

Boat Launch

Marsh

Marsh

### Legend

-  Picnic Area
-  Boardwalk with Rip-Rap
-  Nature Trails
-  Interpretive Center
-  Kayak Rental/Bait Shop
-  Marsh Overlook Pier
-  Parking
-  Marsh

Popp's Ferry Causeway



MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE OF MISSISSIPPI  
COUNTY OF HINDS

MDEQ AGREEMENT NO. 15-00068

EARLY RESTORATION GRANT AGREEMENT

This Grant Agreement (“Grant” or “Agreement”) is by and between the Mississippi Department of Environmental Quality (“MDEQ”) and the City of Biloxi, Mississippi (“Grantee”, and together with MDEQ, the “Parties”, and each, a “Party”).

In consideration of the mutual covenants and agreements hereinafter set forth, the Parties agree as follows:

1. Source of Funds. The funds to be disbursed by MDEQ to Grantee under this Agreement (the “Funds”) represent a portion of the funding by BP Exploration & Production Inc. pursuant to the Stipulation Regarding Early Restoration Project for the Deepwater Horizon Oil Spill – Popp’s Ferry Causeway Park (the “Stipulation”) dated October 2, 2014.

2. Project to be Funded. Under this Agreement, MDEQ agrees to disburse Funds to Grantee in accordance with the terms hereof to pay the costs associated with Grantee’s implementation of the project entitled “Popp’s Ferry Causeway Park Project” (the “Project”). Grantee shall implement the Project in strict accordance with the following:

A. Appendix A of the Stipulation, a copy of which is attached hereto and incorporated herein as Attachment “A”;

B. Sections 10.6 and 10.7 of the Final Programmatic and Phase III Early Restoration Plan and Early Restoration Programmatic Environmental Impact Statement (the “Plan”) a copy of which is attached hereto and incorporated herein as Attachment “B”;

C. Section 10.3.3 of the Record of Decision for the *Deepwater Horizon* Oil Spill: Final Programmatic and Phase III Early Restoration Plan and Early Restoration Programmatic Environmental Impact Statement (Phase III ERP/PEIS)(the “Record of Decision”), a copy of which is attached hereto and incorporated herein as Attachment “C”; and

D. any permits issued to MDEQ or Grantee for the Project (“Permits”, and together with the Stipulation, the Plan, the Record of Decision, as attached hereto in pertinent part, the “Project Description”).

Grantee hereby agrees to use the Funds disbursed to it under this Agreement exclusively to pay the costs of the services, time, materials, equipment, machinery, tools, and other items, including, but not limited to, administrative, engineering, construction, and legal costs (collectively the “Work”) comprising the Project, all in accordance with the Project Description.

3. Period of Performance. Subject to the other provisions herein contained, the period of performance for this Agreement shall end March 31, 2017, beginning upon execution of this Agreement by the Executive Director of MDEQ (“Period of Performance”). Grantee may request to extend the Period of Performance of this Agreement for one (1) year under the same terms,

covenants and conditions as those contained in this Agreement, provided that (A) this Agreement shall not have been previously terminated; or (B) Grantee shall not be in default by reason of any failure in performance of this Agreement. Such extension request may be made in writing by Grantee to MDEQ at least thirty (30) days prior to the expiration of the Agreement. MDEQ may, in its sole discretion, decide whether to grant the extension.

4. Maximum Amount of Funding. Unless otherwise agreed to in writing by MDEQ, at its sole discretion, the amount of Funds to be made available by MDEQ to Grantee under this Agreement for the purposes of paying the Project costs not to exceed a maximum of Four Million Two Hundred Thirty-Two Thousand Ninety-Seven and 00/100 Dollars (\$4,232,097.00) (the “**Maximum Amount**”), which includes contingency funding controlled by MDEQ in an amount of Three Hundred Forty-Eight Thousand Three Hundred Seventy-Two and 00/100 Dollars (\$348,372.00).

5. Expenditure Commitment. Grantee commits to expeditiously expend the Funds provided to Grantee under this Agreement exclusively for the completion of the Project in accordance with the Project Description.

6. Payment for Project Costs. Grantee may request payment of Funds hereunder for Project costs paid or incurred by Grantee (“**Reimbursement Requests**”). Reimbursement Requests shall be made in accordance with the following procedures and subject to the following terms and conditions.

A. *Reimbursement Requests.* Grantee may make Reimbursement Requests no more frequently than once monthly, and such Reimbursement Request shall be submitted separately for periods ending June 30 of any year during the Period of Performance. To receive payment for a Reimbursement Request, Grantee must submit to MDEQ a written request in a form to be provided by MDEQ. At a minimum, the following information must be included in any Reimbursement Request:

- i. the total dollar amount of Funds being requested;
- ii. a narrative description of the Work for which the Funds are being requested;
- iii. evidence of sufficient instruments of record from landowners of real property on which Work corresponding to the Reimbursement Request was performed (e.g., clear site certificates);
- iv. evidence of compliance with all Permits, as defined herein;
- v. invoices for all requested costs previously expended or incurred;
- vi. a certification that: (a) the Work for which the Funds are being requested constitutes part of the Project as set forth in the Project Description; (b) as of the date of the applicable Reimbursement Request, the Project has been proceeding on or under the Maximum Amount and, to Grantee’s best knowledge, Grantee expects the Project to be fully completed on or under the Maximum Amount as well as prior to the expiration of this Agreement.

In the event Grantee is unable to make a certification specified in Subsection 6.A.vi at the time Grantee submits a Reimbursement Request, Grantee shall submit with its Reimbursement Request a written explanation of the basis for Grantee’s determination that the Project has not

been, or will not be, fully completed on or under the Maximum Amount or that the Project will not be completed prior to the expiration of this Agreement. After receipt and review of such written explanation, MDEQ will determine, in its sole discretion, whether to disburse the requested Funds and/or whether additional conditions to disbursement are required to be satisfied by Grantee.

B. *Ongoing Compliance.* MDEQ reserves the right to refuse to pay all or any part of the Funds requested in a Reimbursement Request if at the time the request is submitted Grantee has failed to comply with any term or condition of this Agreement or has otherwise failed to perform the Work to date in accordance with the Project Description.

C. *Holdback.* Notwithstanding any Reimbursement Request by Grantee or any other provision of this Agreement, MDEQ may, in its sole discretion, withhold ten percent (10%) of the Maximum Amount (the “**Holdback**”) until such time as Grantee has completed the Project, submitted the Final Reports (as defined in Section 9), and received MDEQ’s written approval of the Final Reports. Within forty-five (45) days after MDEQ’s written approval of such Final Reports, MDEQ shall disburse to Grantee all or such portion of the ten-percent (10%) holdback as is properly payable to Grantee for Work performed under this Agreement. However, if MDEQ is satisfied that the Project is proceeding on schedule and on budget, MDEQ (acting in its sole discretion) may reduce the holdback from ten-percent (10%) and disburse Funds to Grantee to pay for previously expended or incurred costs of Work in advance of submission of the Final Reports.

D. *Release of Claims and Final Payment.* Upon satisfactory completion of the Work performed under this Agreement, as a condition before final payment under this Agreement or as a termination settlement under this Agreement, Grantee shall execute and deliver to MDEQ a release of all claims against MDEQ arising under, or by virtue of, this Agreement, except claims which are specifically exempted by Grantee to be set forth therein, using the form set forth on Attachment “D”. Unless otherwise provided in this Agreement, by state law or otherwise expressly agreed to by the Parties to this Agreement, final payment under this Agreement or settlement upon termination of this Agreement shall not constitute waiver of MDEQ's claims against Grantee or his sureties under this Agreement. Additionally, Final Payment will be held until Grantee has submitted all Final Reports, and MDEQ has approved such Final Reports.

7. Availability of Funds. It is expressly understood and agreed that the obligation of MDEQ to proceed under this Agreement is conditioned upon the receipt and availability of funds from BP Exploration & Production Inc. pursuant to the Stipulation. If the funds anticipated for the continuing fulfillment of this Agreement are, at any time, not forthcoming or insufficient, either through the failure of the State of Mississippi to appropriate funds or the discontinuance or material alteration of the program under which funds were provided or if funds are not otherwise available to MDEQ, MDEQ shall have the right upon ten (10) working days written notice to Grantee, to terminate this Agreement without damage, penalty, cost or expenses to MDEQ of any kind whatsoever. The effective date of termination shall be as specified in the notice of termination.

8. Progress Reports. Grantee shall provide monthly progress reports to MDEQ using the monthly report form, and including all information required thereby, a copy of which is attached

hereto as Attachment “E” (“**Progress Reports**”). All Progress Reports shall be submitted to MDEQ on or before the 25<sup>th</sup> day of each month during the Period of Performance of this Agreement.

9. **Final Reports.** When GRANTEE believes that it has completed the Project, Grantee shall transmit to MDEQ a comprehensive report on the Project and the corresponding results (the “**Final Project Report**”) and a full accounting of the Funds disbursed to it hereunder (the “**Final Financial Report**”) (the Final Project Report and Final Financial Report are hereinafter referred to collectively as the “**Final Reports**”). If applicable, the Final Project Report should include copies of any publications, press releases, and other documents, materials, and products developed as part of the Project, including, without limitation, certification of completion in accordance with this Agreement, as-builts, photographs, video footage, and other electronic representations of the Project and corresponding Work.

The Final Reports shall be provided by Grantee to MDEQ within forty-five (45) days of Project completion. Within thirty (30) days of receipt of such Final Reports, MDEQ shall provide to Grantee written approval of such Final Reports or provide written guidance for recommendations to be made to such Final Reports so that written approval may be given.

10. **Financial Management.** MDEQ requires that the Grantee have in place, prior to the receipt of Funds, a financial management system that will be able to isolate and trace every dollar funded under this Agreement from receipt to expenditure and have on file appropriate support documentation for each transaction. Examples of documentation are copies of checks paid to vendors, vendor invoices, bills of lading, purchase vouchers, payrolls, bank statements and reconciliations, and real property and easement appraisals. Prior to the submittal of any such documentation to MDEQ, Grantee shall redact all information reflecting a person’s home address, home or personal telephone number(s), social security number, family members, names of minor children, dates of birth, financial account numbers, and credit card numbers. Grantee and its Contractors (as such term is defined in Section 28.B) are limited to the travel rates of the State of Mississippi, including dining and hotels, in place at the time of the expenditure for which reimbursement is sought; and Grantee shall audit any such invoice for same, clearly indicating the actual expense and the adjustment, if any.

Grantee certifies that all information provided to MDEQ or its representatives as part of the initial risk assessment for this Project is complete and accurate. Grantee agrees to submit to and cooperate with MDEQ in any additional risk assessment evaluation and periodic audit procedures to ensure adequate financial management of all Funds. Further, Grantee shall continue to implement any recommendations and/or corrective action plan set forth in the report transmitted to Grantee based on the findings of the systems and processes for financial management, a copy of which is attached hereto as Attachment “F” and incorporated herein in its entirety.

11. **MDEQ Right to Inspect and Project Access.** At any time during the Period of Performance, MDEQ and its representatives and consultants shall, upon prior reasonable notice to Grantee, have access to inspect all Work pursuant to this Agreement; provided, however, that any inspection shall be conducted at a reasonable time and in a manner that does not delay or disrupt the Work. Notwithstanding any review or inspection by MDEQ, Grantee shall not be relieved of its

responsibility to complete the Project in accordance with the Project Description or the submission of any reports required by this Agreement. Grantee shall provide MDEQ and its representatives or consultants with the opportunity to participate in site inspections, meetings, and/or teleconferences, as appropriate, related to Grantee's or any of its Contractors' performance of Work hereunder and completion of the Project.

12. Monitoring. Grantee agrees to assist and cooperate with MDEQ or its designated representatives in the post-construction monitoring of the Project as required by Section 10.6.4 of the Plan for a period of five (5) years following written approval by MDEQ of the Final Reports (the "**Monitoring Period**"). This requirement shall survive the termination of this Agreement.

13. Stop Work Order.

A. *Order to Stop Work*. MDEQ may, by written order to Grantee, at any time, and without notice to any surety, require Grantee to stop all or any part of the Work under this Agreement. This order shall be for a specified period not exceeding ninety (90) days after the order is delivered to Grantee, unless the Parties agree to any further period. Any such order shall be identified specifically as a stop work order issued pursuant to this clause. Upon receipt of such an order, Grantee shall forthwith comply with its terms and take all reasonable steps to minimize the occurrence of costs allocable to the work covered by the order during the period of work stoppage. Before the stop work order expires, or within any further period to which the parties shall have agreed, MDEQ shall either:

- i. cancel the stop work order; or
- ii. terminate the Work covered by such order as provided in Section 22 of this Agreement.

B. *Cancellation or Expiration of the Order*. If a stop work order issued under this clause is canceled at any time during the period specified in the order, or if the period of the order or any extension thereof expires, Grantee shall have the right to resume Work. An appropriate adjustment shall be made in the Period of Performance or to the Funds, and the Agreement shall be modified in writing accordingly, if:

- i. the stop work order results in an increase in the time required for, or in Grantee's costs properly allocable to, the performance of any part of this Agreement; and
- ii. Grantee asserts a claim for such an adjustment within thirty (30) days after the period of work stoppage; provided that, if MDEQ decides that the facts justify such action, any such claim asserted may be received and acted upon at any time prior to final payment under this Agreement.

C. *Termination of Stopped Work*. If a stop work order is not canceled and the Work covered by such order is terminated for default or convenience, the reasonable costs resulting from the stop work order shall be allowed by adjustment or otherwise.

14. Public Records. Notwithstanding any provision to the contrary contained herein, it is recognized that MDEQ and Grantee are public entities of the State of Mississippi and are subject to the Mississippi Public Records Act and its exceptions. See Miss. Code Ann. §§ 25-61-1 *et seq.* (1972, as amended) and Miss. Code Ann. § 79-23-1 (1972, as amended). If Grantee receives a public records request related to the Project or this Agreement and prior to responding to any such request, Grantee shall promptly notify the MDEQ of such request and will respond to the request only in accordance with the procedures and limitations set forth in applicable law.

15. Transparency. This Agreement, including any accompanying exhibits, attachments, and appendices, is subject to the “Mississippi Public Records Act of 1983,” and its exceptions. See Miss. Code Ann. §§ 25-61-1 *et seq.* (1972, as amended) and Miss. Code Ann. § 79-23-1 (1972, as amended). In addition, this Agreement is subject to the provisions of the Mississippi Accountability and Transparency Act of 2008. Miss. Code Ann. §§ 27-104-151 *et seq.* (1972, as amended). Unless exempted from disclosure due to a court-issued protective order, a copy of this executed Agreement is required to be posted to the Department of Finance and Administration’s independent agency contract website for public access at <http://www.transparency.mississippi.gov>. Information identified by Grantee as trade secrets, or other proprietary information, including confidential vendor information or any other information which is required confidential by state or federal law or outside the applicable freedom of information statutes, will be redacted.

16. Grantee’s Personnel. MDEQ shall, throughout the life of the Agreement, have the right of reasonable rejection and approval of staff or Contractors assigned to the Work by Grantee. If MDEQ reasonably rejects staff or Contractors, Grantee must provide replacement staff or Contractors satisfactory to MDEQ in a timely manner and at no additional cost to MDEQ. The day-to-day supervision and control of Grantee’s employees and Contractors is the sole responsibility of Grantee.

17. Failure to Enforce. Failure by MDEQ, at any time, to enforce the provisions of this Agreement shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of this Agreement or any part thereof or the right of MDEQ to enforce any provision at any time in accordance with its terms.

18. Third Party Action Notification. Grantee shall give MDEQ prompt notice in writing of any action or suit filed, and prompt notice of any claim made against Grantee by any entity that may result in litigation related in any way to this Agreement or the Project.

19. Insurance and Bonding.

- A. *Fidelity Bonds*. Grantee shall bond its agents and employees who receive, deposit or have access to the Funds to protect against loss as required by State law. The bond shall name MDEQ as an additional insured or payee.
- B. *Insurance*. Grantee shall secure and maintain in effect for the Performance of Period and the Monitoring Period and pay all premiums for the following kinds and amounts of

insurance covering all aspects of the Project, to be insured by an insurance company or companies licensed to do business in the State of Mississippi:

- i. *Workers' Compensation and Employer's Liability Insurance.* This insurance shall protect Grantee against all claims under applicable State workers' compensation laws. Grantee shall also be protected against claims for injury, disease, or death of employees, which for any reason, may not fall within the provisions of a workers' compensation law. The liability limits shall not be less than the required statutory limits for workers' compensation and employer's liability limits in the amount of One Million and 00/100 Dollars (\$1,000,000.00). Grantee shall supply MDEQ endorsements from its carriers evidencing waiver of subrogation in favor of MDEQ.
- ii. *Comprehensive General Liability Insurance.* This insurance shall include bodily injury, property damage, contractual and other standard coverage contained in comprehensive general liability insurance, in an amount of not less than One Million and 00/100 Dollars (\$1,000,000.00) per occurrence and Two Million and 00/100 Dollars (\$2,000,000.00) aggregate.
- iii. *Auto Liability Insurance.* Grantee shall maintain Auto Liability Insurance in the amount of not less than One Million and 00/100 Dollars (\$1,000,000.00) Combined Single Limit to protect it from any and all claims arising from the use of the following: (1) Grantee's own automobiles and trucks; (2) hired and non-owned automobiles and trucks; and (3) automobiles and trucks owned by Contractors. The aforementioned is to cover use of automobiles and trucks on and off the site of the Project.
- iv. *Property Insurance.* During the construction phase of the Project, Grantee shall purchase and maintain, or require its Contractors to purchase and maintain, property insurance for the Project in the amount of the full replacement cost thereof. This insurance shall:
  - a. be written on a Builder's Risk "all-risk" policy form that shall, at least, include insurance for physical loss or damage to the Project, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or cause of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of any and all applicable laws, statutes, rules regulations, ordinances, codes and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction; and water damage (other than that caused by flood); and if insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood,

are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to MDEQ;

- b. cover, as insured property, at least the following: (i) the Project and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Project, including MDEQ-furnished or assigned property; (b) spare parts inventory required within the scope of the Agreement; and (c) temporary works which are not intended to form part of the permanent constructed Project, but which are intended to provide working access to the Project site, or to any parts of the Project under construction, or which are intended to provide temporary support for the aspect of the Project under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures;
- c. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
- d. extend to cover damage or loss to insured property while in temporary storage at the Project site or in a storage location outside the Project site (but not including property stored at the premises of a manufacturer or supplier);
- e. extend to cover damage or loss to insured property while in transit;
- f. allow for partial occupation or use of the Project by Grantee, such that those portions of the Project that are not yet occupied or used by Grantee shall remain covered by the builder's risk insurance;
- g. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions;
- h. include a separate installation endorsement that would specifically cover start up testing and startup.

Upon completion of any part of any phase of the Project, Grantee shall take such steps as necessary to provide coverage for the completed part of the Project under its existing property and casualty insurance policies, including but not limited to, coverage for wind, flood, fire and extended coverage and such other risks as are or were covered by existing property and casualty insurance policies.

- C. On all of the insurance coverage required in this Section 19 MDEQ, its Commissioners, Board Members, officers, employees, agents, and representatives, and the State of Mississippi and its elected and appointed officers, employees and agents shall be named as additional insureds or loss payee as the situation on such policies as the circumstances may require. Grantee shall provide that the insureds

thereon waive subrogation against the State of Mississippi and MDEQ. It is agreed between the parties (and their respective insurers) that Grantee's respective policies shall provide primary coverage before any applicable policy otherwise covering MDEQ, and any insurance covering MDEQ shall be excess coverage over Grantee's coverage. Endorsements so stating shall be provided by Grantee. The policies shall also provide for all additional insureds to be provided with a minimum 30-day written notice prior to a cancellation or modification of each respective policy. While Grantee shall provide MDEQ with endorsements as set forth in this paragraph, the failure to do so, or the failure of the endorsements or insurance provided to conform to the Agreement, does not constitute waiver or estoppels as to MDEQ of their respective legal and equitable rights, including but not limited to, the right to enforce the terms of the Agreement. These contractual insurance provisions are intended to be, and shall be interpreted to be, separate and independent contractual obligations from the contractual provisions addressing the indemnity of MDEQ by Grantee. Upon execution of the Agreement, Grantee shall promptly furnish MDEQ with certificates of insurance showing the Grantee compliance with the insurance provisions of this paragraph.

20. Record Retention. All records related to this Agreement ("**Project Records**") shall be retained by Grantee, at a minimum, for three (3) years after the expiration of the Monitoring Period and all pending matters are closed; however, if any audit, litigation or other action arising out of or related in any way to this project is commenced before the end of the three (3) year period, the records shall be retained for one (1) year after all issues arising out of the action are finally resolved or until the end of the three (3) year period, whichever is later. Grantee shall maintain such Project Records and other records as may be prescribed by MDEQ or by applicable federal and state laws, rules, and regulations.

21. Access to Records and Right to Audit. The Project Records shall be made available during the Period of Performance, the Monitoring Period and the subsequent three (3)-year period set forth in Section 20 for examination, transcription, and audit by MDEQ, the Mississippi State Auditor's Office, its designees, or other authorized bodies. Provided Grantee is given reasonable advance written notice and such inspection is made during normal business hours of Grantee, the State or any duly authorized representatives shall have unimpeded, prompt access to any of Grantee's Project Records, including, without limitation, all of Grantee's books, documents, papers, and/or records which are maintained or produced as a result of the Project for the purpose of making audits, examinations, excerpts, and transcriptions.

22. Termination. This Agreement may be terminated as follows:

A. *Termination for Default.* If Grantee refuses or fails to perform any of the provisions of this Agreement with such diligence as will ensure Project completion within the time specified in this Agreement or any extension thereof, or otherwise fails to timely satisfy the Agreement provisions, or commits any other substantial breach of this Agreement, MDEQ may notify Grantee in writing of the delay or nonperformance and if not cured in ten (10) days or any longer time specified in writing by MDEQ, MDEQ may terminate Grantee's right to proceed with the Agreement or such part of the Agreement as to which there has been delay or a failure to

properly perform. Notwithstanding termination of the Agreement and subject to any directions from MDEQ, Grantee shall take timely, reasonable, and necessary action to protect and preserve property in the possession of Grantee in which the State has an interest. In the event of such termination, MDEQ shall disburse Funds in an amount to cover satisfactory Work completed on the Project, but in no event shall such Funds exceed the Maximum Amount. The rights and remedies provided in this provision are in addition to any other rights and remedies provided by law or under this Agreement.

*B. Termination upon Bankruptcy.* This contract may be terminated in whole or in part by MDEQ upon written notice to Grantee, if Grantee should become the subject of bankruptcy or receivership proceedings, whether voluntary or involuntary, or upon the execution by Grantee of an assignment for the benefit of its creditors. In the event of such termination, Grantee shall be entitled to recover just and equitable compensation for satisfactory Work performed under this Agreement, but in no case shall said compensation exceed the Maximum Amount.

*C. Termination for Fraud.* This Agreement may be terminated in whole or in part by MDEQ upon written notice to Grantee if MDEQ determines that there is sufficient evidence of fraud or other violations of state or federal law regarding any aspect of the Project. In the event of such termination, MDEQ reserves the right to demand recovery of any or all Funds paid to Grantee for the Project, and Grantee agrees to repay such Funds to MDEQ upon such demand and within the time specified by MDEQ.

23. Recovery of Money. Whenever, under the Agreement, any sum of money shall be recoverable from or payable by Grantee to MDEQ, the same amount may be deducted from any sum due to Grantee under the Agreement or under any other contract between Grantee and MDEQ. The rights of MDEQ are in addition and without prejudice to any other right MDEQ may have to claim the amount of any loss or damage suffered by MDEQ on account of the acts or omissions of Grantee.

