

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
MISSISSIPPI STATE EXPENDITURE PLAN
2019 AMENDMENT

Submitted Pursuant to the
Oil Spill Impact Component of the RESTORE Act
33 U.S.C. § 1321(t)(3)

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Introduction

Projects, and corresponding project details/provisions, approved in the Mississippi State Expenditure Plan (MSEP) and the Mississippi State Expenditure Plan 2017 and 2018 Amendments remain in full force and effect to the extent not modified in this MSEP 2019 Amendment.

Overview of the Oil Spill

On or about April 20, 2010, the mobile offshore drilling unit Deepwater Horizon, which was being used to drill a well for BP Exploration and Production, Inc. (BP) in the Macondo prospect (Mississippi Canyon 252 – MC252), experienced an explosion, caught fire, and subsequently sank in the Gulf of Mexico (the Gulf). This incident resulted in the discharge of oil and other substances into the Gulf from the rig and the submerged wellhead. The Deepwater Horizon oil spill (Spill) is the largest maritime oil spill in U.S. history. The Spill discharged millions of barrels of oil over a period of 87 days. In addition, well over one million gallons of dispersants were applied to the waters of the Spill area in an attempt to disperse the spilled oil. An undetermined amount of natural gas was also released to the environment as a result of the Spill. After several failed attempts to stop the release of oil, the well was declared “sealed” on September 19, 2010.

As a result of civil and criminal settlements with the parties responsible for the Spill, the State of Mississippi (Mississippi) has and will continue to receive funding from several sources to restore or benefit the natural resources or the economy of Mississippi, including, but not limited to funding received through the following: (1) the Oil Pollution Act of 1990 (OPA) and the corresponding Natural Resource Damage Assessment (NRDA); (2) the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act); and (3) the National Fish and Wildlife Foundation (NFWF) Gulf Environmental Benefit Fund (GEBF).

The Executive Director of the Mississippi Department of Environmental Quality (MDEQ) is the designated natural resource trustee under OPA and the Governor’s designee for the RESTORE Act and NFWF GEBF for the State of Mississippi.

RESTORE Act

On July 6, 2012, the President signed into law the RESTORE Act, Subtitle F of Public Law 112-141. The RESTORE Act makes available 80% of the Clean Water Act (CWA) civil and administrative penalties paid by the responsible parties for the Spill (i.e., BP and Transocean) for programs, projects and activities that restore and protect the environment and economy of the Gulf Coast region through the Gulf Coast Restoration Trust Fund established in the U.S. Department of the Treasury (Treasury). Within the RESTORE Act, there are five funding components (commonly referred to as “buckets”), which make funds available to each of the Gulf States in accordance with certain legal parameters. These components are:

- Direct Component (Bucket 1)
- Comprehensive Plan Component (Bucket 2)
- Oil Spill Impact Component (Bucket 3)
- National Oceanic and Atmospheric Administration (NOAA) Science Program (Bucket 4)
- Centers of Excellence Research Grants Program (Bucket 5)

The Oil Spill Impact Component, also referred to as Bucket 3, accounts for 30% of the funds available in the Gulf Coast Restoration Trust Fund. In accordance with the requirements of the RESTORE Act and as set out in the allocation regulation at 40 C.F.R. § 1800.500, the state of Mississippi will receive 19.07% of the 30% allocation of the Oil Spill Impact Component. The amount currently available to Mississippi under the Oil Spill Impact Component is approximately \$80 Million. The RESTORE Act requires Mississippi,

through MDEQ, to prepare a Mississippi State Expenditure Plan (MSEP) describing each activity, project, or program for which Mississippi seeks funding under the Oil Spill Impact Component.

As defined in 31 C.F.R. § 34.503, the MSEP includes a narrative description for each activity, project, or program for which Oil Spill Impact Component funding is being sought. The narrative description for each activity in the MSEP contains the following information:

- The need, purpose, and objectives of the activity;
- How the activity is eligible for funding and meets all requirements of § 34.203 and § 34.503;
- Location of the activity;
- Budget for the activity;
- Milestones for the activity;
- Projected completion dates for the activity;
- Criteria MDEQ will use to evaluate the success of each activity in helping restore and protect the Gulf Coast Region;
- If funding has been requested from other sources, including other components of the Act, the plan identifies the source, states how much funding was requested, and provides the current status of the request;
- How the activities in the plan contribute to the overall economic and ecological recovery of the Gulf Coast; and
- How each activity that would restore and protect natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, coastal wetlands or the economy of the Gulf Coast, is based on the best available science.

New and/or amended MSEP(s) may be written as additional funds become available and as additional projects are identified for funding.

