EJ community Census Tract 303.02, Block Group 2.

Conclusion

Overall, a release during operation of the Project has the potential to impact a total of 61 census block groups, based on the spill model prepared for the Project in accordance with PHMSA regulations. However, the extent of impacts and number of communities affected would depend on a variety of factors including the location and volume of the release.

The calculated incident rate probability information provided by the BBP was reviewed and it was determined that risk of a large spill resulting in significant adverse environmental impacts to any particular resource or community was determined to be minimal. Although the consequences of a large spill may be high, the probability of a large spill impacting any particular resource or community is low. Additionally, the requester has safeguards in place to mitigate the likelihood and severity of a spill. Of the 61 census block groups that could be affected by a release, 17 (28 %) are considered EJ

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communities. Conversely, 44 (72%) are considered non-EJ communities. Based on the percent of EJ communities potentially impacted during operation of the Project relative to the percent of non-EJ communities, there would be no disproportionate impact on EJ communities as a result of operation of the Project.

References:

Pipeline and Hazardous Materials Safety Administration (PHMSA). 2017. PHMSA Pipeline Incident Statistics. <http://www.phmsa.dot.gov/pipeline/library/data/stats/pipelineincidenttrends>. Accessed July 2017.

Louisiana State University Center for Energy Studies. 2017. Potential Economic Impacts of the Bayou Bridge Pipeline. [http://www.enrg.lsu.edu/files/images/publications/online/2017/BAYOU BRIDGE REPO RT_FINAL_02-07-2017.pdf](http://www.enrg.lsu.edu/files/images/publications/online/2017/BAYOU_BRIDGE_REPO_RT_FINAL_02-07-2017.pdf). Accessed February 2017.

(4) EO 13112, Invasive Species.

☐ There were no invasive species issues involved

☒ The evaluation above included invasive species concerns in the analysis of impacts at the project site. The temporary construction ROW and temporary workspaces will be allowed to re-vegetate naturally and will be kept free of invasive species. This is made part of the Department of the Army permit through Special Condition #24.

- (5) EO 13212 and 13302, Energy Supply and Availability. ☒ The project was one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety. (☐ The review was expedited and/or other actions were taken to the extent permitted by law and regulation to accelerate completion of this energy-related (including pipeline safety) project while maintaining safety, public health, and environmental protections.)

- d. Finding of No Significant Impact (FONSI). Having reviewed the information provided by the applicant, the comments received from the public in writing and at the public hearing, the environmental assessment prepared as part of the Section 408 review and this assessment of the environmental impacts, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.
- e. Compliance with 404(b)(1) guidelines. ☒ Having completed the evaluation in paragraph 5, I have determined that the proposed discharge ☒ complies/☐ does not comply with the 404(b)(1) guidelines.

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- f. Public Interest Determination: I find that issuance of a Department of the
Army permit ☒ is not ☐ is contrary to the public interest.

PREPARED BY:

[Redacted Signature]

James W. Little, Jr.
Project Manager, OD-SW

14 DECEMBER 2017
Date

REVIEWED BY:

[Redacted Signature]

Darrell S. Barbara, Chief
Western Evaluation Section

14 December 2017
Date

REVIEWED BY:

[Redacted Signature]

Martin S. Mayer, Chief
Regulatory Branch

14 December 2017
Date

APPROVED BY:

[Redacted Signature]

Michael N. Clancy
Colonel, U.S. Army
District Commander

14 December 2017
Date