24. Unsatisfactory Work. If, at any time during the Period of Performance, the Work performed by Grantee is considered by MDEQ to not be in compliance with the Project Description or to create a condition that threatens the health, safety, or welfare of the citizens, Grantee shall, upon notification by MDEQ, immediately correct such deficient Work. In the event Grantee fails, after notice, to correct the deficient Work immediately, MDEQ shall have the right to order the correction of the deficiency by separate agreement or with its own resources at the expense of Grantee.

25. E-Payment. Grantee agrees to accept all payments in United States currency via the State of Mississippi's electronic payment and remittance vehicle. MDEQ agrees to make payment in accordance with Mississippi law on "Timely Payments for Purchases by Public Bodies," which generally provides for payment of undisputed amounts by the agency within forty-five (45) days of receipt of invoice. Miss. Code Ann. § 31-7-305 (1972, as amended).

26. E-Verification. If applicable, Grantee represents and warrants that it will ensure its compliance with the Mississippi Employment Protection Act of 2008, and will register and participate in the status verification system for all newly hired employees. Miss. Code Ann.

§§ 71-11-1, *et seq.* (1972, as amended). The term “employee” as used herein means any person that is hired to perform work within the State of Mississippi. As used herein, “status verification system” means the Illegal Immigration Reform and Immigration Responsibility Act of 1996 that is operated by the United States Department of Homeland Security, also known as the E-Verify Program, or any other successor electronic verification system replacing the E-Verify Program. Grantee agrees to maintain records of such compliance. Upon request of the State of Mississippi and after approval of the Social Security Administration or Department of Homeland Security, when required, Grantee agrees to provide a copy of each such verification. Grantee further represents and warrants that any person assigned to perform services hereafter meets the employment eligibility requirements of all immigration laws.

27. Paymode. Payments by state agencies using the statewide accounting system shall be made and remittance information provided electronically as directed by the State. These payments shall be deposited into the bank account of Grantee’s choice. The State may, at its sole discretion, require Grantee to submit invoices and supporting documentation electronically at any time during the term of this contract. Grantee understands and agrees that the State is exempt from the payment of taxes. All payments shall be in United States currency.

28. Miscellaneous.

A. Applicable Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Mississippi, excluding its conflicts of laws provisions, and any litigation with respect thereto shall be brought in the courts of the state. Grantee shall comply with applicable federal, state, and local laws and regulations.

B. Anti-Assignment/Subcontracting. Grantee shall not assign, subcontract, subgrant or otherwise transfer this Agreement in whole or in part without the prior written consent of MDEQ, which MDEQ may, in its sole discretion, approve or deny. Grantee must notify MDEQ in writing and submit a Request to Subcontract form, a copy of which is attached hereto as Attachment “G”, prior to subcontracting any portion of this Agreement; and MDEQ, in its sole reasonable discretion, shall have the right to reject the letting of any such subcontract or subgrant. Any attempted assignment or transfer of Grantee’s obligations without such consent shall be null and void. No such approval by MDEQ of any subcontract or subgrant shall be deemed in any way to provide for the incurrence of any obligation of the State or for additional Funds. For the purposes of this Agreement, any contractor, subcontractor, subgrantee or other recipient of Funds from Grantee shall be referred to herein as a “Contractor”. All subcontracts or subgrants shall be subject to the terms and conditions of this Agreement, all terms and conditions required by State law, and to any conditions of approval that MDEQ may deem necessary. MDEQ reserves the right to review and revise any such subcontracts or subgrants prior to execution by Grantee. MDEQ’s failure to reject to the letting of any subcontract or subgrant to this Agreement shall not be deemed in any way to provide for the incurrence of any obligation of MDEQ in addition to the Funds.

C. Attorney’s Fees and Expenses. Subject to other terms and conditions of this Agreement, in the event Grantee defaults in any obligations under this Agreement, Grantee shall pay to the State all costs and expenses (including, without limitation, investigative fees, court

costs, and attorney's fees) incurred by the State in enforcing this Agreement or otherwise reasonably related thereto. Grantee agrees that under no circumstances shall MDEQ be obligated to pay any attorney's fees or costs of legal action to Grantee.

D. Compliance with Laws. Grantee understands that MDEQ is an equal opportunity employer and therefore maintains a policy which prohibits unlawful discrimination based on race, color, creed, sex, age, national origin, physical handicap, disability, or any other consideration made unlawful by federal, State, or local laws. All such discrimination is unlawful and Grantee agrees during the term of the agreement that Grantee will strictly adhere to this policy in its employment practices and provision of services. Grantee shall comply with, and all activities under this Agreement shall be subject to, all applicable federal, State of Mississippi, and local laws and regulations, as now existing and as may be amended or modified.

E. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

F. Force Majeure. Each party shall be excused from performance for any period and to the extent that it is prevented from performing any obligation or service, in whole or in part, as a result of causes beyond the reasonable control and without the fault or negligence of such party and/or its subcontractors. Such acts shall include, without limitation, acts of God, strikes, lockouts, riots, acts of war, epidemics, governmental regulations superimposed after the fact, fire, earthquakes, floods, hurricanes, or other natural disasters ("**Force Majeure Events**"). When such a cause arises, Grantee shall notify the State immediately in writing of the cause of its inability to perform, how it affects its performance, and the anticipated duration of the inability to perform. Delays in delivery or in meeting completion dates due to Force Majeure Events shall automatically extend such dates for a period equal to the duration of the delay caused by such events, unless the State determines it to be in its best interest to terminate the contract.

G. Governing Law. This Agreement shall be subject to and interpreted by the laws of the State of Mississippi, without regard to choice of law principles; and venue for the resolution of any dispute shall be Jackson, Hinds County, Mississippi.

H. Headings. The headings in this Agreement are for reference only and shall not affect the interpretation of this Agreement.

I. Independent Contractor Status. Grantee shall, at all times, be regarded as and shall be legally considered an independent contractor and shall at no time act as an agent for the State. Nothing contained herein shall be deemed or construed by the State, Grantee, or any third party as creating the relationship of principal and agent, master and servant, partners, joint ventures, employer and employee, or any similar such relationship between the State and Grantee. Neither the method of computation of fees or other charges, nor any other provision contained herein, nor any acts of the State or Grantee hereunder creates, or shall be deemed to create a relationship other than the independent relationship of the State and Grantee. Grantee's personnel shall not be

deemed in any way, directly or indirectly, expressly or by implication, to be employees of the State. Neither Grantee nor its employees shall, under any circumstances, be considered servants, agents, or employees of MDEQ, and MDEQ shall be at no time legally responsible for any negligence or other wrongdoing by Grantee, its servants, agents, or employees. MDEQ shall not withhold from the contract payments to Grantee any federal or state unemployment taxes, federal or state income taxes, Social Security tax, or any other amounts for benefits to Grantee. Further, MDEQ shall not provide to Grantee any insurance coverage or other benefits, including Worker's Compensation, normally provided by the State for its employees.

J. Notices. All notices, requests, consents, claims, demands, waivers and other communications hereunder shall be in writing and shall be deemed to have been given (a) when delivered by hand (with written confirmation of receipt); (b) when received by the addressee if sent by a nationally recognized overnight courier (receipt requested); (c) on the date sent by facsimile or e-mail of a PDF document (with confirmation of transmission) if sent during normal business hours of the recipient, and on the next business day if sent after normal business hours of the recipient; or (d) on the third day after the date mailed, by certified or registered mail, return receipt requested, postage prepaid. Such communications must be sent to the respective Parties at the following addresses:

If to MDEQ: Mississippi Department of Environmental Quality  
Attn: Marc Wyatt  
P.O. Box 2261  
Jackson, MS 39225  
Phone: (601) 961-5367  
Fax: (601) 961-5703  
Marc\_Wyatt@deq.state.ms.us

If to Grantee: City of Biloxi, Mississippi  
Attn: Christy LeBatard  
Public Works Department  
P. O. Box 429, Biloxi, MS 39533  
Phone: 228-435-6271  
Fax: 228-435-6179  
Email: clebatard@biloxi.ms.us

K. Public Announcements. Unless otherwise required by applicable law (based upon the reasonable advice of counsel), Grantee shall not make any public announcements with respect to the Project or this Agreement without the prior written consent of MDEQ, and the Parties shall cooperate as to the timing and content of any such announcement.

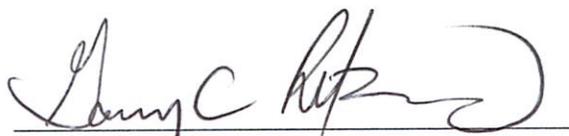
L. Severability. If any part of this Agreement is declared to be invalid or unenforceable, such invalidity or unenforceability shall not affect any other provision of the agreement that can be given effect without the invalid or unenforceable provision, and to this end the provisions hereof are severable. In such event, the parties shall amend the agreement as

necessary to reflect the original intent of the parties and to bring any invalid or unenforceable provisions in compliance with applicable law.

M. Waiver. No delay or omission by either party to this Agreement in exercising any right, power, or remedy hereunder or otherwise afforded by contract, at law, or in equity shall constitute an acquiescence therein, impair any other right, power or remedy hereunder or otherwise afforded by any means, or operate as a waiver of such right, power, or remedy. No waiver by either party to this Agreement shall be valid unless set forth in writing by the party making said waiver. No waiver of or modification to any term or condition of this Agreement will void, waive, or change any other term or condition. No waiver by one party to this Agreement of a default by the other party will imply, be construed as or require waiver of future or other defaults.

IN WITNESS WHEREOF, the undersigned Parties have executed and delivered this Grant Agreement, effective as of the date of execution by all Parties.

**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY**



Gary C. Rikard  
Executive Director

8/10/15  
Date

**CITY OF BILOXI, MISSISSIPPI**

By: A.M. Gilich, Jr.

Name: A.M. GILICH, JR

Title: MAYOR

July 20, 2015  
Date

# ATTACHMENT A

## APPENDIX A

### EARLY RESTORATION PROJECT

## **Appendix A: Popp's Ferry Causeway Park Project**

### **1.0 INTRODUCTION**

This document describes the Popp's Ferry Causeway Park Project (the "Early Restoration Project") to be implemented with funding provided by BPXP, resulting in the NRD Offsets identified in Appendix C. This document is part of a Project Stipulation executed by BPXP, the Trustees, and the United States Department of Justice.

### **2.0 PROJECT DESCRIPTION**

The Early Restoration Project will improve a portion of a site in Back Bay, in Harrison County, Mississippi, that is owned by the City of Biloxi by expanding a park environment where visitors can experience the coastal estuarine ecosystem. The Early Restoration Project is intended to restore lost recreational use. The Early Restoration Project will provide for construction of an interpretive center, nature trails, boardwalks, and other recreational enhancements and will enhance visitor access to the adjacent coastal estuarine environment while updating and constructing amenities, which will allow visitors to fish, crab, and observe nature.

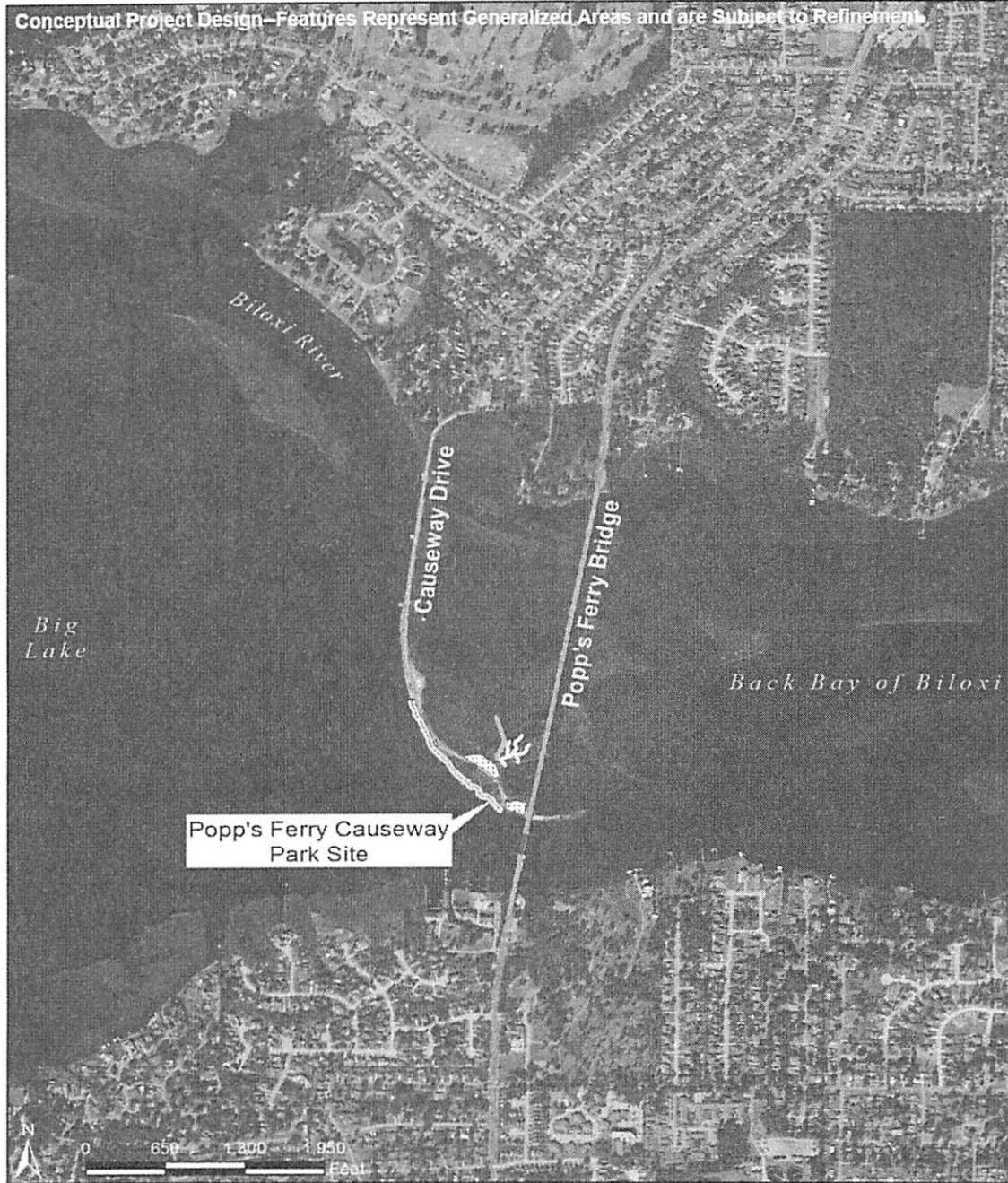


Figure 1: Location of Popp's Ferry Causeway Park Project

### **3.0 PROJECT IMPLEMENTATION**

#### **3.1 Performance Criteria, Monitoring and Maintenance**

Project performance will be assessed as defined in Section 10.6.4 of the Programmatic and Phase III Early Restoration Plan and Early Restoration Programmatic Environmental Impact Statement (“Plan”).

Project implementation will commence upon the filing of the Notice of Stipulation with the MDL Court. Project implementation will be complete when the performance criteria consistent with Section 10.6.4 of the Plan have been met.

#### **3.2 Estimated Project Costs- Popp’s Ferry Causeway Park Project**

The total estimated cost to implement the Popp’s Ferry Causeway Park Project is \$4,757,000, consistent with Sections 10.6.4 and 10.6.6 of the Plan.

# ATTACHMENT B

## 10.6 Popp's Ferry Causeway Park: Project Description

### 10.6.1 Project Summary

The proposed Popp's Ferry Causeway Park Project would improve a portion of a site in Back Bay, in Harrison County, Mississippi, that is owned by the City of Biloxi by expanding a park environment where visitors could experience the coastal estuarine ecosystem. The intent is to restore lost recreational use. The project would provide for construction of an interpretive center, nature trails, boardwalks, and other recreational enhancements and would enhance visitor access to the adjacent coastal estuarine environment while updating and constructing amenities, which would allow visitors to fish, crab, and observe nature. The estimated cost for this project is \$4,757,000.

### 10.6.2 Background and Project Description

The mostly unimproved 10-acre Popp's Ferry Causeway property is a parcel of land and marsh located just to the west of the Popp's Ferry Bridge. It is owned by the City of Biloxi, Mississippi. It is surrounded by water on all sides, including the Biloxi River to the north, Big Lake to the west, and the Back Bay to the south and east (Figure 10-9). The property was purchased by the City of Biloxi in the year 2000. Improvements were started in 2001, but these were destroyed by Hurricane Katrina in 2005. Construction commenced again in 2011, and the following work has been completed and is not included in this proposed Early Restoration project: boardwalk system (north of the boat launch), some shoreline stabilization, a marsh boardwalk and shelters in the northern portion of the area, some utility work, construction of an entry sign, construction of one fishing pier, some roadway lighting, and roadway repairs on the east side of the causeway.

The Early Restoration project currently being proposed would upgrade the existing site and amenities by creating the Popp's Ferry Causeway Park, an interactive location where the public would continue to fish, crab, and walk through a system of boardwalks and nature trails that allow viewing of the waterfront and marshes. One of the project goals is to build upon what the public perceives as the "best fishing spot without a boat in Biloxi, Mississippi." The proposed conceptual plan includes components that would enhance visitor access to coastal estuarine habitats such as roadway repair and lighting, construction of a concession and bait stand where the public can also rent kayaks, construction of new fishing piers, and continuation of an 8-ft.-wide concrete walkway/wooden boardwalk on the west side of the site with benches and lighting. Riprap water edge treatment would replace existing treatments (intermittent riprap consisting of limestone, construction debris, and other materials) west of the concrete walkway/wooden boardwalk for additional shoreline stabilization. In addition, picnic areas, nature trails, visitor parking and construction of a new Interpretive Center with outdoor exhibits would take place in upland areas, and a marsh overlook pier and boardwalk would be included (Figure 10-10).

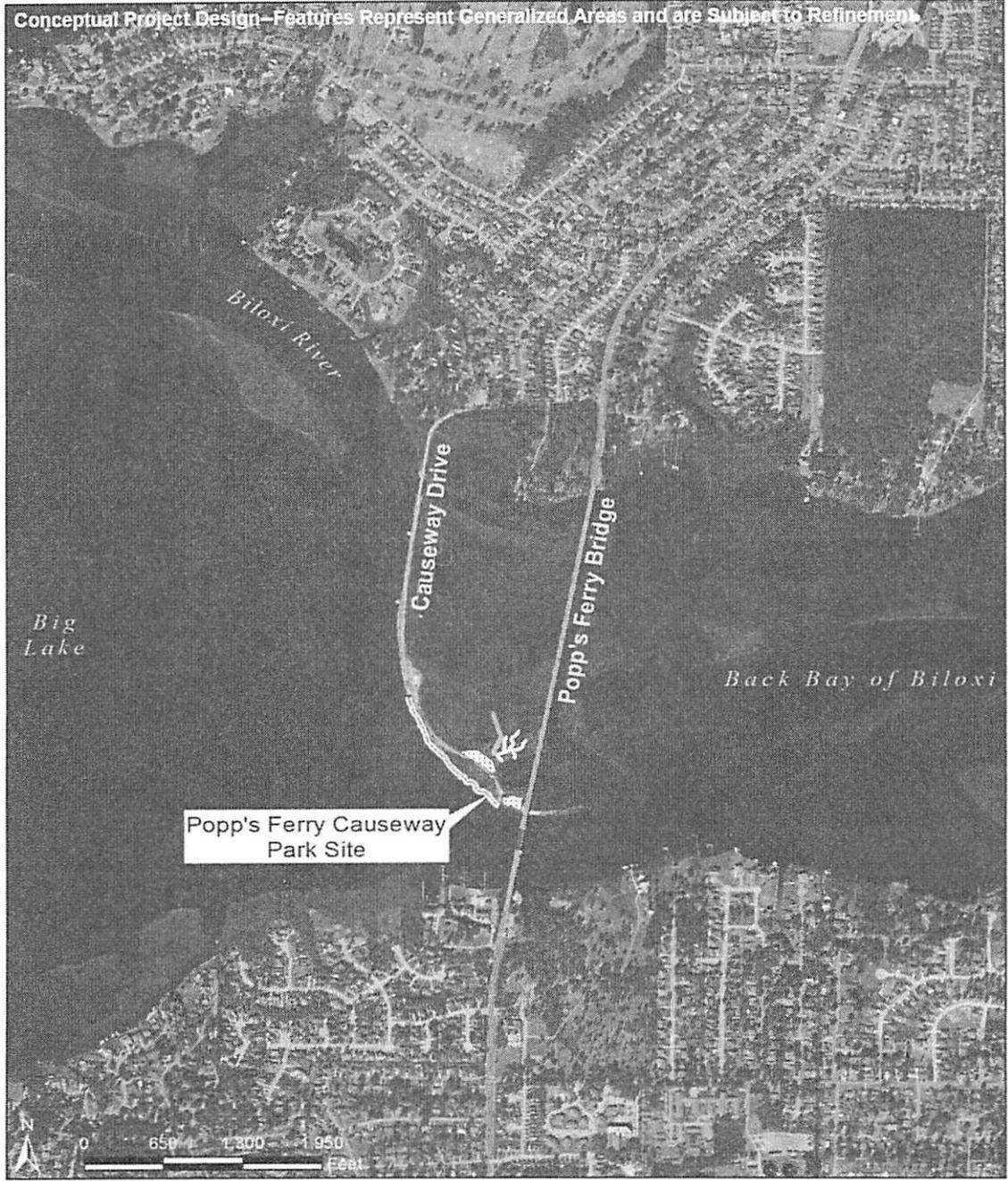


Figure 10-9. Proposed Popp's Ferry Causeway Park area.

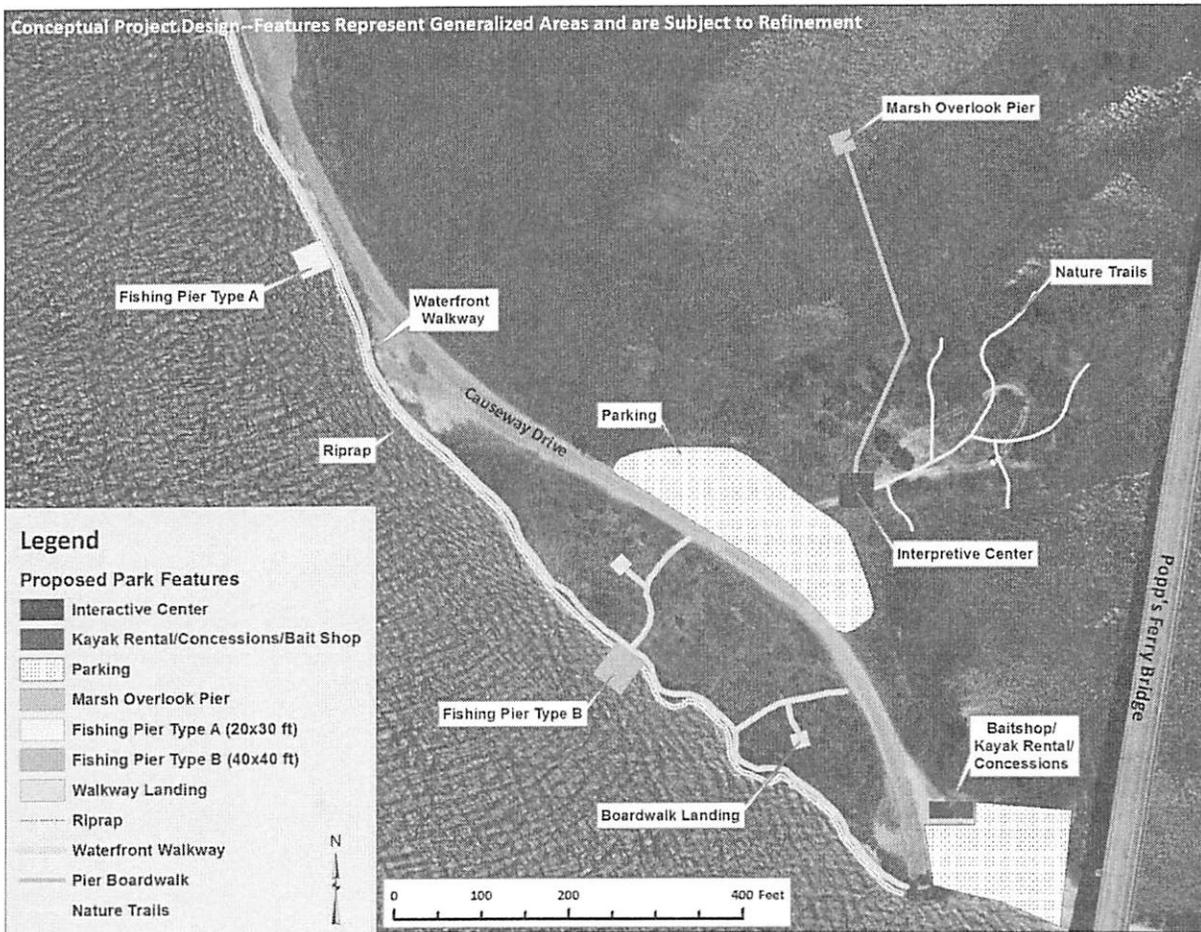


Figure 10-10. Proposed Popp's Ferry Causeway Park conceptual plan.

### 10.6.3 Evaluation Criteria

This project meets the evaluation criteria established for the Oil Pollution Act (OPA) and the Framework Agreement. As a result of the Spill, the public's access to and enjoyment of the natural resources along the Mississippi Gulf Coast was denied or severely restricted. The project would enhance the public's use and/or enjoyment of natural resources by constructing and/or expanding an educational interpretive center, nature trails, piers, and other recreational enhancements that would enhance visitor access to the adjacent coastal estuarine environment and provide opportunities for visitors to fish, crab, and observe nature (Section 7.1; Table 7.1). Accordingly, the project is intended to replace or provide recreational opportunities comparable to the types of opportunities lost as a result of the Spill (see C.F.R. § 990.54(a) (2) and Sections 6a-6c of the Early Restoration Framework Agreement). The project is technically feasible, utilizes proven techniques with established methods and documented results, and can be implemented with minimal delay. Similar projects have been successfully implemented in the area. Further, cost estimates are based on similar past projects, and the project can be conducted at a reasonable cost. For these reasons, the project is considered feasible, cost effective, and has a high likelihood of success. (See C.F.R. § 990.54(a) (1) and (3) and Section 6(e) of the Early Restoration Framework Agreement.) A thorough environmental review, including review under applicable

environmental statutes and regulations, is described in section 10.7, indicates that adverse effects from the project would largely be minor, localized, and often of short duration. In addition, the best management practices and measures to avoid or minimize adverse effects described in 10.7 would be implemented. As a result, collateral injury would be avoided and minimized during project implementation (construction and installation and operations and maintenance) (15 C.F.R. § 990.54(a)(4)). The project is consistent with the anticipated long-term restoration needs and was included as a priority in City of Biloxi Comprehensive Plan (adopted December 2009). The project would not have adverse impacts to public health and safety (see Section 3.3.6 Public Health and Safety). Popp's Ferry Causeway Park was submitted as a restoration project on the NOAA website (<http://www.gulfspillrestoration.noaa.gov>).

#### 10.6.4 Performance Criteria, Monitoring and Maintenance

Successful completion of the project would meet the project's restoration objective to enhance recreational opportunities as well as provide access for enhanced appreciation and awareness of the surrounding natural resources impacted by the Spill. The Trustees would incorporate monitoring efforts to ensure project designs are correctly implemented. Additionally, the Trustees would monitor public use of the project and associated features for recreational activities and access to the natural resources. Monitoring would include visitor counts to reflect the number of visitors to the project during monitoring a five year period upon completion of construction. The monitoring period would conclude five years after the completion of construction. The City of Biloxi would be responsible for maintenance of the Popp's facilities, features, and exhibits.

#### 10.6.5 Offsets

NRD Offsets are \$7,135,500 expressed in present-value 2013 dollars, based on a benefit-to-cost ratio of 1.5, to be applied against the monetized value of lost recreational use provided by natural resources injured in Mississippi, which would be determined by the Trustees' assessment of lost recreational use by the Spill. Please see Chapter 7 of this document (Section 7.2.2) for a description of the methodology used to develop monetized Offsets.<sup>8</sup>

#### 10.6.6 Cost

The total estimated cost to implement this project is \$4,757,000. This cost reflects current cost estimates developed from the most current information available to the Trustees at the time of the project negotiation. The cost includes provisions for planning, engineering and design, construction, monitoring, and potential contingencies.

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<sup>8</sup> For the purposes of applying the NRD Offsets to the calculation of injury after the Trustees' assessment of lost recreational use for the Spill, the Trustees and BP agree as follows:

- The Trustees agree to restate the NRD Offsets in the present value year used in the Trustees' assessment of lost recreational use for the Spill.
- The discount rate and method used to restate the present value of the NRD Offsets will be the same as that used to express the present value of the damages.

## **10.7 Popp's Ferry Causeway Park: Environmental Review**

### **10.7.1 Introduction and Background**

The proposed project would enhance the interactive nature of the existing Popp's Ferry Causeway Park (Figure 10-11) by constructing new amenities and updating existing features. These enhancements would replace lost recreational opportunities by providing improved access to the adjacent coastal estuarine habitats. Local residents have used the mostly undeveloped Popp's Ferry Causeway for fishing, shrimping, boating, walking, jogging, biking, and other shoreline activities for many years. The City of Biloxi purchased the property in 2000 and the Popp's Ferry Causeway Park Master Plan was developed. Partially constructed in the early 2000s, the property and infrastructure sustained damage from Hurricane Katrina in 2005. The proposed project enhances coastal recreational access and opportunities. Improvements such as boardwalks, nature trails, an Interpretive Center, fishing piers, and other amenities intend to provide access to shoreline habitats and replacement opportunities for coastal-based recreation that was lost during the Spill and response activities.

For the purpose of assessing the construction impact on the environment, the project description is based on the current design concept. Final engineering and project design could result in revisions to the project. The following description is intended to be a conservative review of the project components in order to evaluate a maximum environmental impact in the NEPA review and in environmental permitting. Project refinement(s) are anticipated as part of the design process. To the extent possible, revisions would be restricted to the current project footprint.

#### ***10.7.1.1 Concrete Walkway and Wooden Boardwalk***

Along the western edge of the park, south of the boat launch, the project proposes the construction of an 8-ft.-wide concrete walkway and wooden boardwalk that would extend approximately 1,313 linear ft. along the shoreline (Figure 10-11). Benches, low-impact lighting, and shoreline viewing landings would be installed to make this shoreline walkway more enjoyable.

#### ***10.7.1.2 Shoreline Stabilization (Riprap)***

The placement of approximately 1,366 linear ft. of riprap water edge treatment would extend along the western boundary of the park for shoreline stabilization. Riprap placement would begin immediately south of the boat launch.

#### ***10.7.1.3 Fishing Piers***

Up to four fishing piers are proposed for construction on the western shoreline of the project area. Two Type A piers would have an area of 20 ft. by 30 ft. and two Type B piers would have an area of 40 ft. by 40 ft. Currently, there are limited locations for fishing within the park and new piers would greatly increase fishing opportunities, especially for visitors who do not have access to a boat.

#### ***10.7.1.4 Interpretive Center***

An Interpretive Center would be constructed just to the east of a new parking area to provide new amenities for further enjoyment of the shoreline. This facility would be constructed in an open-air style and would provide exhibits on the park and its natural resources, as well as restrooms. This building would be surrounded by appropriate landscaping and connect to other parts of the park through a network of nature trails.

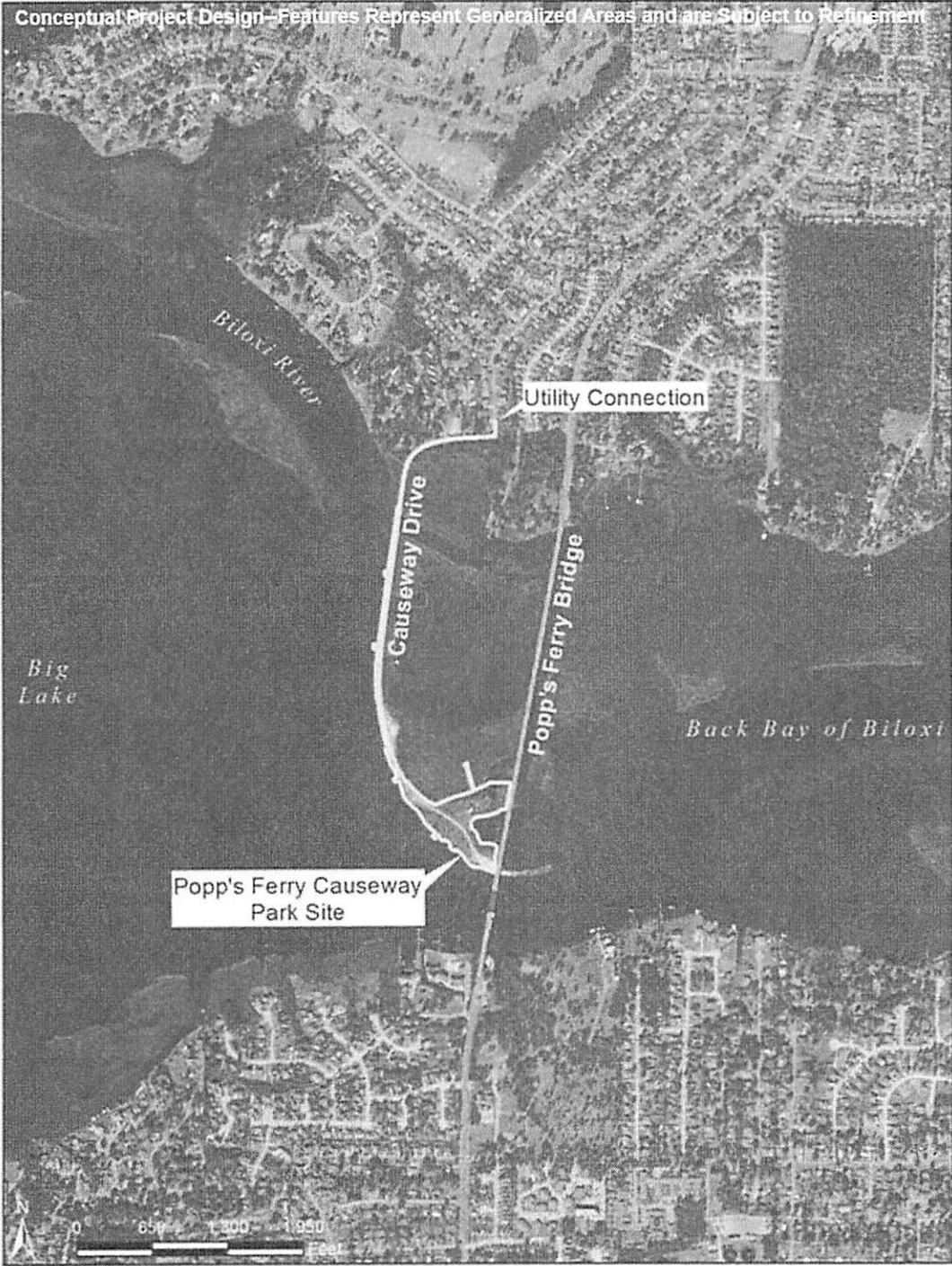


Figure 10-11. Popp's Ferry Causeway Park and vicinity.

#### **10.7.1.5 Causeway Drive Improvements/Parking Areas**

Causeway Drive currently connects the mainland to the future location of Popp's Ferry Causeway Park and runs the length of the property. Improvement of this two-lane road south of the boat launch would enable easier access to the enhanced park and its amenities. At the southern end of the project area is a larger upland area where most of the new park amenities are to be constructed. A new parking area is proposed for land adjacent to the east side of the road in this upland area. Additionally, a hard-packed gravel and soil area is to be paved at the very southern end of the park. The addition of these parking areas would allow for increased public visitation of the park.

#### **10.7.1.6 Nature Trails/Picnic Areas**

Interconnecting nature trails with several picnic areas are proposed throughout the site. The trails would connect several major amenities within the park area, including the Interpretive Center and parking areas, to the outer reaches of the property. These trails are meant to increase public access to and enjoyment of nature in general and, specifically, the surrounding coastal environment.

#### **10.7.1.7 Marsh Overlook Pier and Boardwalk**

A 6-ft.-wide wooden boardwalk (approximately 390 linear ft.) is proposed to extend from the Interpretive Center to the northeast through the estuarine emergent marsh and would end with a marsh overlook pier located on the open water. This would allow the public to have access to the wetland habitats for viewing opportunities of the associated wildlife and scenery.

#### **10.7.1.8 Bait Shop/Concession Stand/Kayak Rental**

A facility housing a bait shop, concessions, and kayak rentals is proposed for the southeastern most portion of the project area. This would be located next to the proposed new parking lot.

#### **10.7.1.9 Landscaping**

This proposed project would landscape the degraded and disturbed portions of the park property with native vegetation for a more enjoyable experience. Landscaping would be placed around the Interpretive Center and bait shop/concession stand/kayak rental facility, along Causeway Drive and other appropriate locations.

#### **10.7.1.10 Utilities**

To support the installation of restrooms and the bait shop/concession stand/kayak rental facility, the project would be connected to existing sewer, water, and electric utility infrastructure on Cambridge Drive, located in the residential neighborhood to the north (Figure 10-11).

### **10.7.2 Project Location**

The proposed Popp's Ferry Causeway Park project would improve approximately 10 acres in Back Bay in the City of Biloxi, Mississippi. The parcel is owned by the City of Biloxi, Harrison County, Mississippi, just to the west of the Popp's Ferry Bridge (Figure 10-11). The project site is located in Section 22, Township 7 South, Range 10 West. The project site is surrounded by the waters of the Biloxi River to the north, Big Lake to the west, and the Back Bay of Biloxi to the south and east. This location provides access to the Gulf of Mexico. However, because the project site is not located directly on Mississippi Sound, it is less vulnerable to damage from hurricanes than sites located directly on Mississippi Sound. In addition to the Popp's Ferry Bridge, other nearby developments include residential neighborhoods approximately 3,250 ft. north and 750 ft. south of the project. An existing road, Causeway Drive, runs from the residential

area to the north along the western boundary of the causeway to the southeastern shoreline. The latitude/longitude of the center of the project area is 30.417783333333°N, 88.976683333333°W.

### 10.7.3 Construction and Installation

Construction methods and activities are included in order to assess the impact on the environment. Actual construction methods and activities would be determined after final design and would likely be comparable to activities described below. It is expected that actual construction methods would be similar to those presented in this section.

The construction and installation of proposed project elements would require the use of small dozers, loaders, excavators, forklifts, backhoes, haul trucks, and track-mounted Bobcats. If heavy equipment is necessary for any construction or installation work in sensitive areas, wetland mats and low ground pressure equipment would be used in order to minimize damage. Access for all water-side construction would be from a working barge which would include a crane, vibratory hammer, clamshell bucket, and other equipment.

Staging for construction would be confined to the site, and the contractor could be directed to stage equipment in areas that have been previously disturbed and that do not contain wetlands. This project would likely involve some amount of redistribution of fill already present within the project area.

#### 10.7.3.1 Concrete Walkway and Wooden Boardwalk

Before construction and installation of the concrete walkway and lighted wooden boardwalk, site preparation activities would include demolition of old pilings, concrete slabs, broken asphalt, and concrete steps along the shoreline and the subsequent grading and compaction of the concrete walkway/boardwalk area only. The designs for the shoreline path include two distinct elements: one constructed of concrete and others constructed of wooden materials. Therefore, the final installation would require the placement of concrete (approximately 500 linear ft.; approximately 4,000 square ft.) and the installation of a wooden piling super structure to be complemented with conventional support framing and composite decking (approximately 813 linear ft.; approximately 4,878 square ft.) along the upland edge of the shoreline. Using the same approach, lighted, wooden connector boardwalks (approximately 355 linear ft.; approximately 2,130 square ft.) featuring landings would connect the main shoreline to more landward areas. Pile installation would be accomplished through the use of a vibratory hammer head attached to a track-mounted excavator (trackhoe). Wood piles 12 inches in diameter would be used in this project. The boardwalk portions of this feature would require approximately 100 pilings, which would take approximately six days to install. The planking would consist of fully recycled composite decking material. Low-impact lighting would be installed along the waterfront shoreline path.

#### 10.7.3.2 Shoreline Stabilization (Riprap)

Replacing and establishing approximately 1,366 linear ft. of clean concrete/conglomerate riprap at the water's edge along the western and southern project boundaries would stabilize the shoreline and protect the walkway. The shoreline to the north of the project has recently been completed using the same treatment. Both a land-based and waterside access via a float barge would be necessary to deploy the riprap from the open water channel west of the shoreline.

#### **10.7.3.3 Fishing Piers**

With the shoreline cleared of existing concrete debris, the construction of four fishing piers would extend out from the concrete walkway or wooden boardwalk and would require the driving of 12-inch-diameter wood pilings in open water using the previously mentioned vibratory hammer technique. Using the pilings as a foundation, conventional support framing and decking would be employed to construct all piers to the applicable specifications. The two Type A piers would be 20 ft. by 30 ft. and would have a total area of 600 square ft. each. The two Type B piers would be 40 ft. by 40 ft. and would have a total area of 1,600 square ft. each. Each Type A pier would contain 12 to 15 pilings and would require approximately one day to install. The Type B fishing piers would require 25 to 30 pilings and would require approximately two days to install.

#### **10.7.3.4 Interpretive Center and Bait Shop/Concession Stand/Kayak Rental**

Site preparation for the approximately 1,600-square-ft. Interpretive Center and the approximately 1,000-square-ft. bait shop/concession stand/kayak rental includes the clearing and grubbing of vegetation within the designated upland areas, using the same approach as described above. The Interpretive Center would be constructed on shallow foundations. The bait shop/concession stand/kayak rental facility would be constructed on pilings.

#### **10.7.3.5 Causeway Drive Improvements/Parking Areas**

Improvements to the existing asphalt road and construction of additional parking areas would require minimal clearing and grubbing milling and reuse of existing asphalt, as well as re-grading and compacting the natural substrate. The placement of asphalt road and parking areas as well as associated grading work would use equipment such as conventional moto-graders, smooth drum rollers or other compaction equipment, and paving machines. These features would be boarded by concrete curbs in addition to the installation of drainage features and standard 16-inch lighting and low-impact lighting where necessary. Approximately 1.0 acre of upland would be paved for parking lots. Approximately 1,296 linear ft. of existing roadway would be improved.

#### **10.7.3.6 Nature Trails/Picnic Areas**

Following any necessary clearing and grubbing work, approximately 3,860 square ft. of nature trails and picnic areas would be installed throughout the project area using natural pervious materials such as mulch. No hardened materials or impervious surfaces such as concrete would be used for these trails.

#### **10.7.3.7 Marsh Overlook Pier and Boardwalk**

The construction of the marsh overlook pier (approximately 625 square ft.) and boardwalk (approximately 390 linear ft.) would require the driving of 12-inch pilings using a vibratory hammer mounted to a trackhoe. All piles used in this project would be wood piles 12 inches in diameter. The construction of this feature would require approximately 125 wood pilings, which would take eight days to install. The pier and boardwalk foundation would be graded plank and the decking would be composite decking material.

#### **10.7.3.8 Landscaping**

Landscaping work is intended for areas surrounding the trails and picnic areas as well as around the constructed facilities, parking areas, and roadway. Preparation for landscaping activities would involve the removal of unusable soils, vegetation, trees, stumps, and debris followed by the placement of clean materials such as topsoil, sand, gravel and/or mulch on the proposed surfaces. After clearing and

grubbing, trees and shrubs would be planted and seed would be spread along the roadway and around areas disturbed during construction. All landscaping work would use native species to the extent possible.

#### **10.7.3.9 Utilities**

The inclusion of restrooms in the Interpretive Center would require the construction of a new pump station and installation of a sanitary sewer main and new force main. Electrical and water, in addition to sewer and force main utilities, would be installed in trenches of approximately 3 ft. along Causeway Road to a maximum depth of approximately 6 ft. These utilities would run approximately 4,749 linear ft. from both the Interpretive Center and the bait shop/concession stand/kayak rental and tie into existing utilities located within the residential neighborhood to the north (Figure 10-11).

Construction in Mississippi is required to follow the “Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas” and the “Field Manual for Erosion and Sediment Control on Construction Sites in Mississippi” (MDEQ 2005). The construction of the proposed project would follow these guidelines as well as any other BMPs in order to prevent, control, and mitigate for any adverse impacts.

#### **10.7.4 Best Management Practices**

Throughout the design process, every practical attempt would be made to avoid and minimize potentially adverse environmental, social, and cultural impacts. The BMPs and conservation measures that would be utilized to minimize impacts to resources are listed in Section 10.7.7, Summary and Next Steps.

#### **10.7.5 Operations and Maintenance**

The constructed Popp’s Ferry Causeway Park would be operated by the City of Biloxi Parks and Recreation Department. The City would likely lease the operation of the bait shop/concession stand/kayak rental facility to an independent entity. This lessee would determine the specifics of the kayak rental/concession stand/bait rental operation, including operation hours and products available. The overall park property would remain open and accessible 24 hours a day. The maintenance of the Popp’s Ferry Causeway Park and associated features would be controlled by the City of Biloxi. It is anticipated that maintenance activities would include activities such as replacement of light bulbs for street lighting, trash removal, mowing in grassed areas, and possible noxious/invasive plant removal.

#### **10.7.6 Affected Environment and Environmental Consequences**

Under the National Environmental Policy Act, federal agencies must consider environmental effects of their actions that include, among others, impacts on social, cultural, and economic resources, as well as natural resources. The following sections describe the affected resources and environmental consequences of the project.

##### **10.7.6.1 No Action**

Both OPA and NEPA require consideration of the No Action alternative. For this Final Phase III ERP proposed project, the No Action alternative assumes that the Trustees would not pursue the Popp’s Ferry Causeway Park as part of Phase III Early Restoration.

Under the No Action alternative, the existing conditions described in the affected resources subsection would prevail. Restoration benefits associated with this project would not be achieved at this time.

#### **10.7.6.2 Physical Environment**

Geology and substrates, hydrology, water quality, air quality, greenhouse gas emissions, and noise are discussed in this section.

#### **Geology and Substrates**

##### ***Affected Resources***

Data from the Mississippi State Geological Survey generally indicates that surface soils in the project area consist of Holocene-age coastal deposits of loam, sand, gravel, and clay. The United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey identifies three soil mapping units within the footprint of the proposed project. These soil map units and their approximate percent of the project footprint area are: Handsboro association (93.1 percent); Eustis loamy sand, 0 to 5 percent slopes (0.8 percent); and Eustis and Poarch soils, 8 to 17 percent slopes (0.3 percent) (NRCS 2013a). Of these soils, the Handsboro association soil is listed as hydric, and two inclusions of the Eustis and Poarch soils—8 to 17 percent slopes—are listed as hydric (NRCS 2013b). A hydric soil is defined as one that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Most of the project features are proposed for the southern portion of the footprint, which consists of Handsboro association soil. These soils are very poorly drained, moderately permeable, deep soils typically found in regularly flooded salt marshes and tidal flats with 0 to 1 percent slopes (NRCS 2013c). The Eustis loamy sand, 0 to 5 percent slopes, and Eustis and Poarch soils, 8 to 17 percent slopes, are present along a small portion of the northern residential roadway area designated for utility connection work. USDA NRCS reports that the Eustis loamy sand, 0 to 5 percent slopes, mapping unit is somewhat excessively drained and found on upland sites (NRCS 2013c). Eustis and Poarch soils, 8 to 17 percent slopes, are somewhat excessively drained to well drained and found on slopes (NRCS 2013c). Site visits indicate that there are hydric soils within the project area, and this is confirmed by information presented in the City of Biloxi Comprehensive Plan.

Site visits to the southern project area determined that much of the soil has been disturbed and compacted due to decades of human activity and use. It is assumed that dredged material from the channel and/or the construction of the Popp's Ferry Bridge was deposited at various locations throughout the site over a period of time. The upland areas with higher elevations, such as those in the northeastern portion of the lower park area, are likely locations of dredged material.

##### ***Environmental Consequences***

The overall project footprint encompasses approximately 10 acres. Each project feature would disturb smaller localized areas within this footprint. Localized clearing and grubbing and other site preparation activities could impact soils to a maximum depth of 4 ft. below ground surface while utility installation could impact to a depth of 6 ft. below ground surface. Dewatering is anticipated in certain areas; water would be discharged to a vegetated pervious area for infiltration. Project features and corresponding approximate disturbance areas are listed in Table 10-21.

**Table 10-21. Approximate disturbance areas within the Popp’s Ferry Causeway Park.**

<b>PROJECT FEATURE</b>	<b>APPROXIMATE DISTURBANCE AREA (ACRES)</b>
Connector and Boardwalks	0.25
Shoreline Stabilization	0.09
Fishing Piers	0.10
Interpretive Center	0.04
Bait Shop/Concession Stand/Kayak Rental	0.02
Marsh Overlook and Pier	0.23
Nature Trails and Picnic Area	0.03
Road Improvements	0.50
Parking	1.00
Landscaping	4.20
Utility Work	0.30

**Paving:** Areas within the footprint of the concrete shoreline walkway (0.09 acre) and parking areas (1.00 acre) would be compacted and covered with impervious material. Of the total parking, only 0.38 acre consists of new parking acreage; the remaining 0.60 acre would be hard-packed dirt and gravel. There would be long-term moderate impacts to substrates from these features within the relatively small footprint.

**Upland Pile Driving:** The bait shop/concession stand/kayak rental facility would be constructed on pilings that would be installed using a vibratory hammer. The two facilities would cover over a total of 0.06 acre of soil. There would be long-term minor adverse impacts to geology and soil due to the soil coverage and the pile installation within the relatively small footprint. The Interpretive Center would be constructed on shallow-spread footing foundations and would not require pile installations.

**In-Water Pile Installations:** The four fishing piers and marsh overlook pier and boardwalk would also impact sediment on the bay floor through pile installation using a vibratory hammer. This would result in short-term, minor adverse impacts to geology and substrate in localized areas. The installation of in-water piles would disturb the substrate and compact it within the immediate footprint of the pile. In-water pile installation would also result in short-term minor impacts when sediment is displaced. However, these sediments would settle on the bay floor in the immediate vicinity of the pile shortly after the pile is installed to its ultimate depth. Long-term, minor adverse impacts to geology and soil would result within the relatively small footprint of the individual piles.

**Trails and Picnic Areas:** The nature trail/picnic areas and landscaping area project elements would include the use of native materials and would not include fill or creation of any impervious areas. Therefore, only short-term minor impacts to soils would occur during clearing and grubbing preparation for native planting. Clearing, grading, and actual construction work requires the use of heavy equipment and machinery, which would result in soil disturbance and compaction. As the ground is cleared and disturbed in preparation for construction, the exposed soil is subject to possible wind or water erosion. Contractors would be instructed to avoid the clearing of trees and minimize disturbance and compaction in wetlands where permitted activities would occur. A Construction General Permit would be required because the land disturbance exceeds 5.0 acres. Construction BMPs including those described in “Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas” and the “Field Manual for Erosion and Sediment Control on Construction Sites in Mississippi”

would be used to prevent, control, and mitigate any soil, sediment, and substrate impacts including soil erosion due to wind and water. If necessary, riprap placement by float barge would prevent further soil disturbance and compaction during that portion of the project. Due to preparation work such as clearing and equipment usage required for all project features, all features would result in short-term, minor adverse impacts on soils and substrates within their specific localized immediate construction zones. Work in wetlands, waters of the U.S., and navigable waters would require a Mississippi Coastal Wetland Protection Act Permit as well as U.S. Army Corps of Engineers Section 404 and Section 10 Permits. This is discussed in detail in Section 10.6.5.2 *Hydrology and Water Quality*.

**Findings:** Adverse impacts from construction on geology and substrates would be short term and long term. Displacement and compaction of existing soils to hard surface for upland piles and parking lot areas would result in long-term minor adverse impacts. For most construction elements, the adverse impacts would be localized to small project area footprints and would be mainly within previously disturbed areas. For shoreline stabilization, boardwalks, marsh overlooks, and piers, disturbance would be minimized to the maximum extent possible.

**10.7.6.3 Hydrology and Water Quality**

**Affected Resources**

**Hydrology**

The project area is located within the Biloxi Bay watershed and includes estuarine wetlands and estuarine deep water habitats surrounding Popp’s Ferry Causeway Park. The surrounding waterbodies are the Biloxi River, Big Lake, and the Back Bay of Biloxi. The open water habitats of the Biloxi River navigation channel to the west and south have deeper water, whereas Back Bay of Biloxi waters to the north and east are shallower. NOAA bathymetry charts show that water depths are approximately 14 to 23 ft. adjacent to the western and southern boundaries and approximately 1 to 2 ft. on the northern and eastern sides. The project site is approximately 12.5 navigable miles from the Mississippi Sound and is tidally influenced.

**Wetlands**

There are five types of wetlands and other waters of the U.S. in the project area: estuarine marsh, open water, emergent/scrub shrub wetlands, shoreline emergent wetlands, and forested/emergent wetlands (Table 10-22; Figure 10-12). Wetlands and other waters, their classifications, and characteristics are described below.

**Table 10-22. Wetlands and waters of the U.S. in the Popp’s Ferry Causeway Park.\***

WETLAND TYPE	TOTAL IN PROJECT AREA	WETLAND IMPACTS	FACILITY
Estuarine Marsh (NWI)	0.18 acre	0.03 acre	Marsh Boardwalk
Open Water	0.02 acre	0.02 acre	Marsh Overlook Pier and Boardwalk
Emergent/Scrub Shrub	1.62 acres	0.25 acre	Shoreline Walkway and Landings
Shoreline Emergent Disturbed/ Existing Riprap	1,500 linear ft.	1,366 linear ft.	Shoreline Stabilization (riprap)
Forested/Emergent	0.04 acres	0	NA

\*See Figure 10-12 for locations of National Wetlands Inventory (NWI) features and delineated wetlands.

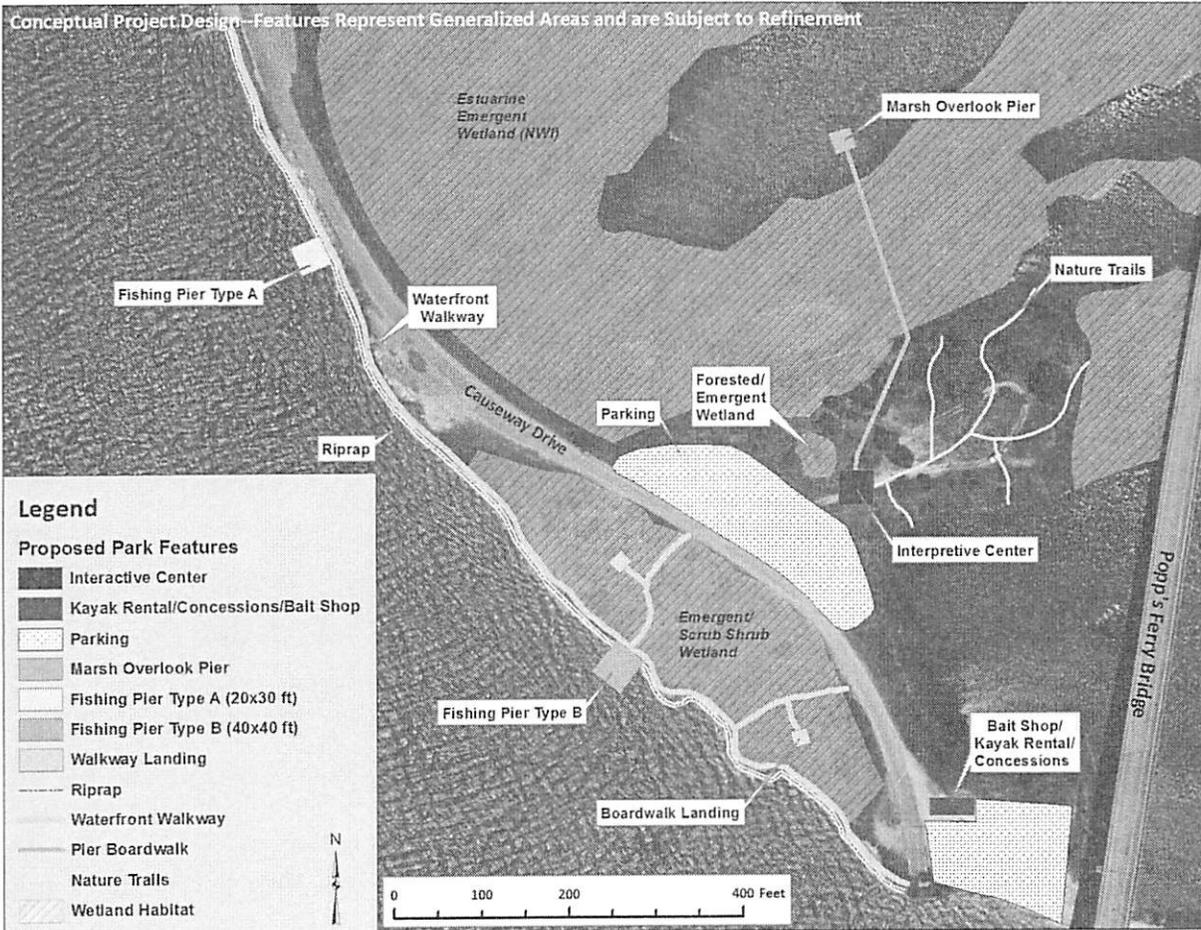


Figure 10-12. Map of wetlands and upland areas.

### Estuarine Marsh (NWI/Delineated)

Estuarine marsh is extensive in the Popp's Ferry Causeway Park project vicinity (Figure 10-12). The marsh is an intertidal emergent wetland with dominant vegetation including black needlerush (*Juncus roemerianus*), salt meadow cordgrass (*Spartina patens*), saltgrass (*Distichlis spicata*), saltmarsh morning-glory (*Ipomoea sagittata*), and Jesuit's bark (*Iva frutescens*). The National Wetlands Inventory (NWI) map indicates 0.18 acre of estuarine marsh within the project area. However, only 0.15 acre was delineated within the project area. The delineated wetland is an extension of the salt marsh habitat directly downslope and is characterized by thick cover of salt meadow cordgrass (*Spartina patens*).

### Open Water

The open water area in the Popp's Ferry Causeway Park is a small (0.02 acre) intertidal lagoon surrounded by intertidal estuarine marsh. A boardwalk and marsh overlook is planned in the area (Figure 10-12).

### **Emergent/Scrub Shrub (Delineated)**

The emergent/scrub shrub wetland is a 1.62-acre area in the southwestern portion of the project area. Hydrology in the emergent/scrub shrub wetland is perched with exposure to intertidal hydrology in high-water events. The wetland is moderately to heavily disturbed and is marked with man-made depressions and a sediment berm that flanks a shoreline emergent-disturbed habitat. Vegetation within the emergent/scrub shrub wetland is brackish marsh (seaward) and tidal fresh marsh (landward) with more salt-tolerant species occurring in a gradient toward the shoreline. Drifted wrack lines are common on the seaward side approximately 10 ft. inshore. Dominant brackish species include needlerush, salt meadow cordgrass, saltgrass, saltmarsh morning-glory, and Jesuit's bark. Common freshwater marsh plants in the area include various sedges (*Cyperus* spp.), bushy bluestem (*Andropogon glomeratus*), beakrush (*Rhynchospora* spp.), spikerush (*Eleocharis* spp.), saw-grass (*Cladium jamaicense*), and broadleaf cattail (*Typha latifolia*). Additionally, there are numerous locations in the area that retain standing water and areas that contain algal mats on the sediment surface (Figure 10-12).

### **Shoreline Emergent (Disturbed/Existing Riprap)**

Discontinuous shoreline emergent wetlands are found in the southwestern area of the site bordering the navigation channel and are intermingled with riprap for approximately 1,500 ft. along the existing shoreline from the Popp's Ferry Causeway Bridge northwest to an existing pier (Figure 10-12). The disturbed wetland community is intertidal and vegetation is interspersed with riprap in this disturbed area and is similar to the adjacent emergent/scrub shrub wetland.

### **Palustrine Emergent and Forested Wetland (Delineated)**

Upland to the site, the palustrine emergent/forested wetland area (0.04 acre) appears to be a man-made depression or pit that has retained water and wetland vegetation around a somewhat concentric circle around the ponded area (Figure 10-12). It is completely surrounded by upland habitat. Black willow (*Salix nigra*) trees are found growing on the periphery of the pond. Plant species in the area include saw-grass (*Cladium jamaicense*) and soft rush (*Juncus effusus*).

### **Floodplains**

The southern portion of the project site is classified as flood hazard Zone AE while the northern portion is mainly Zone VE with a small portion classified as Zone X (FEMA 2009). Zone AE indicates that the area is within the 100-year (1-percent-annual chance) floodplain and there is a high risk of flooding; the project area has base flood elevations of 15 to 16 ft. within this zone. Zone VE indicates that the area is within a coastal flood zone with hazards from high velocity wave action. It is within the 100-year (1-percent-annual chance) floodplain and there is a high risk of flooding; the project area has a base flood elevation of 18 ft. within this zone. Zone X indicates that the area is outside the 500-year (0.2-percent-annual chance) floodplain and the risk of flooding is minimal.

### **Water Quality**

In the late 1990s, impairment from pathogens led to the development of a total maximum daily load (TMDL) for the waters around the project area. A fecal coliform TMDL for the Back Bay of Biloxi and Biloxi Bay was approved in 2002, and the waterbodies were removed from the 303(d) list of impaired waterbodies. Currently, the waters surrounding the project area are not impaired. An advisory regarding fish consumption is in place for king mackerel due to mercury for the Gulf of Mexico, which includes the waters surrounding the Popp's Ferry Causeway Park (MDEQ 2012b).

## ***Environmental Consequences***

### **Hydrology**

In-water construction includes placement of four fishing piers, shoreline stabilization, and a boardwalk/marsh overlook pier. The construction would not appreciably affect tidal hydrology in the project area. Upland construction of the Interpretive Center, parking lots, boardwalks, trails, bait shop/concession stand/kayak rental facility, and picnic areas would not add appreciably to stormwater runoff in the area. To the extent possible, pervious, vegetated treatment areas would be incorporated into the final design to facilitate stormwater storage and treatment throughout the site. Construction of the Popp's Ferry Causeway Park facilities would not have an adverse impact to site hydrology.

### **Wetlands**

Wetland impacts are summarized in Table 10-22 above. Although the proposed boardwalk would not disturb the delineated estuarine marsh, it would traverse the downslope estuarine marsh area for access to the marsh overlook pier. Construction of the marsh overlook pier/boardwalk could have a minor long-term impact on 0.02 acre of open water and 0.03 acre of estuarine marsh (Table 10-22). Construction of the shoreline walkway and landings could result in a 0.25-acre impact to emergent/scrub shrub wetland. The construction would result in shading of vegetation of 0.25 acre under the pier and boardwalks. There would be some disturbance to vegetation in the immediate area of each feature due to movement of construction equipment. Constructing the boardwalk to allow sunlight to penetrate would reduce these shading effects and allow vegetation to regrow.

Although construction of the marsh overlook pier/boardwalk would affect 0.03 acre of emergent marsh habitat through shading, this represents only a small portion of the total emergent marsh habitat located in the surrounding area, which would continue to support local and regional vegetative communities. Similarly, the shoreline walkway and landings would affect 0.25 acre of emergent/scrub shrub wetland; however, this represents a small portion of the total 1.62-acre area of this habitat located on the project site. The palustrine emergent and forested wetland is in the area of the proposed Interpretive Center but would be avoided during construction. Overall, there would be short-term minor impacts to wetland habitats during construction. There would be long-term impacts to wetlands filled as a result of the proposed project, but because of the small footprint of project features and the overall availability of the wetland habitats onsite, these impacts would also be minor.

The shoreline would be stabilized with riprap; the treatment would be similar to stabilization work to the north of the existing pier. The shoreline stabilization (riprap) area would result in a long-term moderate impact to 1,366 linear ft. of vegetated shoreline. The existing shoreline is a mosaic of discontinuous wetland vegetation and riprap including concrete debris. Some segments of the shoreline are experiencing substantial erosion. Stabilization in this partially degraded and eroding system is required for the shoreline as well as for the shoreline walkway.

A Mississippi Coastal Wetland Protection Act Permit and a U.S. Army Corps of Engineers Clean Water Act Section 404/10 permit would be needed for all work in wetlands and other jurisdictional waters. Under the Coastal Zone Management Act of 1972, selected restoration projects must be consistent to the maximum extent practicable with the federally-approved coastal management programs for the states in which the projects are to be conducted. On December 12, 2013 the Federal Trustees submitted a consistency determination to the MDMR for this project for appropriate state reviews coincident with

public review of the Draft Phase III ERP/PEIS. On February 4, 2014, the MDMR responded and concurred with the federal determination for the project for purposes of finalizing this early restoration plan (Miller 2014).

The proposed discharge of dredged or fill material into waters of the United States, including wetlands, or work affecting navigable waters associated with this project is currently being coordinated with the U.S. Army Corps of Engineers (USACE) pursuant to the Clean Water Act Section 404 and Rivers and Harbors Act (CWA/RHA). On March 3, 2014, an application requesting Mississippi Coastal Wetland Protection permit authorization was submitted to Mississippi Department of Marine Resource (MDMR). Shortly after receiving the application, MDMR notified the USACE of the application and began the USACE permitting process (SAM-2014-00275-TMZ). Coordination with the MDMR and USACE is ongoing, and final authorization pursuant to Coastal Zone Management Act of 1972 and the CWA/RHA will be completed prior to project implementation.

The current site design has been developed to avoid and minimize impacts on wetlands. Contractors would be instructed to minimize disturbance during construction in wetlands. In addition, the Trustee would adhere to the conditions of the Mississippi Coastal Wetland Protection Act and Clean Water Act permits.

#### **Floodplains**

Construction of the Interpretive Center and bait shop/concession stand/kayak rental facility would be above base flood elevations that are designated for the area. Although there would be construction in the floodplain, the construction or operation of the proposed project would not increase flood risk or change floodplain values. The installation of utility connection to tie into the mainland utilities would have no impact on flooding.

#### **Water Quality**

Sediment from construction and contaminants (e.g., gas, oil, lubricants) from construction equipment could degrade surrounding waterbodies and/or groundwater. Dewatering may be required for subsurface work such as utility installation. Water would be discharged to a vegetated pervious area for infiltration. Appropriate BMPs would be used to prevent, control, and mitigate potential impacts. Following construction, the paving of parking lots and the concrete shoreline walkway could affect local water resources in two ways. First, as the ground is converted to an impervious surface, it would allow a greater quantity of water to enter the local waterbodies during precipitation events. A less-pervious surface would mean less infiltration and water quality treatment. Second, the stormwater runoff from these impervious surfaces could contain contaminants swept from the parking lot (e.g., car fluids, gas, and oil) or trash and debris that could pollute the surrounding waterbodies. To the extent possible, pervious, vegetated treatment areas would be incorporated into the final design to facilitate stormwater storage and treatment throughout the site. There would be short-term and long-term minor and localized impacts on surface water and groundwater hydrology and water quality.

The "Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas" (MDEQ 2012a) document describes several categories of erosion and sediment control BMPs. These include surface stabilization, runoff conveyance, inlet protection, sediment control, and stream protection BMPs and site preparation techniques. The exact BMPs used during construction activities would not be identified until construction contractor(s) are selected. Additionally, stormwater BMPs,

which attempt to limit or treat contaminants and the quantity of water running off into waterbodies, can be either structural or non-structural and use infiltration, filtration, or retention/detention as well as planning or site design. A Construction General Permit for stormwater would be necessary as the site is greater than 5.0 acres.

**10.7.6.4 Air Quality and Greenhouse Gas Emissions**

**Affected Resources**

The U.S. Environmental Protection Agency (EPA) defines ambient air in 40 C.F.R. Part 50 as “that portion of the atmosphere, external to buildings, to which the general public has access.” In compliance with the 1970 Clean Air Act (CAA) and the 1977 and 1990 Clean Air Act Amendments (CAAA), the EPA has promulgated National Ambient Air Quality Standards (NAAQS). Under the CAA, the EPA establishes primary and secondary air quality standards. Primary air quality standards protect the public health, including the health of “sensitive populations, such as people with asthma, children, and older adults.” Secondary air quality standards protect public welfare by promoting ecosystems health, and by preventing decreased visibility, and damage to crops and buildings. The EPA has set NAAQS for the following six criteria pollutants: ozone, particulate matter (PM 2.5 and 10), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and lead.

**Air Quality**

Mississippi has adopted the federal standards (Table 10-23). According to the MDEQ, the entire state of Mississippi (including Harrison County) is classified as in attainment, meaning criteria air pollutants do not exceed the NAAQS. Air quality conditions in the project area are good as there are no existing pollutant sources.

**Table 10-23. State and federal ambient standards for criteria air pollutants.**

<b>POLLUTANT</b>	<b>AVERAGING PERIOD</b>	<b>STATE AND FEDERAL PRIMARY STANDARD</b>
Ozone	8-hour	0.075 ppm
	1-hour (daily max.)	0.12 ppm
PM2.5	Annual (arithmetic mean)	15.0 µg/m <sup>3</sup>
	24-hour	35 µg/m <sup>3</sup>
PM10	Annual (arithmetic mean)	NA
	24-hour	150 µg/m <sup>3</sup>
Carbon Monoxide	8-hour	9 ppm
	1-hour	35 ppm
Nitrogen Dioxide	Annual (arithmetic mean)	0.053 ppm
	1-hour	0.100 ppm
Sulfur Dioxide	Annual (arithmetic mean)	0.03 ppm
	24-hour	0.14 ppm
	1-hour (per annum)	NA
	1-hour (per 7 days)	NA
	5-minute	NA
Lead	Rolling 3-month average	0.15 µg/m <sup>3</sup>
	Quarterly average	1.5 µg/m <sup>3</sup>

POLLUTANT	AVERAGING PERIOD	STATE AND FEDERAL PRIMARY STANDARD
Total Suspended Particulates	Annual (geometric mean)	NA
	24-hour	NA

**Greenhouse Gases**

Greenhouse Gases (GHGs) are chemical compounds found in the earth’s atmosphere that absorb and trap infrared radiation as heat. Global atmospheric GHG concentrations are a product of continuous emission (release) and removal (storage) of GHGs over time. In the natural environment, this release and storage is largely cyclical. For instance, through the process of photosynthesis, plants capture atmospheric carbon as they grow and store it in the form of sugars. Human activities such as deforestation, soil disturbance, and burning of fossil fuels disrupt the natural cycle by increasing the GHG emission rate over the storage rate, which results in a net increase of GHGs in the atmosphere. The principal GHGs emitted into the atmosphere through human activities are CO<sub>2</sub>, methane, nitrous oxide, and fluorinated gases, such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, with CO<sub>2</sub> as the major GHG emitted.

***Environmental Consequences***

**Air Quality**

Project implementation would require the use of heavy equipment, which could temporarily lead to air quality impacts from equipment exhaust. In addition, fine particulate matter (fugitive dust) associated with road improvements, parking, shoreline stabilization, and construction of facilities and trails, may become airborne during the construction process. No air quality permits are required for this type of project, and violations of state air quality standards are not expected.

Air quality impacts during construction are expected to be localized, minor, and short term.

**Greenhouse Gas Emissions**

The use of gasoline and diesel-powered construction vehicles and equipment, including small trucks, dump trucks, concrete trucks, Bobcats, grading and paving machines, trackhoes, dozers, cranes and tugboats and other equipment would contribute to an increase in GHG emissions. Table 10-24 details the construction equipment needed to complete the project, the total hours used for each type of equipment, and the emissions resulting from the use of equipment.

Based on the assumptions detailed in Table 10-24, the project would generate approximately 357.76 metric tons of GHGs over the duration of all phases. The following mitigation measures have been identified to reduce or eliminate GHG emissions from the project.

- Shut down idling construction equipment, if feasible.
- Locate staging areas as close to construction sites as practicable to minimize driving distances between staging areas and construction sites.
- Encourage the use of the proper size of equipment for the job to maximize energy efficiency.
- Encourage the use of alternative fuels or power sources for generators at construction sites, such as propane or solar power, or use electrical power where practicable.

**Findings:** Air quality impacts during construction are expected to be localized, minor, and short term. Project construction would generate approximately 357.76 metric tons of carbon equivalents. The project would have short-term minor impacts but no long-term impacts on GHG emissions. Mitigation measures would minimize GHG emissions.

Table 10-24. Greenhouse gas impacts for the Popp's Ferry Causeway Park.

EQUIPMENT DESCRIPTION	TOTAL HOURS USED	CO <sub>2</sub> FACTOR-MT*/100HRS	CO <sub>2</sub> (MT)	CH <sub>4</sub> FACTOR-MT/100HRS	CH <sub>4</sub> (MT)	NO <sub>2</sub> O FACTOR-MT/100HRS	NO <sub>2</sub> O (MT)	TOTAL CO <sub>2</sub> (MT)
Dump Trucks / Flatbed Truck	481	1.70	8.18	0.50	2.41	7.20	34.63	45.21
Concrete Trucks	64	1.70	1.09	0.50	0.32	7.20	4.61	6.02
Line Truck	48	1.25	0.60	0.40	0.19	5.50	2.64	3.43
Pick-Up Trucks	2112	1.10	23.23	0.35	7.39	4.40	92.93	123.55
Bobcat (bare and w/auger mount)	248	2.65	6.57	0.9	2.23	10.60	26.29	35.09
Moto Grader	20	2.25	0.45	0.65	0.13	1.08	0.22	0.80
Milling Machine	8	2.55	0.20	0.85	0.07	10.2	0.82	1.09
Paving Machine	80	2	1.60	0.50	0.40	8	6.40	8.40
Rollers	100	2	2.00	0.50	0.50	8	8.00	10.50
Trackhoe (w/ Bucket/Thumb or Vibratory Attachments)	428	2.55	10.91	0.85	3.64	10.2	43.66	58.21
Dozer	52	2.25	1.17	0.65	0.34	1.08	0.56	2.07
Forklift	208	2.25	4.68	0.65	1.35	1.08	2.25	8.28
Ditchwitch	86	0.75	0.65	0.35	0.30	4	3.44	4.39
Crane (bare and w/clamshell attachment)	148	2.55	3.77	0.85	1.26	10.20	15.10	20.13
Tug Boat (8 trips)	8	-----	5.20	-----	1.60	-----	20.80	27.60
Georgia Buggies	40	1.35	0.54	0.4	0.16	5.75	2.30	3.00
<b>Total</b>	<b>4131</b>							<b>357.76</b>

\*MT = metric tons

#### 10.7.6.5 Noise

##### **Affected Resources**

The Noise Control Act of 1972 (42 U.S.C. 4901 to 4918) was enacted to establish noise control standards and to regulate noise emissions from commercial products such as transportation and construction equipment. The standard measurement unit of noise is the decibel (dB), which represents the acoustical energy present. Noise levels are measured in A-weighted decibels (dBA), a logarithmic scale which approaches the sensitivity of the human ear across the frequency spectrum. A 3-dB increase is equivalent to doubling the sound pressure level, but is barely perceptible to the human ear. Table 10-25 presents some familiar sounds and their decibel levels.

**Table 10-25. Familiar sounds and their decibel levels (dB).**

<b>SOUND</b>	<b>DECIBEL LEVEL (DB)</b>
Whisper	30
Normal Conversation	50 – 65
Vacuum Cleaner at 10 ft.	70
Midtown Manhattan Traffic Noise	70 – 85
Lawnmower	85 – 90
Train	100
Nearby Jet Takeoff	130

**Project Area Noise Levels and Receptors**

Existing ambient noise is consistent with noise from developed areas as well as natural wetland and marine environments. Popp’s Ferry Bridge parallels the eastern side of the park and this traffic noise is noticeable on the eastern portion of the project area, especially the noise associated with vehicles crossing the drawbridge section of the bridge. The southern portion of the project area is located between 0 and 650 ft. away from the centerline of the Popp’s Ferry Bridge. A traffic noise investigation was prepared for the Environmental Assessment for Alternative “E” for improvements to Popp’s Ferry Road and Bridge between Riverview Drive to Pass Road in Biloxi, Harrison County, Mississippi (MDOT 2010). Sound levels of 59 – 64  $L_{eq}$  dBA were recorded at non-causeway sites that were 55 – 145 ft. from the centerline along Popp’s Ferry Road. The portion of the project area north of the existing boat launch has similar noises, although this area is farther away from the Popp’s Ferry Bridge centerline. There is also likely some noise from sporadic boat traffic using the Biloxi River channel on the western side of the park and barge traffic using the navigation channel south of the Popp’s Ferry Causeway Park. Ambient noise includes low-flying C-131 transports from Keesler Air Force Base. Natural noise includes sounds emitted by resident wildlife and wave action on windy days. The closest residence is located 750 ft. to the south of the project area.

**Marine Mammals**

The Marine Mammal Protection Act requires evaluation of activities that could injure or cause behavioral change in marine mammals. Noise impacts to fish are also considered here. Within water, noise levels decrease with increasing distance from the pile installation source. This noise attenuation is typically cylindrical in shallower water and spherical in deeper water. Vibratory pile installation produces less sound (approximately 10 – 20 dB) than impact pile installation; however, the increased time and therefore overall sound produced with vibratory hammers could be greater (Caltrans 2009). Use of wood piles also produces less noise than other pile materials as does smaller pile diameters (Caltrans 2009). Injury impact thresholds occur closest to the source, whereas behavior impact threshold levels occur at a further distance from the source.

***Environmental Consequences***

**Human/Terrestrial Wildlife Receptors**

During construction, the use of general construction equipment would have short-term, minor adverse noise impacts. The noise impacts would take place only during construction periods and would not close the entire project area to visitors. During the installation of the wood piles with a vibratory hammer, terrestrial wildlife and humans (visitors and residents) may be disturbed due to noise. However, the duration needed for pile driving is short; in addition to using a vibratory hammer to minimize noise,

every effort would be made to minimize the time required for pile installation. Impacts associated with vibratory hammer pile driving would be short term and moderate.

### **Marine Mammals**

Several project features require piling and the use of vibratory hammer installation equipment. In-water piling installation would be necessary for constructing the four fishing piers, marsh overlook pier, and the associated marsh boardwalk. Pile installation could also be necessary for upland construction of the bait shop/concession stand/kayak rental facility. Potential impacts on marine and coastal aquatic life from insertion of pilings would be due to the noise created from the vibration generated by the equipment. During use of this equipment, a vibratory motion would propagate through the pile and radiate a pulse into the water, ground substrate, and air. The planned installation of the pilings would be brief in duration.

The Trustees coordinated with NOAA to ensure that there would be no takes or harassments of marine mammals as a result of project construction. The Trustee intends to take a number of precautionary measures to ensure that there is no disturbance to marine mammals in the project area, and in particular, to manatees and cetaceans (dolphins). All construction personnel involved in in-water work that generates noise would be responsible for observing water-related activities for the presence of marine mammals, in particular, dolphins and manatees. The Trustee, or designee, shall advise all construction personnel regarding the civil and criminal penalties for harming, harassing, or killing West Indian manatees, which are protected under the Endangered Species Act of 1973. All vessels associated with the construction project shall operate at “no wake/idle” speeds at all times and in all water depths where the draft of the vessel provides less than a 4-ft. clearance from the bottom. Construction contractors would preferentially follow deep-water routes (e.g., marked channels) whenever possible. If marine mammals are seen, all work (pile driving) would cease until the animal has left the project area. The Trustee, or designee, would have monitors onsite during pile installation to ensure that these conditions are met.

**Findings:** There would be short-term, minor adverse noise impacts to residents and visitors as a result of excavators and other construction equipment during the period of construction for the park features, with short-term, moderate adverse impacts during the very short period of pile installation. The Trustee will consult with NOAA and NMFS to determine noise impacts for the project and minimization measures.

#### **10.7.6.6 Biological Environment**

##### ***Living Coastal and Marine Resources***

##### ***Affected Resources***

The living coastal and marine resources in the project area include those associated with estuarine and marine wetlands, shallow coastal water habitats, and disturbed uplands.

##### **Flora**

Dominant vegetation in the brackish habitats includes black needlerush, salt meadow cordgrass, saltgrass, saltmarsh morning-glory, and Jesuit’s bark. Tidally influenced freshwater marsh species include black willow (*Salix nigra*), saw-grass, yellow-eye grass (*Xyris* spp.), bushy bluestem, broadleaf cattail, as well as sedges and rushes. The upland habitats contain slash pine (*Pinus elliottii*) stands and

live oak (*Quercus virginiana*) trees. Estuarine brackish marsh flanks the project area to the east and is composed primarily of black needlerush assemblages. A survey for sub-aquatic vegetation (SAVs) was completed for the marsh overlook pier and boardwalk area. There is no SAV in the project area.

#### **Fauna**

The faunal species found in the area include those associated with natural estuarine marsh pocket beaches, and disturbed upland habitats. These include various species of mammals, birds, fish, reptiles, infauna, epifauna, and other aquatic invertebrates. The Mississippi diamondback terrapin (*Malaclemys terrapin pileata*) utilizes pocket beaches adjacent to marsh for nesting habitat.

The mixing of fresh water from rivers with saline water from the Mississippi Sound allows for a range of fish species in the waters surrounding the Popp's Ferry Causeway Park including redfish (*Sciaenops ocellatus*), blue catfish (*Ictalurus furcatus*), flounder (*Paralichthys lethostigma*), speckled trout (*Cynoscion nebulosus*), white trout (*Cynoscion arenarius*), southern kingfish (*Menticirrhus americanus*), sheepshead (*Archosargus probatocephalus*), and black drum (*Pogonias cromis*), as well as crab and shrimp species. The estuarine emergent wetland habitat supports an array of neonate and juvenile fish and aquatic invertebrates. Other fish and marine mammals such as Atlantic bottlenose dolphins (*Tursiops truncatus*) could also occur in the area.

#### ***Environmental Consequences***

##### **Flora**

Construction of the concrete walkway, new parking area, Interpretive Center, bait shop/concession stand/kayak rental facility, nature trail, and picnic areas would involve minimal clearing and grubbing in the construction footprint. However, the land within these footprints, in its current state, is partially disturbed. Following construction, cleared areas outside the footprint would be replanted and reseeded with trees, shrubs, and other suitable vegetation. There is adequate habitat within the project area and vicinity to ensure continued viability of native species. The alteration of vegetation to recreational structures would result in long-term, minor adverse impacts. Clearing and grubbing would result in short-term, minor adverse impacts until vegetation is reestablished.

Construction of the wooden shoreline boardwalk, marsh overlook pier, and associated marsh boardwalk would impact floral resources by shading vegetation under the pier and boardwalks. Several boardwalks connecting the shoreline boardwalk to landings would be constructed through this wetland, totaling 355 linear ft. In addition, there could be some disturbance to vegetation in the immediate area of each feature due to movement of construction equipment. Construction of the boardwalk to allow penetration by sunlight would reduce these shading effects and allow vegetation to regrow. Installation of the pier and boardwalks would not appreciably diminish the availability of emergent marsh habitat in the project area that supports local and regional vegetative communities. There would be no fragmentation of vegetative communities and, therefore, short-term and long-term impacts would be localized and minor.

##### **Fauna**

Construction of the wooden boardwalks, marsh overlook pier, and boardwalk would result in short-term minor localized adverse impacts. Increased human presence after the project improvements are complete is anticipated; however, because these areas currently experience human presence, on

balance, adverse impacts to wildlife are expected to be minor or nonexistent. Construction of the wooden boardwalks, marsh overlook pier, and boardwalk would reduce availability of habitat underneath the structures for certain wildlife species; however, the project footprint represents only a small portion of the available habitat in the area for local wildlife. The Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) provided consultation on the Mississippi diamondback terrapin and requests minimizing riprap usage for shoreline stabilization at locations where pocket beaches might be present (Frey 2014). The Trustee would identify and also avoid pocket beaches to the maximum extent practicable in the design of the project.

Therefore long-term adverse impacts to wildlife would be minor. There would be long-term minor adverse impacts on fauna resulting from occasional disturbance to feeding or resting in localized areas.

The construction of the four fishing piers and marsh overlook pier would have short-term impacts for the aquatic organisms and benthic habitat during piling installation. The area of impact to both surface and benthic habitat is minor relative to the amount of each of these habitats available in the local and adjacent area. The Trustee coordinated with NOAA NMFS to determine impacts to cetaceans and to identify avoidance measures.

## **Marine Mammals**

### ***Affected Resources***

Marine mammals found within the Gulf of Mexico include 21 species of cetaceans (whales and dolphins) and the West Indian manatee. The Marine Mammal Protection Act (MMPA) prohibits the "taking" of marine mammals incidental to a specified activity, unless such taking is appropriately authorized.

### **Dolphin Species**

The bottlenose dolphin, *Tursiops truncatus*, and the Atlantic spotted dolphin, *Stenella frontalis*, are the two most common marine mammals found in the Gulf of Mexico. Both species feed primarily on fish, squid and crustaceans. While *S. frontalis* spends the majority of its life offshore, *T. truncatus* often travel into coastal bays and inlets for feeding and reproduction.

### **West Indian Manatee**

The West Indian manatee (*Trichechus manatus latirostris*) is listed as endangered under the ESA. The species is endangered due to its small population size (less than 2,500 mature individuals with possible population decline), the possibility of at least a 50 percent future reduction in population size, and near- and long-term threats from human-related activities (FWS 2010; FWC 2007). Between October and April, manatees concentrate in areas of warmer water. During summer months, the species may migrate as far west as the Louisiana and Texas coast on the Gulf of Mexico. Manatees inhabit both salt and fresh water of sufficient depth (about 5 feet to usually less than 18 feet). Manatees will consume any aquatic vegetation available to them including sometimes grazing on the shoreline vegetation.

### ***Marine Mammal Environmental Consequences***

Noise and other activity associated with proposed construction may temporarily disturb certain dolphin species and manatee in the vicinity of the project area through temporary impacts on prey abundance, water quality (turbidity), and underwater noise, and may temporarily increase the potential for boat

collisions with certain species in the project area. However, the mobility of these species reduces the risk of injury due to construction activity. Based on the mobility of these species, the short duration of construction activities, and the proposed construction methodology, effects on dolphin species are not anticipated.

Extreme care should be taken during construction not to disturb or injure manatees. If manatee(s) are found to be present in the immediate project area during restoration activities, construction would be halted until the species moves away from the project area.

The procedures contained within the MMPA coordination and ESA consultation for West Indian manatee<sup>9</sup> constitute appropriate and responsible steps to promote compliance with MMPA prohibitions on take by requiring the proposed activities to achieve a standard of No Effect or May Affect, Not Likely to Adversely Affect for manatees (McClain 2014). As such, the Trustees do not anticipate any take, incidental or otherwise, under the MMPA for West Indian manatee due to implementation the proposed project.

As a result of coordination with NFMS Office of Protected Resources, the Trustees will implement the below listed measures to minimize the potential for incidental take of marine mammals:

- **Establishment of Shut-Down Zone:** The calculated radius for the 120 dB rms/Level B harassment zone (i.e., distance from driven pile to area where harassment would no longer be expected to occur) is 1,585 m. The area defined by this radius in all relevant directions from the pile driving activity will comprise the shut-down zone. Shut-down of pile driving activity would occur immediately upon observation of any marine mammal within or approaching this zone.
- **Visual Monitoring and Shut-down of Pile Driving Activities:** The shut-down zone will include all areas where underwater sound pressure levels are anticipated to equal or exceed the 120 dB threshold, as described under "Establishment of Shut-Down Zone." Qualified observers will monitor these zones and advise project personnel when delay or shut-down of pile driving activities is required. The shut-down zone will be monitored for the presence of marine mammals before, during, and after any pile installation activity, beginning 15 minutes prior to initiating the start of pile installation and continuing for 15 minutes following the completion of pile installation. If marine mammals are present within the shut-down zone prior to pile installation, the start of pile installation will be delayed until the animals voluntarily leave the shut-down zone and have been visually confirmed beyond the zone, or until 15 minutes have elapsed without redetection. Shutdown of pile driving activities will occur if any marine mammal enters or approaches the established zone, and will not resume until the animal has voluntarily moved beyond the relevant shut-down zone radius, either through visual confirmation or by waiting until 15 minutes has elapsed without redetection.
- **Qualified biologists will be present on site at all times during pile driving activities.** The action area will be monitored by at least three observers during vibratory pile driving. One will be based on land; two will be on vessels traveling along and within the radius while visually scanning the area.

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<sup>9</sup> Implementing of the Service's most recent version of the Standard Manatee Conditions for In-water Work.

- Monitoring of the shut-down zone will be conducted using binoculars, spotting scopes and visual observations. Each monitor will have a radio for contact with other monitors or work crews. A GPS unit, range finder, or other suitable methodology will be used for determining the observation location and distance to marine mammals, vessels, and construction equipment.
- No pile driving will occur in low-light conditions, or when visibility is impaired such that the shut-down zone cannot be effectively monitored. Pile driving will only be conducted between one-hour post-sunrise through one hour prior to sunset. If waters exceed small craft advisories or conditions otherwise restrict biologists' ability to make observations or become unsafe for the observation boat to operate, pile installation will cease until conditions allow for monitoring to resume.

### **Protected Species**

The U.S. Fish and Wildlife Service (USFWS) lists species as threatened or endangered when they meet criteria detailed under the ESA of 1973, as amended (16 U.S.C. §1531 et seq.). Additionally, the Mississippi Wildlife Fisheries and Parks (MWFP) and NOAA National Marine Fisheries Service (NMFS) identify and list protected species. Section 7(a)(2) of the ESA requires that each federal agency ensures that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of those species. Migratory Bird Treaty Act compliance and Bald and Golden Eagle Protection Act compliance are discussed in this section.

Federally listed species that are known to occur or could occur in Harrison County are listed in Table 10-26. However, only the West Indian manatee, five sea turtle species and Alabama red-belly turtle are likely to occur or could pass through the project area.

**Table 10-26. Popp’s Ferry Causeway Park—threatened and endangered species in Harrison County, Mississippi.**

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS	HABITAT
<b>Amphibians</b>				
Dusky Gopher Frog	<i>Rana sevosa</i>	Endangered	Endangered	Sandy uplands and temporary pools
<b>Birds</b>				
Red-cockaded Woodpecker	<i>Picoides borealis</i>	Endangered	Endangered	Mature, open southern pine forests
Piping Plover	<i>Charadrius melodus</i>	Threatened	Endangered	Beaches and mudflats in southeastern coastal areas
Red Knot	<i>Calidris canutus rufa</i>	Proposed	--	Marine intertidal habitats including inlets, estuaries, and bays feeding in mud and sand flats on beaches and barrier islands
<b>Ferns and Allies</b>				
Louisiana Quillwort	<i>Isoetes louisianensis</i>	Endangered	--	Aquatic or wet habitats, mostly shallow streams in bottomland habitats (MDWFP 2001)
<b>Fishes</b>				
Gulf Sturgeon	<i>Acipenser oxyrinchus desotoi</i>	Threatened	Endangered	Migrates from large freshwater coastal rivers to brackish and marine coastal bays and estuaries
<b>Mammals</b>				
West Indian Manatee	<i>Trichechus manatus</i>	Endangered	Endangered	Fresh and salt water in large coastal rivers, bays, bayous and estuaries
Louisiana Black Bear	<i>Ursus americanus luteolus</i>	Threatened	Endangered	Bottomland hardwood forest; dispersal corridors
<b>Reptiles</b>				
Hawksbill Sea Turtle	<i>Eretmochelys imbricate</i>	Endangered	Endangered	Coral reefs, open ocean, bays, estuaries
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	Endangered	Endangered	Open ocean, coastal waters
Kemp's Ridley Sea Turtle	<i>Lepidochelys kempii</i>	Endangered	Endangered	Nearshore and inshore coastal waters, often in salt marshes; neritic zones with muddy or sandy substrate (NOAA Fisheries 2013b)
Green Sea Turtle	<i>Chelonia mydas</i>	Threatened	Endangered	Shallow coastal waters with SAV and algae, nests on open beaches
Loggerhead Sea Turtle <sup>1</sup>	<i>Caretta caretta</i>	Threatened	Endangered	Open ocean; also inshore areas, bays, salt marshes, ship channels and mouths of large rivers
Alabama Red-belly Turtle	<i>Pseudemys alabamensis</i>	Endangered	Endangered	Fresh and brackish habitats, river banks, submerged and emergent aquatic vegetation; upland habitat for nesting (MDWFP 2001; USFWS 2010)
Black Pine Snake	<i>Pituophis melanoleucus lodingi</i>	Candidate	Endangered	Open canopy longleaf pine/hardwood habitats with well-drained sandy soils and ground cover (MDWFP 2001; USFWS 2010)
Gopher Tortoise	<i>Gopherus polyphemus</i>	Threatened	Endangered	Open canopy longleaf pine/scrub oak habitats with well-drained sandy soils and ground cover (USFWS 2010)

<sup>1</sup>Listed by NOAA National Marine Fisheries Service

## **Mammals**

**West Indian Manatee (*Trichechus manatus*):** This species uses both fresh and saltwater habitats such as coastal rivers, bays, bayous, and estuaries. The manatee is an occasional visitor to Mississippi's coasts, although migration into the area is poorly understood. After wintering in Florida, and perhaps Mexico, manatees migrate northward during spring, including to Mississippi and Alabama waters, although these migrations are not well understood (Fertl et al. 2005). Manatees frequently seek out freshwater sources such as rivers and river mouths and have been known to be found near estuaries (Fertl et al. 2005). Seagrasses are the typical manatee forage material; however, they can also consume other aquatic vegetation, algae, and terrestrial vegetation (Fertl et al. 2005). There have been sightings of West Indian manatees in the project area (Fertl et al. 2005); however, given the lack of their main food source at the site, any manatee occurrence, if any, is expected to be transitory.

## **Reptiles**

**Hawksbill Sea Turtle (*Eretmochelys imbricata*):** Although this species uses various habitats such as the open ocean, bays, and estuaries throughout different life stages, it is mainly associated with coral reefs. This species nests in Florida from April to November (NOAA Fisheries 2013a). It likely does not nest in Mississippi and observations are rare in the state (MDWFP 2001; NOAA Fisheries 2013a). The main dietary items of this species are sponges and other invertebrates (NOAA Fisheries 2013a).

**Leatherback Sea Turtle (*Dermochelys coriacea*):** This species mainly inhabits the offshore open ocean; however, it does use nearshore coastal waters during nesting or feeding. Nesting for this species occurs in Florida from April through November. Their main forage item is jellyfish. This species migrates long distances from nesting to feeding areas. While not common, there have been sporadic observations of leatherback turtles in Mississippi waters (MDWFP 2001).

**Kemp's Ridley Sea Turtle (*Lepidochelys kempii*):** Typical habitat for this species includes nearshore and inshore coastal waters and often salt marshes and neritic zones with muddy or sandy substrate (NOAA Fisheries 2013b). This species has been observed in nearshore waters of the Mississippi Sound during migration and foraging and has been accidentally caught by shore-based fishermen (MDWFP 2001; Shaver and Rubio 2008). Females typically nest from May through July (NOAA Fisheries 2013b). Males potentially use Gulf of Mexico habitats all year and females presumably use the Mississippi Sound and barrier island habitats for foraging when not nesting (NOAA Fisheries 2013b). Kemp's Ridley sea turtles do not nest in Mississippi (MDWFP 2001).

**Green Sea Turtle (*Chelonia mydas*):** This species typically prefers shallow coastal waters with SAV and algae for foraging and nests on open beaches (NOAA Fisheries 2012). Nesting typically does not occur on mainland beaches and there is likely no Mississippi nesting at all (MDWFP 2001; NOAA Fisheries 2012). This species migrates long distances in the open ocean from nesting to feeding areas. Observations of this species in Mississippi are rare (MDWFP 2001).

**Loggerhead Sea Turtle (*Caretta caretta*):** Loggerhead habitat for foraging and migration includes open ocean, inshore areas, bays, salt marshes, ship channels, and mouths of large rivers. This sea turtle feeds on mollusks, fish, crustaceans, and other marine organisms. This species typically nests at night from late April through September (NOAA Fisheries 2013c). Although loggerheads occasionally use barrier islands for nesting, mainland nesting is rare (MDWFP 2001). Preferences for nesting beaches include

high high-energy coarse-grained beaches adjacent to the ocean that are narrow and steeply sloped (NOAA Fisheries 2013c). This species has been observed in nearshore waters of the Mississippi Sound during migration and foraging and has been accidentally caught by shore-based fishermen (MDWFP 2001).

**Alabama Red-Belly Turtle (*Pseudemys alabamensis*):** The habitat of the Alabama red-belly turtle includes fresh and brackish habitats, river banks, submerged and emergent aquatic vegetation, and upland habitat for nesting (MDWFP 2001; USFWS 2010). Within the project area, individuals of this species are known to be present in the Tchoutacabouffa River, the Biloxi River, and the Back Bay of Biloxi (MDWFP 2001; USFWS 2010); however, this species is mainly a freshwater species associated with river and stream channels and associated wetlands. Nesting occurs from mid-May to mid-July (MDWFP 2001).

### ***Environmental Consequences***

#### **Protected Species**

The West Indian manatee and Alabama red-belly turtle have potential to occur or pass through the project area. Sea turtles are also addressed in the environmental consequences discussion, but they are not known to occur in or near the project area.

#### **West Indian Manatee**

West Indian manatee observations in Mississippi have mainly been associated with barrier islands and offshore areas; however, there are infrequent documented sightings from within the Back Bay of Biloxi (Fertl et al. 2005). There are no known wintering habitats or refuge within the Back Bay of Biloxi, nor any populations that use the area. Manatees forage on SAV; however, no SAV is found within the project area. Although impacts to West Indian manatee are not expected, short-term, minor impacts could occur if an individual comes into contact with construction activities. The Trustee, or designee, shall advise all construction personnel regarding the civil and criminal penalties for harming, harassing, or killing West Indian manatees, which are protected under the Endangered Species Act of 1973. If manatee(s) are found to be present in the immediate project area during restoration activities, construction would be halted until the species moves away from project area.

#### **Alabama Red-Belly Turtle**

Alabama red-belly turtle habitat includes fresh and brackish waters, river banks and uplands, and submerged and emergent aquatic vegetation. Although suitable habitat for this species could be present in the project area, no observations have been recorded. The lack of SAV for foraging, as well as the presence of riprap, would make this species unlikely to be present in the project area. It is unlikely that there would be impacts to the Alabama red-belly turtle due to lack of habitat in the project area.

#### **Sea Turtles**

No specific occurrences of sea turtles are known for the project footprint; however, the five federally listed sea turtles (green, hawksbill, Kemp's Ridley, leatherback, and loggerhead) have been sighted in the Mississippi Sound. Both Kemp's Ridley and loggerhead sea turtles are known to be present in nearshore waters of the Mississippi Sound and have been accidentally captured by shore-based fisherman (MDWFP 2001). The open beach habitat preferred by sea turtles for nesting is not present within the project area. Therefore, these species are unlikely to be within the project area. If any sea

turtles are found to be present in the immediate project area during restoration activities, construction would be halted until the species moves away from project area. Precautionary measures would be utilized to prevent and minimize impacts to sea turtles. Precautionary measures would include construction personnel education, proper use and selection of siltation barriers, use of “no wake/idle” speeds in proper locations, adhering to protection guidelines when a sea turtle is within 100 yards of activities, and reporting turtle injuries.

**Findings:** ESA Section 7 consultations were completed with USFWS (McClain 2014) and NMFS (Crabtree 2014 ). The USFWS and NMFS each concurred that the project, as proposed, is not likely to adversely affect West Indian Manatee, Gulf Sturgeon, Kemp's ridley, loggerhead, green sea turtles, (leatherback and hawksbill would be unaffected) or Gulf sturgeon so long as the following measures are taken:

- Conditions A-D of the Standard Manatee Conditions for In-water Work (USFWS 2011)
- Sea turtle and Smalltooth Sawfish Construction Guidelines\_(NMFS 2006) shall be followed when operating vessels or doing in-water work construction.
- Mississippi Department of Environmental Quality's 3- volume manual Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas (MDES 2012) and the Field Manual for Erosion and Sediment Control on Construction Sites in Mississippi (MDEQ 2005) will be utilized.

No effects would occur to other listed, proposed, or candidate species considered during consultation (McClain 2014; Crabtree 2014).

**Migratory Birds**

Migratory bird guilds that could have presence in the Popp’s Ferry project area include wading birds, seabirds, waterfowl, raptors, rails and coots, landbirds, and doves and pigeons (see Table 10-27).

**Table 10-27. Migratory birds in the Popp’s Ferry Causeway Park area.**

SPECIES	BEHAVIOR	SPECIES/HABITAT IMPACTS
Wading birds (herons, egrets, ibises)	Foraging, feeding, resting, roosting	Wading birds primarily forage and feed at the water’s edge. As such, they may be impacted locally and temporarily by the project. It is expected that they would be able to move to another nearby location to continue foraging, feeding and resting. These birds primarily roost in trees or shrubs (e.g., pines, <i>Baccharis</i> ), but project components would not impact these habitats.
Seabirds (terns, gulls, double-crested cormorant, brown pelican)	Foraging, feeding, resting, roosting.	Seabirds forage and rest in the project area. As such, they may be impacted locally and temporarily by the project. It is expected that they would be able to move to another nearby location to continue foraging, feeding and resting. Nesting habitat does not exist in the project area; therefore, it is not anticipated to impact nesting.
Waterfowl (ducks, loons, and grebes)	Foraging, feeding, resting, roosting.	Waterfowl may forage, feed, rest, and roost in the project area. As such, they may be impacted locally and temporarily by the project. It is expected that they would be able to move to another nearby location to continue foraging, feeding and resting. These birds primarily roost and nest in low vegetation, which is not near the project area; therefore it is not anticipated to impact nesting.

SPECIES	BEHAVIOR	SPECIES/HABITAT IMPACTS
Raptors (osprey, hawks, owls)	Foraging, feeding, resting, roosting	Raptors forage, feed, and rest in the project area. As such, they may be impacted locally and temporarily by the project. It is expected that they would be able to move to another nearby location to continue foraging, feeding and resting. Most raptors are aerial foragers and soar long distances in search of food. Locations where these birds roost and nest are not within the project area.
Rails and Coots	Foraging, feeding, resting, roosting,	Rails and coots forage, feed, rest, or roost in the project area. As such, they may be impacted locally and temporarily by the project. However, they are most likely to favor marshy areas. It is expected that they would be able to move to another nearby location to continue foraging, feeding and resting if disturbed by the project. These birds primarily roost and nest in marshes, which are not directly within the project area; therefore, it is not anticipated to impact nesting.
Landbirds (white-eyed vireo, great crested flycatcher, indigo bunting)	Breeding, foraging, feeding, roosting	Various species of migratory birds in Mississippi use upland and freshwater wetland habitats including disturbed and human influenced areas. Breeding locations for these species could include open areas, open deciduous woodlands, shrub thickets, and forest edges especially near freshwater wetlands and waterbodies. The project area includes open disturbed areas with trees, grasses, shrubs, and other low vegetation as well as freshwater wetland depressions. No project features directly impact these habitats.
Doves and Pigeons	Foraging, feeding, roosting, resting	These species may use the upland habitat where trees and shrubs are available. It is expected that they would be able to move to another nearby location to continue foraging, feeding and resting.

**Bald and Golden Eagle Protection Act**

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) of 1940 (BGEPA), prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. BGEPA provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." Golden eagles are not present along the Gulf Coast.

**Environmental Consequences**

**Migratory Bird Treaty Act**

The Trustee has reviewed the project site and determined that migratory bird nesting is not known, but is possible. The MBTA requires the protection of all migratory bird species and protection of ecosystems of special importance to migratory birds against detrimental alteration, pollution, and other environmental degradation. Coordination under MBTA with the USFWS was completed on January 24, 2014. Based on the implementation of BMPs, no "take" is anticipated. If activities require tree removal pre-construction surveys will be completed. If evidence of nesting is found, coordination with the USFWS would be initiated to develop and implement appropriate conservation measures.

**Bald and Golden Eagle Protection Act**

There are no golden eagles in the project area. No bald or golden eagles are known to nest within 660 ft. of the project area. Thus, no impacts to golden or bald eagles are anticipated. Coordination under BGEPA by the USFWS was completed on January 24, 2014. Since no nesting occurs, no "take" is anticipated.

### **Essential Fish Habitat**

Essential fish habitat (EFH) consists of all waters and aquatic substrates and habitats that provide habitat for fish spawning, reproduction, feeding, and/or growth. The proposed project is located within an area designated as EFH for four Fishery Management Plans (FMP) governed by the Gulf of Mexico Fisheries Management Council (GMFMC). These fishery groups are Red Drum, Reef Fish, Coastal Migratory Pelagics, and Shrimp. Based on species habitat characteristics, depth preferences, and commonality of occurrence for all life stages as reported in the final environmental impact statement for the Generic Essential Fish Habitat Amendment of March 2004 (GMFMC 2004), nine of forty species could feasibly be present within the project area (Table 10-28). The waters and associated substrates of the following areas contain EFH for the listed fishery groups.

**Red Drum FMP:** All estuaries; Vermilion Bay, Louisiana, to the eastern edge of Mobile Bay, Alabama, out to depths of 150 ft.; Crystal River, Florida, to Naples, Florida, between depths of 30 and 60 ft.; and Cape Sable, Florida, to the boundary between the areas covered by the GMFMC and the South Atlantic Fishery Management Council (SAFMC), also between depths of 30 and 60 ft.

The red drum fishery is very common in the northern Gulf and the estuarine zone is used by this species in all life stages. Habitats with the highest use include nearshore hard bottoms, nearshore sand/shell, estuarine SAV, and estuarine soft bottoms (GMFMC 2004). Larvae, juveniles, and young adults spend the majority of their time in estuarine habitats and prey on a large array of species including blue crab eggs and juvenile fish (Table 10-28).

**Reef Fish FMP:** All estuaries; the U.S./Mexico border to the boundary between the areas covered by the GMFMC and the SAFMC from estuarine waters out to depths of 600 ft.

The reef fish fishery includes numerous species that use the estuarine zone during particular life stages. Most of these species are transitory and, therefore, just use the inshore environments during part of the year. Mutton and gray snapper use the estuarine zone for feeding as adults only; however, all reef species listed in Table 10-28 have the potential to use this zone as early or late juveniles for growth and feeding habitat. Most of the reef fish species in the area have low occurrences. Abundance levels for these types, including the grouper and snapper fishes, are much higher in the southern and eastern Gulf of Mexico. Juveniles of these species would typically use SAV beds in estuarine environments for food and cover (GMFMC 2004); Table 10-28.

**Coastal Migratory Pelagic FMP:** All estuaries; the U.S./Mexico border to the boundary between the areas covered by the GMFMC and the SAFMC from estuarine waters out to depths of 600 ft. Of the three coastal migratory pelagic species listed in the management unit, only the Spanish mackerel uses the estuarine zone during any life stage. Habitat use for all life stages is primarily the water column; however, the Spanish mackerel uses the estuarine zone during the early and late juvenile and adult life stages. Adults typically only use these shallow areas in the pursuit of baitfish and typically prefer higher-salinity waters (GMFMC 2004); Table 10-28.

Table 10-28. Essential fish habitat considerations for Popp's Ferry Causeway Park.

GULF OF MEXICO FMP GROUP	SPECIES	HABITAT TYPE	EGGS	LARVAE	POST LARVAE	EARLY JUVENILES	LATE JUVENILES	ADULTS	SPAWNING ADULTS
Red Drum Fishery	Red Drum ( <i>Scianops ocellatus</i> )	SAV, soft bottom, sand/shell, emergent marsh		Growth; feeding	Growth; feeding	Growth; feeding	Growth; feeding	Feeding	Feeding
Reef Fish Fishery	Mutton Snapper ( <i>Lutjanus analis</i> )	SAV, emergent marsh				Growth; feeding	Growth; feeding	Feeding	
	Cubera Snapper ( <i>Lutjanus cyanopterus</i> )	SAV, emergent marsh				Growth	Growth		
	Gray Snapper ( <i>Lutjanus griseus</i> )	SAV, soft bottom, sand/shell, emergent marsh			Growth; feeding	Growth; feeding	Growth; feeding	Feeding	
	Lane Snapper ( <i>Lutjanus synagris</i> )	SAV, soft bottom, sand/shell			Growth	Growth; feeding	Growth; feeding		
	Yellowtail Snapper ( <i>Ocyurus chrysurus</i> )	SAV, soft bottom				Growth; feeding			
Coastal Pelagic Fishery	Spanish Mackerel ( <i>Scomberomorus maculatus</i> )	Pelagic				Growth; feeding	Growth; feeding	Growth; feeding	
Shrimp Fishery	Brown Shrimp ( <i>Farfantepenaeus aztecus</i> )	SAV, soft bottom, sand/shell, emergent marsh, oyster reef			Growth; feeding	Growth; feeding	Growth; feeding		
	White Shrimp ( <i>Litopenaeus setiferus</i> )	Emergent marsh, soft bottom			Growth; feeding	Growth; feeding	Growth; feeding		
Source: GMFMC 2004									

**Shrimp FMP:** All estuaries; the U.S./Mexico border to Fort Walton Beach, Florida, from estuarine waters out to depths of 600 ft.; Grand Isle, Louisiana, to Pensacola Bay, Florida, between depths of 100 and 2,000 ft.; Pensacola Bay, Florida, to the boundary between the areas covered by the GMFMC and the SAFMC out to depths of 200 ft., with the exception of waters extending from Crystal River, Florida, to Naples, Florida, between depths of 60 and 150 ft. and in Florida Bay between depths of 30 and 60 ft.

Shrimp fishery species that use the estuarine zone of the management unit include two penaeid types: brown and white shrimp. Post larvae, early juvenile, and late juvenile shrimp of both species use

estuarine habitat for survival. Emergent marsh and marsh edge are particularly important microhabitats for these species and they would use the tidal cycle to enter low emergent marsh adjacent to the shoreline (GMFMC 2004); Table 10-28.

### ***Environmental Consequences***

#### **Red Drum FMP**

Juvenile red drum could be impacted by marsh overlook pier and boardwalk construction activities during high tides when the young fish would use the emergent marsh habitat for feeding and cover. In addition, there would likely be short-term displacement of benthic invertebrate populations and small ichthyofauna and temporary displacement of adult fish on the shoreline boardwalk at the water's edge on the western project boundary. Adverse impacts to red drum EFH would be short term, minor and localized to the areas of pier pilings.

#### **Reef Fish FMP**

Most reef fish use estuarine habitat during some of their life stages; however, this use is transitory and not year-round, especially if used as foraging adults. Most juvenile reef fish use estuarine habitats within SAV beds (GMFMC 2004). Due to the lack of SAV in the project area, it is unlikely that there is a major presence of juvenile reef species in the area. Furthermore, reef fish numbers in the northern Gulf of Mexico are fairly low. The estuarine habitat in the area consists mainly of emergent marsh and soft sediments. Potential impacts during construction of the marsh overlook pier and boardwalk include disruption to larval fish movement during high-tide events and harm to benthic invertebrates, which are prey for many juvenile species. Therefore, only short-term, minor adverse impacts would be expected in the localized area of pier pilings.

#### **Coastal Migratory Pelagic FMP**

A majority of the habitat use by all life stages of coastal migratory pelagic species is within the water column habitat. However, estuarine habitats are one of many possible habitats used by Spanish mackerel in early and late juvenile and adult life stages. Estuarine habitat use is likely transitory and temporary during foraging activities. Adverse impacts to coastal migratory pelagic EFH would be short term, minor and localized to the areas of pier pilings.

#### **Shrimp FMP**

During boardwalk construction, potential impacts to shrimp species include possible disruption during high-tide events as individuals come in with the tide. During in-water pile driving, there could be possible disruption to species in the form of benthic habitat alteration. Soft-bottom habitat could be modified during construction activities and water quality decreased from surface water runoff. Impacts would be short term with localized disturbances only in areas of construction. Disturbed substrate would settle quickly. Therefore, only short-term, minor adverse impacts would be expected in the localized area of pier construction.

**Findings:** Adverse impacts to EFH would be short term, minor and localized to the areas of pier pilings. As per requirements in Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act, the Mississippi Trustee has notified NOAA Marine Fisheries of action that may adversely affect EFH, and has further provided an EFH assessment to NOAA Marine Fisheries. Essential Fish Habitat (EFH) consultation was completed with NMFS's Southeast Regional Office's Habitat Conservation Division (SERO HCD); (Fay, 2014). NMFS concurred with the EFH assessment that the project may result in

minimal and temporary impacts to EFH, and no EFH conservation recommendations were provided pursuant to Section 305(b)(2) of the Magnuson-Stevens Act at this time. Further consultation is not necessary unless future modifications are proposed and such actions may result in adverse impacts to EFH. Under the notification the Trustee stated that the following BMPs would be adhered to:

- Anchoring and mooring will be restricted to impacted areas. Work barges would be moored for overnight and weekends/holidays in areas where previous impacts have occurred (deployment areas).
- Vibratory hammers are considered a minimization measure to decrease injury and behavior modification to fish and cetaceans. The project will use this method to install pilings for piers.
- Monitoring will be conducted before, during, and after project implementation to ensure compliance with project design.
- Structures will be designed to minimize shading impact to tidal and non-tidal wetland grasses.
- Appropriate BMPs will be employed to minimize impacts associated with the parking areas and during construction.

#### **10.7.6.7 Invasive Species**

##### ***Affected Resources***

The potential introduction of terrestrial and aquatic non-native invasive species of plants, animals, and microbes is a concern for any proposed project. Non-native invasive species could alter existing terrestrial or aquatic ecosystems, may cause economic damages and losses, and are frequently the second most common reason for protecting species under the Endangered Species Act. The species that are or may become introduced, established, and invasive are difficult to identify. The analysis focuses on pathway control or actions/mechanisms that may be taken or implemented to prevent the spread of invasive species on site or introduction of species to the site.

The following plant species are listed as invasive in Mississippi: alligator weed (*Alternanthera philoxeroides*), cogongrass (*Imperata cylindrical*), common salvinia (*Salvinia minima*), Eurasian watermilfoil (*Myriophyllum spicatum*), giant salvinia (*Salvinia molesta*), kudzu (*Pueraria lobata*), Chinese tallow tree (*Sapium sebiferum*), torpedo grass (*Panicum repens*), and water hyacinth (*Eichornia spp.*) (MDMR 2013). Much of the uplands within the project area are disturbed habitats where several invasive species are found. These include cogongrass and Chinese tallow. Invasive aquatic fauna reported in the area include Asian tiger shrimp (*Penaeus monodon*), and Nile tilapia (*Oreochromis niloticus*).

##### ***Environmental Consequences***

BMPs to prevent the spread of invasive species through common pathways will be implemented thereby minimizing the potential for short and long-term adverse impacts from the proposed project. This project involves the construction of boardwalks, an interpretive center, a bait shop/kayak rental facility, shoreline stabilization, and trails. A variety of construction equipment (both in-water and on land) will be used. Each of these actions and pieces of equipment serve as a potential pathway to introduce or spread invasive species. To ensure these pathways are “broken” and do not spread or introduce species the following BMPs will be implemented: all equipment to be used during the project, including personal gear, will be inspected and cleaned such that there is no observable presence of mud, seeds,

vegetation, insects, and other species. During operation and management of the facilities, native vegetation will be used for planting. Prior to bringing vegetation to the site, the vegetation will be inspected and “non-target<sup>10</sup>” species will be removed. The implementation of these BMPs meets the spirit and intent of EO 13112. Due to the implementation of BMPs, the Trustees expect risk from invasive species introduction and spread to be short term and minor.

#### **10.7.6.8 Human Uses and Socioeconomics**

##### **Socioeconomics and Environmental Justice**

###### ***Affected Resources***

Socioeconomic resources combine the social resources and economic resources of the area. The social resources evaluation includes consideration such as potential changes in neighborhoods or community cohesion; affordable housing; changes in travel patterns and accessibility; impacts on community facilities; impacts on traffic safety/public safety; and impacts on any special groups such as elderly, handicapped, minority, and transit-dependent persons. The data in this section was compiled using the Census and American Factfinder websites (U.S. Census Bureau 2011 and 2012).

The project is located in the northern part of the City of Biloxi (Census Tract 33.04) in southern Harrison County, Mississippi. In 2010, Harrison County had a population of 187,105 with a mostly white (70 percent) and black or African American (22 percent) racial composition (Table 10-29). The City of Biloxi had a population of 44,054 with a similar racial composition, although the Asian population was higher (4.4 percent) percentage-wise than Harrison County (2.8%). Harrison County Census Tract 33.04 had a population of 4,233, also with a similar racial composition.

The 2007 Economic Census collected data on various industries including those operating in Harrison County and the City of Biloxi (U.S. Census Bureau 2011b). The following list reports industries within Harrison County and the employer value of sales, shipments, receipts, revenue, or business done in thousands of dollars. (Note: In the lists below, N means “not available or not comparable” and D means “withheld to avoid disclosing data for individual companies; data area included in higher level totals.”)

- Manufacturing (D)
- Wholesale trade (839,746)
- Retail trade (2,903,219)
- Information (D)
- Real estate and rental and leasing (175,579)
- Professional, scientific, and technical services (D)
- Administrative and support and waste management and remediation services (199,219)
- Educational services (D)
- Health care and social assistance (1,498,878)
- Arts, entertainment, and recreation (D)
- Accommodation and food services (1,619,113)
- Other services except public administration (181,349)

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<sup>10</sup> A non-target species is any species that is present on the species of choice but is not desirable and should be removed.

**Table 10-29. Demographics of the project area in 2010 (U.S. Census Bureau 2011a).**

	<b>HARRISON COUNTY</b>	<b>CITY OF BILOXI</b>	<b>CENSUS TRACT 33.04, HARRISON COUNTY</b>
Total Population	187,105	44,054	4,233
<i>Race</i>			
White alone	130,366 (70%)	30,129 (68%)	3,320 (78%)
Black or African American alone	41,393 (22%)	8,632 (20%)	550 (13%)
American Indian or Alaska Native alone	863 (0.5%)	221 (0.5%)	22 (0.5%)
Asian alone	5,322 (2.8%)	1,951 (4.4%)	171 (4.0%)
Native Hawaiian and Other Pacific Islander alone	263 (0.1%)	108 (0.2%)	5 (0.1%)
Some Other Race alone	3,911 (2.1%)	1,662 (3.8%)	61 (1.4%)
Two or More Races	4,987 (2.7%)	1,351 (3.1%)	104 (2.4%)
Hispanic or Latino	9,937 (5.3%)	3,847 (8.7%)	161 (3.8%)
Not Hispanic or Latino	177,168 (94.7%)	40,207 (91.3%)	4,072 (96.2%)

The following list reports industries within the City of Biloxi and the employer value of sales, shipments, receipts, revenue, or business done in thousands of dollars.

- Wholesale trade (160,552)
- Retail trade (573,389)
- Information (N)
- Real estate and rental and leasing (58,502)
- Professional, scientific, and technical services (D)
- Administrative and support and waste management and remediation services (30,136)
- Educational services (D)
- Health care and social assistance (799,482)
- Arts, entertainment, and recreation (D)
- Accommodation and food services (1,247,079)
- Other services except public administration (34,961)

Table 10-30 lists employment information for Harrison County, the City of Biloxi, and Harrison County Census Tract 33.04. The top five industries in Harrison County in terms of employment are educational services, and health care and social assistance (18.5 percent); arts, entertainment, and recreation, and accommodation and food services (17 percent); retail trade (12 percent); construction (9.7 percent); and public administration (7.9 percent). The percentage of civilian labor force unemployed in Harrison County is 5.7 percent. The median household income is \$38,645 and the per capita income is \$21,001. Data for the City of Biloxi and Census Tract 33.04 are generally similar, although the household income in Census Tract 33.04 is considerably higher (\$38,315) and unemployment is lower (3.6 percent).

Biloxi police and fire departments and emergency medical services have access to the Popp’s Ferry Causeway Park along Causeway Drive. The nearest medical facility, Cedar Lake Medical Park and Surgery Center, is located approximately 3.8 miles northeast of the proposed park. Biloxi Fire Department District 6 serves the proposed project location and the Biloxi Police Department has a location on Popp’s Ferry Road. Local law enforcement currently patrols the park. Parks and recreation areas other than the

proposed project include Camp Wilkes on the Back Bay to the east, the Biloxi Sports Complex to the northeast, and the Popp’s Ferry Recreational Area and Sunkist Country Club to the north.

**Table 10-30. Selected economic characteristics of the project area.**

	HARRISON COUNTY	CITY OF BILOXI	CENSUS TRACT 33.04, HARRISON COUNTY
<b>Industry (civilian employed population 16 years and over)</b>	<b>83,694</b>	<b>20,233</b>	<b>2,437</b>
Agriculture, forestry, fishing and hunting, and mining	737 (0.9%)	372 (1.8%)	27 (1.1%)
Construction	8,093 (9.7%)	1,600 (7.9%)	69 (2.8%)
Manufacturing	5,867 (7.0%)	1,171 (5.8%)	12 (0.5%)
Wholesale trade	2,277 (2.7%)	552 (2.7%)	90 (3.7%)
Retail trade	10,345 (12%)	2,602 (13%)	109 (4.5%)
Transportation and warehousing, and utilities	3,488 (4.2%)	610 (3.0%)	22 (0.9%)
Information	1,366 (1.6%)	521 (2.6%)	0 (0.0%)
Finance and insurance, and real estate and rental and leasing	6,023 (7.2%)	969 (4.8%)	235 (9.6%)
Professional, scientific, and management, and administrative and waste management services	5,709 (6.8%)	1,356 (6.7%)	351 (14%)
Educational services, and health care and social assistance	15,458 (19%)	3,148 (16%)	479 (20%)
Arts, entertainment, and recreation, and accommodation and food services	13,845 (17%)	4,435 (22%)	591 (24%)
Other services, except public administration	3,875 (4.6%)	980 (4.8%)	121 (5.0%)
Public administration	6,611 (7.9%)	1,917 (9.5%)	331 (14%)
% unemployed, civilian labor force	5.7%	4.4%	3.6%
Median household income (dollars)	38,645	41,655	66,117
Per capita income (dollars)	21,001	24,488	38,315
Percentage of all People whose income in the past 12 months is below the poverty line	20.3%	19.6%	4.7%

**Environmental Consequences**

**Socioeconomic**

The project would provide work for construction-related industries for the construction timeframe. The operation of the bait shop/concession stand/kayak rental facility would create four to five jobs. Additionally, the improved access, environmental education, and creation of recreational facilities, especially the provision of fishing locations for those without boats, would benefit the local community. Short-term and long-term benefits would result from construction jobs and jobs at the Popp’s Ferry Causeway Park.

**Environmental Justice**

The project would provide additional recreational opportunities in the Popp’s Ferry Causeway Park and vicinity and is located in Back Bay away from residential developments. There would be no disproportionate impacts to minority or low-income populations.

#### **10.7.6.9 Cultural Resources**

##### ***Affected Resources***

The National Historic Preservation Act of 1966 (NHPA) charges the federal government with considering the potential effects of its actions on the nation's cultural and historic resources. Much of the southern portion of the project area, while undeveloped, has been disturbed at some point in the past. Dating back to the late 1800s, the southern end of the project site was used as a ferry landing transporting people, livestock, and vehicles across Big Lake to Biloxi. A Phase I cultural and archeological inventory was completed for the project area (R. Christopher Goodwin and Associates, 2014). Investigation of previously recorded site locations on file with the Mississippi Department of Archives and History (MDAH) and based on the results of field surveys, there are no identified archaeological, prehistoric or historic sites, or historic standing structures that are listed on the NRHP, or designated National Historic Landmarks within the project area. No further study is the recommendation of the Phase I report.

This project is currently being reviewed under Section 106 of the NHPA to identify any historic properties located within the project area and to evaluate whether the project would affect any historic properties.

##### ***Environmental Consequences***

A complete review of this project under Section 106 of the NHPA is ongoing and would be completed prior to any project activities that would restrict consideration of measures to avoid, minimize or mitigate any adverse effects on historic properties located within the project area. This project would be implemented in accordance with all applicable laws and regulations concerning the protection of cultural and historic resources.

#### **10.7.6.10 Infrastructure**

##### ***Affected Resources***

Within the project area, there is only one roadway, the two-lane Causeway Drive. This roadway connects the mainland neighborhood to Popp's Ferry Causeway Park by crossing Burnt Bridge and terminates at the southern point of the park. The main arterial road adjacent to the project area is Popp's Ferry Road/Bridge, which connects North Biloxi to the Biloxi peninsula. The City of Biloxi Comprehensive Plan reports that the 2007 average daily traffic on the section of Popp's Ferry Road that runs along Causeway Park is 22,000 vehicles with a year 2030 projection of 24,900 vehicles. No traffic estimates exist for Causeway Drive, although traffic volume is low. A multi-use (i.e., biking and walking) path has been suggested for Popp's Ferry Road and a proposed shared route connecting the Biloxi Sports Complex to the neighborhood north of the Popp's Ferry Causeway Park (City of Biloxi 2009). Currently, there is no public transportation serving the project area; however, bus service has been proposed for Popp's Ferry Road (City of Biloxi 2009).

Electric utility lines run most of the length of the project site and feed existing lighting facilities along Causeway Drive. There is a sewer force main within the project area, although there are no sewer or solid waste utilities for use at the site. No water supply is present and no oil or natural gas wells are present.

### ***Environmental Consequences***

Enhancement of the project area would result in increased parking and access to the fishing, picnicking, and educational facilities. Increased capacity could result in an increased volume of visitors, thereby increasing vehicular and boat traffic associated with the site. Along with improvements to the surface of Causeway Drive, additional lighting would be installed for the road and parking areas. Wastewater and water utilities connections would be installed to provide restroom facilities and potable water. Existing utilities may need to be shut down for very brief periods while utilities are connected, but no adverse impacts would be expected.

There would be no impacts to infrastructure as a result of the project. The installation of new wastewater and water utilities in the area would be a long-term benefit resulting from the project.

#### ***10.7.6.11 Land and Marine Management***

##### ***Affected Resources***

According to the City of Biloxi zoning map, the current zoning for the project area is neighborhood business (NB) and RS-10 Single-Family Residential, Low Density (RS-10) (City of Biloxi 2010). NB is a non-residential district zoned to provide small-scale and low-intensity goods and services (e.g., recreational facilities, small restaurants, convenience stores, libraries, schools) for adjacent neighborhoods that do not increase traffic (City of Biloxi 2013). RS-10 intended to provide for residential housing needs but it is also zoned to provide open space and recreational needs and complimentary public land uses (City of Biloxi 2013). The City of Biloxi Comprehensive Plan predicts that the future land use for the entire Popp's Ferry Causeway Park area would be parks, recreation, and environmental open space.

The main portion of the project area is designated as parks and recreation land use by the City of Biloxi Comprehensive Plan (City of Biloxi 2009). The project area north of the boat launch facility, including the estuarine marsh adjacent to Causeway Drive, is classified as undeveloped, vacant land, or vacant building. Institutional or government land use is also present and adjacent to the project area in the northeast. Surrounding Causeway Drive at the northern point of the project area is single-family residential land use. The waters of Big Lake/Biloxi River along the western boundary of the Popp's Ferry Causeway Park are part of the Biloxi River Marshes Preserve within the Mississippi Coastal Preserves system. These waters are also part of the Biloxi River navigation channel and support regular barge traffic.

##### ***Environmental Consequences***

The proposed project elements are consistent with current and future zoning and land use plans for the area. The majority of the project area is designated as park, recreational land, and open land. The construction and operation of the Popp's Ferry Causeway Park project would improve the park and recreational features of the area and highlight ecological features. Pursuant to the CZMA of 1972, federal activities must be consistent to the maximum extent practicable with the federally approved coastal management programs for states where the activities would affect a coastal use or resource. Federal Trustees are submitting consistency determinations for state review coincident with public review of this document. The project is consistent with current land use plans and would provide a long-term benefit to land and marine management in the area.

#### **10.7.6.12 Aesthetics and Visual Resources**

##### ***Affected Resources***

Aesthetics and visual resources of the project area consist of viewsheds of natural and developed environments. The natural areas include the estuarine wetlands and disturbed upland habitats of the causeway as well as the open water areas visible from the project footprint including the waters of Biloxi River, Big Lake, and the Back Bay of Biloxi. Although the southern portion of the park is mainly undeveloped, it has experienced a large degree of human disturbance. A two-lane unimproved roadway runs the length of the western causeway from north to south. In addition, there is a non-vegetated dirt and gravel open area at the very southern end of the site adjacent to the road. North and east of the road, a rutted dirt track makes a loop through an upland area. Sparsely interspersed through this area are trees, shrubs, and grasses. Most of the trees on the site are located north of the upland area and separate the disturbed uplands from the emergent marsh further to the north. Both project site visitors as well as commuters on the Popp's Ferry Bridge are able to see these visual resources. Man-made visual resources consisting of urban development features that are visible from the project footprint include the Popp's Ferry Bridge to the east and small portions of residential land both north and south of the causeway. When viewing outward from the southern part of the site, park visitors can see these urban visual resources. The bridge is very close to the southern project area; depending on the viewer's location in this area, the bridge is anywhere from 0 to 650 ft. away. In the southernmost section of Popp's Ferry Causeway Park, the outward viewshed consists mostly of open water with residential land at least 750 ft. to the south.

The northern portion of the project area encompasses the proposed utility connection work that runs north along Causeway Drive, across to the mainland ending at the residential street, Cambridge Drive. The viewshed here consists of an improved two-lane roadway, a concrete walkway along the western side, a parking lot for cars and boat trailers, a fishing pier, and a marsh boardwalk. A residential area is visible at the far northern end. In addition to the artificial resources described above, most of the outward viewshed consists of open water areas and emergent estuarine marsh.

##### ***Environmental Consequences***

During construction, there would be temporary aesthetic and visual resource impacts due to the presence and use of construction equipment as well as the disrupted and disturbed state of the site before the completion of each project feature. Currently, the site is used for fishing, boating, and walking. The presence of the construction equipment and disturbed site would be apparent and could detract from the nature viewing experience of some visitors. Additionally, large equipment and areas of disturbed ground might be visible to people passing through adjacent areas such as Popp's Ferry Bridge or the surrounding waters and residential neighborhoods. Therefore, construction activities would result in short-term, minor adverse impacts to aesthetic and visual resources.

Following construction, there would be long-term beneficial aesthetic and visual resource impacts due to the presence of the various project features. The shoreline stabilization would use rock riprap. The benefits from this stabilization would outweigh potential adverse impacts to aesthetics and visual resources. Other installed features (Interpretive Center, bait shop/concession stand/kayak rental facility, fishing piers, walkways, marsh overlook pier, etc.) would change the visual character of the disturbed site to a park environment. In addition to providing opportunities and visitor enjoyment, these facilities would be considered beneficial to aesthetics and visual resources.

Short-term minor adverse impacts to visual resources would occur during construction. Long-term beneficial impacts to aesthetics and visual resources would result from park implementation.

#### **10.7.6.13 Tourism and Recreational Use**

##### ***Affected Resources***

The proposed project site currently includes infrastructure for public access and recreation. Access to the site is provided by a two-lane roadway entering the park at Burnt Bridge. The northern portion of this road was recently repaved and lighting was installed. The southern portion is paved but needs repair and improved lighting. Adjacent to the terminus of the improved road is a parking lot for at least ten cars and ten boat trailers. At the southernmost portion of the project area is a gravel and dirt area currently available for parking. A lighted concrete promenade with benches runs along the western side of the causeway and terminates at a boat launch facility, which would provide access to shoreline opportunities and the surrounding waters. A wooden fishing pier provides additional access to coastal habitats and recreational pursuits. An extensive walkway over marsh and estuarine waters allows access to wetland vistas. The public can access the Popp's Ferry Causeway Park and its existing facilities 24 hours a day.

No visitation numbers are available for the Popp's Ferry Causeway Park. However, anecdotal evidence shows that it is a popular spot for outdoor activities by local residents. Visitors use the fishing piers, Burnt Bridge, and shoreline locations for fishing, crabbing, and shrimping. The boat launch provides boaters accessibility to the waters surrounding the park. Walking, running, and nature viewing are possible throughout the park including on the lighted concrete walkway, the marsh boardwalk, and other areas in the southern portion.

##### ***Environmental Consequences***

Due to safety concerns, access to certain areas may be restricted during construction of each project feature. These restrictions would be limited to the vicinity of construction of specific project features and during the construction period only. Other parts of the park could still be accessed during construction.

After construction is complete, the project would increase the recreational opportunities on the park lands and in the surrounding waters. In addition, completion of the project would allow for easier access to the park and its existing and new recreational features. Almost all areas of the park would be open to recreational pursuits through the nature trails and picnic areas, marsh overlook pier, concrete shoreline walkway, and improvements to the southern part of Causeway Drive. The addition of the bait shop/concession stand/kayak rental facility would allow visitors to use kayaks to explore the nearby shallow water estuarine areas adjacent to the park; previously, these areas were not easily accessible for recreation. The additional fishing piers would allow for more visitors to fish and crab in local waters, especially for those without boat access.

Construction activities would result in short-term minor adverse impacts to public access and recreation. Following construction, there would be long-term beneficial impacts to public access and recreation within the park and adjacent areas.

#### 10.7.6.14 *Public Health and Safety*

##### ***Affected Resources***

Riprap water edge treatment protects the western side of the project area. The northern portion of riprap has been enhanced, but the southern area of riprap is older and needs replacement.

##### ***Environmental Consequences***

There are no anticipated impacts to public health and safety due to construction or operation of the project. The improvement to, and addition of, riprap water edge treatment would result in long-term beneficial impacts to shoreline protection for the localized western boundary of the Popp's Ferry Causeway Park.

#### 10.7.7 *Summary and Next Steps*

The project is intended to restore lost recreational opportunities through the enhancement of increased access to coastal estuarine habitats and wildlife viewing areas. The project would enhance the public's use and/or enjoyment of natural resources by constructing and/or expanding an educational interpretive center, nature trails, piers, and other recreational enhancements that would enhance visitor access to the adjacent coastal estuarine environment and provide opportunities for visitors to fish, crab, and observe nature. The project is consistent with Alternative 3 (Contribute to Providing and Enhancing Recreational Opportunities) and Alternative 4 (Preferred Alternative).

NEPA analysis of the environmental consequences suggests that while there may be minor adverse impacts to some resource categories, there would be no long-term major adverse impacts as a result of the project. The project would provide long-term benefits by providing enhanced access to coastal resources and educational opportunities in the park, fishing piers, boardwalks, a marsh overlook, and interpretive center. The Trustees have completed coordination and reviews under the Endangered Species Act, the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act and the Marine Mammal Protection Act. Consistency reviews of the proposed Phase III early restoration projects in Mississippi were initiated by the Federal Trustees under the Coastal Zone Management Act and have been completed. The Trustees have initiated consultations under the Historic Preservation Act and other federal statutes. The Trustees will consider public comment and information relevant to environmental concerns bearing on the proposed actions or their impacts. Trustees' determination on selection of this project will be included in the Record of Decision.

Throughout the design process, every practical attempt would be made to avoid and minimize potentially adverse environmental, social, and cultural impacts. The following BMPs and conservation measures that (sorted by resource type) would be utilized to minimize impacts to resources:

- **Geology and Substrates**
  - Construction in Mississippi is required to follow the "Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas"(MDEQ 2012a) and the "Field Manual for Erosion and Sediment Control on Construction Sites in Mississippi" (MDEQ 2005).
- **Hydrology and Water Quality**
  - To the extent possible, pervious, vegetated treatment areas would be incorporated into the final design to facilitate stormwater storage and treatment throughout the site.

- The marsh boardwalk would be constructed to allow sunlight to penetrate through, reducing shading effects and allow vegetation to regrow.
- Construction in Mississippi is required to follow the “Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas”(MDEQ 2012a) and the “Field Manual for Erosion and Sediment Control on Construction Sites in Mississippi” (MDEQ 2005).
- Contractors would be instructed to avoid the clearing of trees and minimize disturbance and compaction in wetlands.
- Green House Gas Emissions
  - Shut down idling construction equipment, if feasible.
  - Locate staging areas as close to construction sites as practicable to minimize driving distances between staging areas and construction sites.
  - Encourage the use of the proper size of equipment for the job to maximize energy efficiency.
  - Encourage the use of alternative fuels or power sources for generators at construction sites, such as propane or solar power, or use electrical power where practicable.
- Noise
  - Piling driving will be completed with a vibratory hammer, which would minimize noise impacts.
  - Every effort would be made to minimize the time required for pile installation.
  - All vessels associated with the construction project shall operate at “no wake/idle” speeds at all times and in all water depths where the draft of the vessel provides less than a 4-ft. clearance from the bottom.
  - Construction contractors would preferentially follow deep-water routes (e.g., marked channels) whenever possible.
  - If marine mammals are seen, all work (pile driving) would cease until the animal has left the project area.
  - The Trustee, or designee, would have monitors onsite during pile installation to ensure that these conditions are met.
- Flora and Fauna
  - Construction of the boardwalk to allow penetration by sunlight would reduce shading effects and allow vegetation to regrow.
  - The Trustee would identify and also avoid pocket beaches to the maximum extent practicable in the design of the project.
- Marine Mammals
  - Establishment of Shut-Down Zone: The calculated radius for the 120 dB rms/Level B harassment zone (i.e., distance from driven pile to area where harassment would no longer be expected to occur) is 1,585 m. The area defined by this radius in all relevant directions from the pile driving activity will comprise the shut-down zone. Shut-down of pile driving activity would occur immediately upon observation of any marine mammal within or approaching this zone.
  - Visual Monitoring and Shut-down of Pile Driving Activities: The shut-down zone will include all areas where underwater sound pressure levels are anticipated to equal or exceed the 120 dB threshold, as described under "Establishment of Shut-Down Zone."

Qualified observers will monitor these zones and advise project personnel when delay or shut-down of pile driving activities is required. The shut-down zone will be monitored for the presence of marine mammals before, during, and after any pile installation activity, beginning 15 minutes prior to initiating the start of pile installation and continuing for 15 minutes following the completion of pile installation. If marine mammals are present within the shut-down zone prior to pile installation, the start of pile installation will be delayed until the animals voluntarily leave the shut-down zone and have been visually confirmed beyond the zone, or until 15 minutes have elapsed without redetection. Shutdown of pile driving activities will occur if any marine mammal enters or approaches the established zone, and will not resume until the animal has voluntarily moved beyond the relevant shut-down zone radius, either through visual confirmation or by waiting until 15 minutes has elapsed without redetection.

- Qualified biologists will be present on site at all times during pile driving activities. The action area will be monitored by at least three observers during vibratory pile driving. One will be based on land; two will be on vessels traveling along and within the radius while visually scanning the area.
- Monitoring of the shut-down zone will be conducted using binoculars, spotting scopes and visual observations. Each monitor will have a radio for contact with other monitors or work crews. A GPS unit, range finder, or other suitable methodology will be used for determining the observation location and distance to marine mammals, vessels, and construction equipment.
- No pile driving will occur in low-light conditions, or when visibility is impaired such that the shut-down zone cannot be effectively monitored. Pile driving will only be conducted between one-hour post-sunrise through one hour prior to sunset. If waters exceed small craft advisories or conditions otherwise restrict biologists' ability to make observations or become unsafe for the observation boat to operate, pile installation will cease until conditions allow for monitoring to resume.
- Protected Species
  - If possible, complete the in-water work when manatees are not expected to be present, i.e., when water temperatures are below 68F. If timing restrictions are not feasible, then conditions A-D of the Standard Manatee Conditions for In-water Work, 2011, shall be followed when operating vessels or doing in-water work construction.
  - If protected species enter the construction area, construction would be halted until the individual(s) leave the project area.
- Migratory Birds
  - If activities require tree removal pre-construction surveys will be completed. If evidence of nesting is found, coordination with the USFWS would be initiated to develop and implement appropriate conservation measures.
- Essential Fish Habitat
  - Anchoring and mooring will be restricted to impacted areas. Work barges would be moored for overnight and weekends/holidays in areas where previous impacts have occurred (deployment areas).

- Vibratory hammers are considered a minimization measure to decrease injury and behavior modification to fish and cetaceans. The project will use this method to install pilings for piers.
- Monitoring will be conducted before, during, and after project implementation to ensure compliance with project design.
- Structures will be designed to minimize shading impact to tidal and non-tidal wetland grasses.
- Appropriate BMPs will be employed to minimize impacts associated with the parking areas and during construction.
- Invasive Species
  - All non-native species removed during clearing and grubbing would be properly handled to prevent spreading into other areas on the project site. Proper handling could include bagging, mulching, or burning removed vegetation to prevent regrowth.
- Tourism and Recreational Use
  - Access to certain areas may be restricted during construction of each project feature.

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## ATTACHMENT C

seeds, vegetation, insects (especially ants and snails), and other species in order to prevent introduction of invasive species.

- Native vegetation will be used for planting. Prior to bringing to vegetation to the site, it will be inspected and “non-target<sup>20</sup>” species will be removed.
- The noise will be generated during daytime hours and is not expected to alter the activities of fauna that utilize the area. Appropriate BMPs will be employed to prevent, mitigate, and control potential impacts from noise.

### 10.3.2.2.3 Measures to Mitigate Impacts to Human Uses and Socioeconomics

- Recycling collection areas will be established for paper, cardboard, aluminum cans and plastic bottles, as appropriate.
  - Increases in solid waste as a result of expected growth will be addressed by appropriate waste collection and maintenance activities.
- Underground utilities will be located prior to any construction activities.
- All construction activities will occur in daytime hours.

### *10.3.2.3 Performance Criteria, Monitoring, and Maintenance*

The project’s restoration objectives are to enhance and increase recreational opportunities as well as the public’s appreciation and awareness of the Gulf of Mexico’s natural resources. Successful completion of the project will enhance public use and enjoyment of these resources. This project includes monitoring efforts to ensure project designs are correctly implemented during construction to meet the stated restoration objectives. Further, the project will be monitored for visitor counts and facility usage at the INFINITY Science Center and its resources. Monitoring will include calculating the number of visitors to the INFINITY Science Center indoor facility/exhibits and the number of visitors using the Heritage Trail-Possum Walk and Outdoor Education Center. Visitation and public use of the facilities and associated amenities will be monitored for five years following completion of construction. The INFINITY Science Center will be responsible for maintaining the Science Center facilities, features, and exhibits.

### **10.3.3 Popp’s Ferry Causeway Park: Project Description**

The project is intended to restore lost recreational opportunities through the enhancement of increased access to coastal estuarine habitats and wildlife viewing areas. The project will enhance the public’s use and/or enjoyment of natural resources by constructing and/or expanding an educational interpretive center, nature trails, piers, and other recreational enhancements that will enhance visitor access to the adjacent coastal estuarine environment and provide opportunities for visitors to fish, crab, and observe nature. Accordingly, the project is intended to replace or provide recreational opportunities comparable to the types of opportunities lost as a result of the Spill (see C.F.R. § 990.54(a) (2) and Sections 6a-6c of the Early Restoration Framework Agreement).

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<sup>20</sup> A non-target species is any species that is present on the species of choice but is not desirable and should be removed.

This project was analyzed for its potential environmental consequences on geology and substrates; hydrology and water quality; air quality and GHGs; noise; living coastal and marine resources; protected species; socioeconomics and environmental justice; aesthetics and visual resources; tourism and recreational use; as well as infrastructure and public health and safety. NEPA analysis of the environmental consequences suggests that while there may be minor adverse impacts to some resource categories, there will be no long-term major adverse impacts as a result of the project. The project will provide long-term benefits by providing enhanced access to coastal resources and educational opportunities in the park, fishing piers, boardwalks, a marsh overlook, and interpretive center. Based on the cumulative impact analysis, the Popp's Ferry Causeway Park project will not substantially contribute to adverse cumulative effects to resources. The Popp's Ferry Causeway Park project, carried out in conjunction with other actions, has the potential to provide long-term beneficial cumulative impacts to socioeconomics, land and marine management, aesthetic and visual resources, tourism and recreation, infrastructure and public health and safety/shoreline protection.

#### ***10.3.3.1 Compliance with Relevant Federal Environmental Laws, Regulations, and Executive Orders***

The Trustees have completed coordination and reviews under the Endangered Species Act, the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, the Magnuson-Stevens Fishery Conservation and Management Act, the Marine Mammal Protection Act, and the National Historic Preservation Act. Consistency reviews of the Phase III early restoration projects in Mississippi were initiated by the Federal Trustees under the Coastal Zone Management Act and have been completed for purposes of finalizing this Early Restoration Plan. Additional reviews may occur during permitting processes required for implementation. The Trustees have initiated consultations under the Clean Water Act and the Rivers and Harbors Act.

#### ***10.3.3.2 Mitigation Measures***

Throughout the design and implementation of this project, every practical attempt will be made to avoid and minimize potentially adverse environmental, social, and cultural impacts. The Trustees agree to implement the following conservation measures and BMPs, which include measures identified during the consultations noted above. Although conservation measures and BMPs are listed under specific resources, they could result in reduced impacts to other resources.

##### **10.3.3.2.1 Measures to Mitigate Impacts to the Physical Environment**

- Construction in Mississippi is required to follow the "Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas" (MDEQ 2012a) and the "Field Manual for Erosion and Sediment Control on Construction Sites in Mississippi" (MDEQ 2005).
- Low-impact lighting will be installed along the waterfront shoreline path.
- To the extent possible, pervious, vegetated treatment areas will be incorporated into the final design to facilitate stormwater storage and treatment throughout the site.
- The current site design has been developed to avoid and minimize impacts on wetlands. Contractors will be instructed to minimize disturbance during construction in wetlands. In addition, the Trustee will adhere to the conditions of the Mississippi Coastal Wetland Protection Act and Clean Water Act permits.

- Dewatering may be required for subsurface work such as utility installation. Water will be discharged to a vegetated pervious area for infiltration. Appropriate BMPs will be used to prevent, control, and mitigate potential impacts.
- To reduce emissions of greenhouse gases, the operators will shut down idling construction equipment, if feasible; locate staging areas as close to construction sites as practicable to minimize driving/travel distances between staging areas and construction sites; encourage the use of the proper size of equipment for the job to maximize energy efficiency; and encourage the use of alternative fuels or power sources for generators at construction sites, such as propane or solar power, or use electrical power where practicable.
- Piling driving will be completed with a vibratory hammer, which will minimize noise impacts.
- Every effort will be made to minimize the time required for pile installation.
- All vessels associated with the construction project shall operate at “no wake/idle” speeds at all times and in all water depths where the draft of the vessel provides less than a 4-ft. clearance from the bottom.
- Construction contractors will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- The Trustee, or designee, will have monitors onsite during pile installation to ensure that conditions are met.

#### 10.3.3.2.2 Measures to Mitigate Impacts to Biological Resources

- Contractors will be instructed to avoid the clearing of trees and minimize disturbance and compaction in wetlands where permitted activities will occur.
- If heavy equipment is necessary for any construction or installation work in sensitive areas, wetland mats and low ground pressure equipment will be used in order to minimize damage.
- Staging for construction will be confined to the site, and the contractor could be directed to stage equipment in areas that have been previously disturbed and that do not contain wetlands.
- Construction of the boardwalk to allow penetration by sunlight will reduce shading effects and allow vegetation to regrow.
- All landscaping work will use native species to the extent possible.
- The Trustee will identify and also avoid pocket beaches to the maximum extent practicable in the design of the project.
- The Trustee, or designee, shall advise all construction personnel regarding the civil and criminal penalties for harming, harassing, or killing West Indian manatees, which are protected under the Endangered Species Act of 1973.
- Establishment of Shut-Down Zone: The calculated radius for the 120 dB rms/Level B harassment zone (i.e., distance from driven pile to area where harassment would no longer be expected to occur) is 1,585 m. The area defined by this radius in all relevant directions from the pile driving activity will comprise the shut-down zone. Shut-down of pile driving activity will occur immediately upon observation of any marine mammal within or approaching this zone.
- Visual Monitoring and Shut-down of Pile Driving Activities: The shut-down zone will include all areas where underwater sound pressure levels are anticipated to equal or exceed the 120 dB

threshold, as described under "Establishment of Shut-Down Zone." Qualified observers will monitor these zones and advise project personnel when delay or shut-down of pile driving activities is required. The shut-down zone will be monitored for the presence of marine mammals before, during, and after any pile installation activity, beginning 15 minutes prior to initiating the start of pile installation and continuing for 15 minutes following the completion of pile installation. If marine mammals are present within the shut-down zone prior to pile installation, the start of pile installation will be delayed until the animals voluntarily leave the shut-down zone and have been visually confirmed beyond the zone, or until 15 minutes have elapsed without redetection. Shutdown of pile driving activities will occur if any marine mammal enters or approaches the established zone, and will not resume until the animal has voluntarily moved beyond the relevant shut-down zone radius, either through visual confirmation or by waiting until 15 minutes has elapsed without redetection.

- Qualified biologists will be present on site at all times during pile driving activities. The action area will be monitored by at least three observers during vibratory pile driving. One will be based on land; two will be on vessels traveling along and within the radius while visually scanning the area.
- Monitoring of the shut-down zone will be conducted using binoculars, spotting scopes and visual observations. Each monitor will have a radio for contact with other monitors or work crews. A GPS unit, range finder, or other suitable methodology will be used for determining the observation location and distance to marine mammals, vessels, and construction equipment.
- No pile driving will occur in low-light conditions, or when visibility is impaired such that the shut-down zone cannot be effectively monitored. Pile driving will only be conducted between one-hour post-sunrise through one hour prior to sunset. If waters exceed small craft advisories or conditions otherwise restrict biologists' ability to make observations or become unsafe for the observation boat to operate, pile installation will cease until conditions allow for monitoring to resume.
- If possible, complete the in-water work when manatees are not expected to be present, i.e., when water temperatures are below 68F. If timing restrictions are not feasible, then conditions A-D of the Standard Manatee Conditions for In-water Work, 2011, shall be followed when operating vessels or doing in-water work construction.
- If protected species enter the construction area, construction will be halted until the individual(s) leave the project area.
- Sea turtle and Smalltooth Sawfish Construction Guidelines (NMFS 2006) shall be followed when operating vessels or doing in-water work construction.
- If activities require tree or shrub removal during the migratory bird breeding season, pre-construction surveys will be completed. If evidence of nesting is found, coordination with the USFWS will be initiated to develop and implement appropriate conservation measures.
- Care will be taken to minimize noise and vibration near areas where foraging or resting birds are encountered. Work will occur during daylight hours only.

- Anchoring and mooring will be restricted to impacted areas. Work barges will be moored for overnight and weekends/holidays in areas where previous impacts have occurred (deployment areas).
- Vibratory hammers are considered a minimization measure to decrease injury and behavior modification to fish and cetaceans. The project will use this method to install pilings for piers.
- Monitoring will be conducted before, during, and after project implementation to ensure compliance with project design.
- Structures will be designed to minimize shading impact to tidal and non-tidal wetland grasses.
- Appropriate BMPs will be employed to minimize impacts associated with the parking areas and during construction.
- All non-native species removed during clearing and grubbing will be properly handled to prevent spreading into other areas on the project site. Proper handling could include bagging, mulching, or burning removed vegetation to prevent regrowth.
- All equipment to be used during the project, including personal gear, will be inspected and cleaned prior to being brought to the site such that there is no observable presence of mud, seeds, vegetation, insects (especially ants and snails), and other species, in order to prevent introduction of invasive species.
- During operation and management of the facilities, native vegetation will be used for planting. Prior to bringing vegetation to the site, the vegetation will be inspected and “non-target<sup>21</sup>” species will be removed.
- The Trustees will conduct environmental compliance monitoring to ensure that all BMPs are implemented properly, the intent of the BMPs is achieved, and no unanticipated effects occur to fish and wildlife resources. Compliance monitoring results will be made available to the public.

#### 10.3.3.2.3 Measures to Mitigate Impacts to Human Uses and Socioeconomics

- Due to safety concerns, access to certain areas may be restricted during construction of each project feature.

#### *10.3.3.3 Performance Criteria, Monitoring, and Maintenance*

Successful completion of the project will meet the project’s restoration objective to enhance recreational opportunities as well as provide access for enhanced appreciation and awareness of the surrounding natural resources impacted by the Spill. The Trustees will incorporate monitoring efforts to ensure project designs are correctly implemented. Additionally, the Trustees will monitor public use of the project and associated features for recreational activities and access to the natural resources. Monitoring will include visitor counts to reflect the number of visitors to the project during monitoring a five year period upon completion of construction. The monitoring period will conclude five years after the completion of construction. The City of Biloxi will be responsible for maintenance of the Popp’s facilities, features, and exhibits.

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<sup>21</sup> A non-target species is any species that is present on the species of choice but is not desirable and should be removed.

# ATTACHMENT D

## MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

### RELEASE OF CLAIMS

MDEQ Agreement Number 15-00068

WHEREAS, by the terms of the above-identified agreement stated in Section 6.D, Final Payment, entered into by the Mississippi Department of Environmental Quality and the Grantee, the City of Biloxi, Mississippi, it is provided that after completion of all work, and prior to final payment, the Grantee will furnish the Mississippi Department of Environmental Quality with a release of all claims.

NOW, THEREFORE, in consideration of the above premises and the payments by the Mississippi Department of Environmental Quality to the Recipient pursuant to the above referenced agreement, the Grantee hereby remises, releases, and forever discharges the Mississippi Department of Environmental Quality, its officers, agents, contractors and employees, of and from all manner of debts, dues, liabilities, obligations, accounts, claims, and demands whatsoever, in law and equity, under or by virtue of the said agreement.

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Typed/Printed Name

\_\_\_\_\_  
Title

REPORT DATE RANGE  
(MM/DD/YR - MM/DD/YR)

### Project Information

Official Project Title

Contact Information

Name (Project Coordinator)	Christy LeBatard		
Title	Acting City Engineer		
Organization	City of Biloxi		
City	Biloxi	State	MS
Email	clebatard@biloxi.ms.us	Phone	228-435-6271

Change of Project Coordinator?

Name (Financial Coordinator)	If Different From Project Coordinator		
Title	<input type="text"/>		
Organization	<input type="text"/>		
City	<input type="text"/>	State	<input type="text"/>
Email	<input type="text"/>	Phone	<input type="text"/>

Change of Financial Coordinator?

REPORT DATE RANGE  
(MM/DD/YR - MM/DD/YR)

## Project Activities

Provide the requested information for activities conducted during the reporting period. Each component should be reported on at least once each period. If no activity occurred for a component, please select "No Activity". Multiple activity types for a single component should be reported on separately, i.e. if construction on the boardwalk began during the same reporting period that the contract for construction of the boardwalk was awarded, then there should be two "Component Title" entries for the boardwalk with one activity reported on under each entry. When an activity is reported as "Complete" the activity may be excluded from future reports.

Activities Conducted This Reporting Period	Component Title (i.e. parking lot, kayak stand, boardwalk, interpretive center, etc.)	Enter a Single Component Title	
	Activity Type		
	Activity Status		Date Complete
	Activity Description		
	Component Title (i.e. parking lot, kayak stand, boardwalk, etc.)	Enter a Single Component Title	
	Activity Type		
	Activity Status		Date Complete
	Activity Description		
		Add Activity	Delete Activity

**Critical Issues/Delays**  
(describe any anticipated or actual issues and/or delays, i.e. weather delays, shortage of materials, manufacturing complications, etc.)

**Construction Deficiencies/ Remedial Actions**  
(describe any anticipated or actual deficiencies and resulting remedial actions, i.e. improper use of materials, out of sequence work, etc.)

## Project Activity Definitions

### Planning Activities:

- **Permitting and Consultations:** Activities that meet regulatory compliance guidelines. "Date Complete" for permitting/consultation activities should be the date the permit/consultation was approved/finalized. A "Date Complete" is required if a status of "Complete" is selected.
- **Engineering and Design:** Activities that involve the planning of the engineering and the designing of the project. A "Date Complete" is required if a status of "Complete" is selected.
- **Bid Packages and Contract Award for Engineering and Design:** Activities that relate to contracting for engineering and design of the project including issuing a RFP, RFQ, public notice, receipt of bids, award of contracts, execution of contracts, etc. "Date Complete" for "Public Submittal of Bid Packages and Contract Award for Engineering and Design" may be the date of the announcement of the winning bid, the date of execution of the contract, etc. A "Date Complete" is required if a status of "Complete" is selected.

### Execution Activities:

- **Construction:** Activities related to construction. "Date Complete" for construction activities should be the date the construction activity was completed on site. A "Date Completed" is required if a status of "Complete" is selected.
- **Bid Packages and Contract Award for Construction:** Activities that relate to contracting for construction or implementation of the project including issuing a RFP, RFQ, public notice, receipt of bids, award of contracts, execution of contracts, etc. "Date Complete" for "Public Submittal of Bid Packages and Contract Award for Construction" may be the date of the announcement of the winning bid, the date of execution of the contract, etc. A "Date Complete" is required if a status of "Complete" is selected.
- **As-Built/Construction Monitoring:** Monitoring activities that occur post construction, including construction monitoring for meeting contract specifications, but are still part of the contract/construction process (as distinguished from Performance Monitoring). "Date Completed" for this type of monitoring should be the day in which contract/construction execution monitoring is finished. A "Date Complete" is required if a status of "Complete" is selected.

### Post-Execution Activities:

- **Performance Monitoring** Activities that are inclusive of performance monitoring or project related additional monitoring. Performance Monitoring is the evaluation of effectiveness of the project in meeting the established restoration objectives and assist in determining the need for corrective actions. A "Date Complete" is required if a status of "Complete" is selected.
- **Operations and Maintenance:** Activities conducted during the project life related to the routine, preventative, predictive, scheduled, and unscheduled actions that aim to (1) keep the project working as intended and/or (2) prevent equipment failure or decline of constructed facilities, infrastructure, or other mechanically-oriented projects with the goal of increasing efficiency, reliability, and safety. These activities include any related administrative and technical actions.
- **Corrective Actions:** Adjustments to the project during the post-execution phase to meet performance criteria or to bring the project into compliance with the terms of the grant agreement. A "Date Complete" is required if a status of "Complete" is selected.

# ATTACHMENT F

## SYSTEMS AND PROCESSES FOR FINANCIAL MANAGEMENT RECOMMENDATIONS AND/OR CORRECTIVE ACTION PLAN

An evaluation for the assessment of uncontrolled risks of the GRANTEE's systems and processes for financial management was performed as of part of the initial award process by MDEQ, acting on behalf of the State of Mississippi, as administrator of this grant agreement. No corrective action is required to the GRANTEE's systems and processes at the time of this award. MDEQ requires the GRANTEE provide the following information to MDEQ as part of recommendations made during the evaluation:

1. GRANTEE agrees to provide MDEQ with a copy of their annual audited financial statements within 60 days of the report release date throughout the project performance period.
2. GRANTEE agrees to promptly notify MDEQ of any significant changes made to the GRANTEE's current policies and procedures that would impact financial management systems and processes, specifically those communicated as part of the evaluation, from which the current residual risk levels were derived.
3. GRANTEE agrees to promptly notify MDEQ of any level of fraud or abuse discovered within the organization without regard to materiality that is related to the operation of the Popp's Ferry Causeway Park Project, as well as other pervasive deficiencies identified for grant management practices from any source, both external and internal, throughout the project performance period.
4. If deficiencies, significant deficiencies and/or material weaknesses are reported to the GRANTEE, as part of any assurance, attestation, or monitoring engagement during the project performance period, GRANTEE agrees to provide its response(s) and/or corrective action plan(s) to MDEQ so that prompt action can be taken by MDEQ to mitigate any elevated level of uncontrolled risk that could potentially impact MDEQ's or the GRANTEE's ability to comply with grant and/or award requirements.
5. GRANTEE agrees to promptly notify MDEQ of the management company(s) selected for the proposed concession, kayak rental, and bait shop operations, including the terms of the agreement(s) and any liability assumed by the GRANTEE from these operations.

# ATTACHMENT G

## MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY REQUEST TO SUBCONTRACT

MDEQ Agreement Number 15-00068

In accordance with Section 28.B, Anti-Assignment/Subcontracting, of the above-referenced contract, the City of Biloxi, Mississippi requests approval to subcontract the following portion or duties under the Agreement to \_\_\_\_\_  
("SUBCONTRACTOR"):

Define task(s)/work to be subcontracted:

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Subcontractor FEIN/Tax ID: \_\_\_\_\_

GRANTEE:

Subcontractor:

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\_\_\_\_\_  
Authorized Signature of GRANTEE

\_\_\_\_\_  
Authorized Signature of Subcontractor

\_\_\_\_\_  
Printed Name/Title

\_\_\_\_\_  
Printed Name/Title

Approved By:

\_\_\_\_\_  
Mississippi Department of Environmental Quality  
Gary C. Rikard  
Executive Director

Debarment List

\_\_\_\_\_  
Initial                      Date

For Contracts Office Use Only

**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY**

**STATE OF MISSISSIPPI  
COUNTY OF HINDS**

**MDEQ AGREEMENT NO. 15-00068**

**AMENDMENT NO. 1 TO EARLY RESTORATION GRANT AGREEMENT**

Amendment No. 1 to Early Restoration Grant Agreement (this "Amendment") is by and between the Mississippi Department of Environmental Quality ("MDEQ") and the City of Biloxi, Mississippi ("Grantee", and together with MDEQ, the "Parties", and each, a "Party").

WHEREAS, the Parties have entered into an Early Restoration Grant Agreement, dated as of August 10, 2015 (the "Existing Agreement"); and

WHEREAS, the Parties hereto desire to amend the Existing Agreement to revise the insurance and bonding requirements on the terms and subject to the conditions set forth herein.

NOW, THEREFORE, in consideration of the premises set forth above and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Definitions. Capitalized terms used and not defined in this Amendment have the respective meanings assigned to them in the Existing Agreement.

2. Amendments to the Existing Agreement. As of the Effective Date (defined below), Section 19, Insurance and Bonding, of the Existing Agreement is hereby amended in its entirety to read as follows:

A. *Fidelity Bonds*. Grantee shall bond its agents and employees who receive, deposit or have access to the Funds to protect against losses required by State law.

B. *Grantee Insurance*. Grantee, to the extent that Grantee is performing any of the Work apart from any third-party Contractor, shall maintain builders risk coverage for the Project to the extent reasonably available, shall continue to maintain its general property and liability insurance presently in force through the Municipal Services Company or other private carrier in limits acceptable to MDEQ, and shall maintain workmen's compensation insurance in accordance with State law. To the extent that the Project would be insurable under Grantee's existing commercial property and general liability insurance, the improvements being constructed shall be added to and covered under any such policies.

C. **Contractor Insurance.** Grantee agrees that any Contractor hired by the Grantee for the performance of the Work, shall meet all insurance standards as established by the MDEQ including but not limited to the following:

- i. **Workers' Compensation / Employer's Liability Insurance.** Liability limits shall not be less than the required statutory limits for workers' compensation and employer's liability limits in the amount of \$1,000,000.
- ii. **Commercial Property and General Liability Insurance.** This insurance shall include bodily injury, property damage, contractual and other standard coverage contained in commercial property and general liability insurance policies in an amount of not less than \$1,000,000 per occurrence and \$2,000,000 aggregate.
- iii. **Motor Vehicle Insurance.** Grantee shall require Contractor to provide proof of motor vehicle insurance on any and all vehicles to be used by the Contractor in the performance of the Work having limits of liability not less than \$1,000,000 combined single limit.

D. On all of the insurance coverage required in this Section 19, MDEQ, its Commissioners, Board Members, officers, employees, agents, and representatives, and the State of Mississippi shall be named as additional insureds or loss payee as the situation on such policies as the circumstances may require and as allowed by law. Grantee shall provide that the insureds thereon waive subrogation against the State of Mississippi and MDEQ. It is agreed between the parties (and their respective insurers) that Grantee's respective policies shall provide primary coverage before any applicable policy otherwise covering MDEQ, and any insurance covering MDEQ shall be excess coverage over Grantee's coverage. Endorsements so stating shall be provided by Grantee. The policies shall also provide for all additional insureds to be provided with a minimum 30-day written notice prior to a cancellation or modification of each respective policy. While Grantee shall provide MDEQ with endorsements as set forth in this paragraph, the failure to do so, or the failure of the endorsements or insurance provided to conform to the Agreement, does not constitute waiver or estoppel as to MDEQ of their respective legal and equitable rights, including but not limited to, the right to enforce the terms of the Agreement. These contractual insurance provisions are intended to be, and shall be interpreted to be, separate and independent contractual obligations from the contractual provisions addressing the indemnity of MDEQ by Grantee. Upon execution of the Agreement, Grantee shall promptly furnish MDEQ with certificates of insurance showing the Grantee compliance with the insurance provisions of this paragraph.

3. **Limited Effect.** Except as expressly provided in this Amendment, all of the terms and provisions of the Existing Agreement are and will remain in full force and effect and are hereby ratified and confirmed by the Parties. Without limiting the generality of the foregoing, the amendments contained herein will not be construed as an amendment to or waiver of any other provision of the Existing Agreement or as a waiver of or consent to any further or future action on the part of either Party that would require the waiver or

consent of the other Party. On and after the Effective Date, each reference in the Existing Agreement to "this Agreement," "the Agreement," "hereunder," "hereof," "herein" or words of like import will mean and be a reference to the Existing Agreement as amended by this Amendment.

4. Miscellaneous.

(a) This Amendment is governed by, and construed in accordance with, the laws of the State of Mississippi, without regard to the conflict of laws provisions of such State.

(b) The headings in this Amendment are for reference only and do not affect the interpretation of this Amendment.

(c) This Amendment may be executed in counterparts, each of which is deemed an original, but all of which constitutes one and the same agreement. Delivery of an executed counterpart of this Amendment electronically or by facsimile shall be effective as delivery of an original executed counterpart of this Amendment.

(d) This Amendment constitutes the sole and entire agreement of the Parties with respect to the subject matter contained herein, and supersedes all prior and contemporaneous understandings, agreements, representations and warranties, both written and oral, with respect to such subject matter.

[SIGNATURES ON FOLLOWING PAGE(S)]

IN WITNESS WHEREOF, the undersigned Parties have executed and delivered this Grant Agreement, effective as of the date of execution by all Parties (the "Effective Date").

**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY**



\_\_\_\_\_  
Gary C. Rikard  
Executive Director

\_\_\_\_\_  
3/16/16  
Date

**CITY OF BILOXI, MISSISSIPPI**



\_\_\_\_\_  
A.M. Gilich, Jr.  
Mayor

\_\_\_\_\_  
9/18/15  
Date