Eligible Activities for the Oil Spill Impact Component

The RESTORE Act dedicates 80% of any civil and administrative penalties paid under the Clean Water Act by responsible parties in connection with the Deepwater Horizon oil spill to the Gulf Coast Ecosystem Trust Fund or ecosystem restoration (environmental), economic recovery, and tourism promotion in the Gulf Coast region. The RESTORE Act differs from other restoration funding sources (i.e., NFWF, NRDA) in that it specifically allows and anticipates that restoration projects will be developed for the restoration of natural resources and the restoration of the economy, both of which were affected as a result of the Spill.

The eligible activities for the Oil Spill Impact Component cover both ecological and economic projects. The RESTORE Act defines eligible activities for which the Oil Spill Impact Component funds may be used. The eligible activities, projects, and programs as defined in 31 C.F.R. § 34.203 are:

1. Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches and coastal wetlands of the Gulf Coast Region;
2. Mitigation of damage to fish, wildlife, and natural resources;
3. Implementation of a federally-approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring;
4. Workforce development and job creation;
5. Improvements to or on state parks located in coastal areas affected by the Deepwater Horizon Oil Spill;
6. Infrastructure projects benefitting the economy or ecological resources, including port infrastructure;
7. Coastal flood protection and related infrastructure;
8. Planning assistance;

9. Administrative costs;
10. Promotion of tourism in the Gulf Coast Region, including recreational fishing; and
11. Promotion of the consumption of seafood harvested from the Gulf Coast Region.

Designated State Entity

The State of Mississippi, Office of the Governor, is the entity designated under the Oil Spill Impact Component of the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act) to develop the required State Expenditure Plan. The Office of the Governor appointed Gary C. Rikard, the Executive Director of the Mississippi Department of Environmental Quality, as his appointee.

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Section I: State Certification of RESTORE Act Compliance

Certifications of RESTORE Act Compliance

The Mississippi Department of Environmental Quality hereby certifies to the following:

- Pursuant to the RESTORE Act, 33 U.S.C. § 1321(t)(3)(B)(i)(I), the MSEP includes projects, programs, and activities which will be implemented within the Gulf Coast Region and are eligible for funding under the RESTORE Act.
- Pursuant to the RESTORE Act, 33 U.S.C. § 1321(t)(3)(B)(i)(II), the projects, programs, and activities in the MSEP contribute to the overall economic and ecological recovery of the Gulf Coast.
- Pursuant to the RESTORE Act, 33 U.S.C. § 1321(t)(3)(B)(i)(III), the MSEP takes into consideration and is consistent with the goals and objectives of the Comprehensive Plan adopted by the RESTORE Council.
- Pursuant to the RESTORE Act, 33 U.S.C. § 1321(t)(2)(B)(i), the projects and programs that would restore and protect the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, coastal wetlands, and economy of the Gulf Coast included on the MSEP will be based on the best available science as defined by the RESTORE Act.
- Pursuant to the RESTORE Act, 33 U.S.C. § 1321(t)(3)(B)(ii), not more than 25% of the funds will be used for infrastructure projects for the eligible activities described in 33 U.S.C. § 1321(t)(1)(B)(i)(VI-VII).
- Issues crossing Gulf State boundaries have been evaluated to ensure that a comprehensive, collaborative ecological and economic recovery is furthered by the MSEP.

Process Used to Verify Compliance

The development of the MSEP involves a series of activities that create an iterative process while maintaining transparency to stakeholders, and are designed to achieve the following criteria:

- Identify eligible projects, programs and activities for inclusion on the MSEP;
- Ensure that eligible projects, programs and activities included on the MSEP contribute to overall ecological and economic recovery of the Gulf Coast;
- Ensure the MSEP takes into consideration and is consistent with the goals, objectives and commitments of the RESTORE Council's Comprehensive Plan; and
- Promote funded projects to be as successful and sustainable as possible.

In 2016 and 2017, Mississippi's MSEP planning effort included five phases:

- Phase 1: Establishing a Foundation
- Phase 2: Project Contribution, Benefit, and Coordination
- Phase 3: Project Filtering
- Phase 4: Project Vetting
- Phase 5: Project Selection and MSEP development

This five-phase process, and the engagement and input derived from it, was used as the foundation for development of the 2018 MSEP Amendment and this 2019 MSEP Amendment.

Since 2016, MDEQ has solicited feedback specific to the development of the MSEP. Engagement with a wide range of stakeholders, including private citizens, non-governmental organizations, business owners, elected officials, and other community leaders, which has informed the priorities for restoration. The priorities identified during Phase I and Phase II planning activities for the 2016 and 2017 MSEPs were the following:

- **Goals: Restore** Water Quality and Restore and Revitalize the Economy. Projects should contribute to both water quality and economic goals.
- **Contributions:** Projects should contribute towards improving marine ecosystems and/ or decrease water pollution.
- **Benefits:** All projects should promote ecosystem health.
- **Consideration:** Community resilience for all proposed and existing projects.

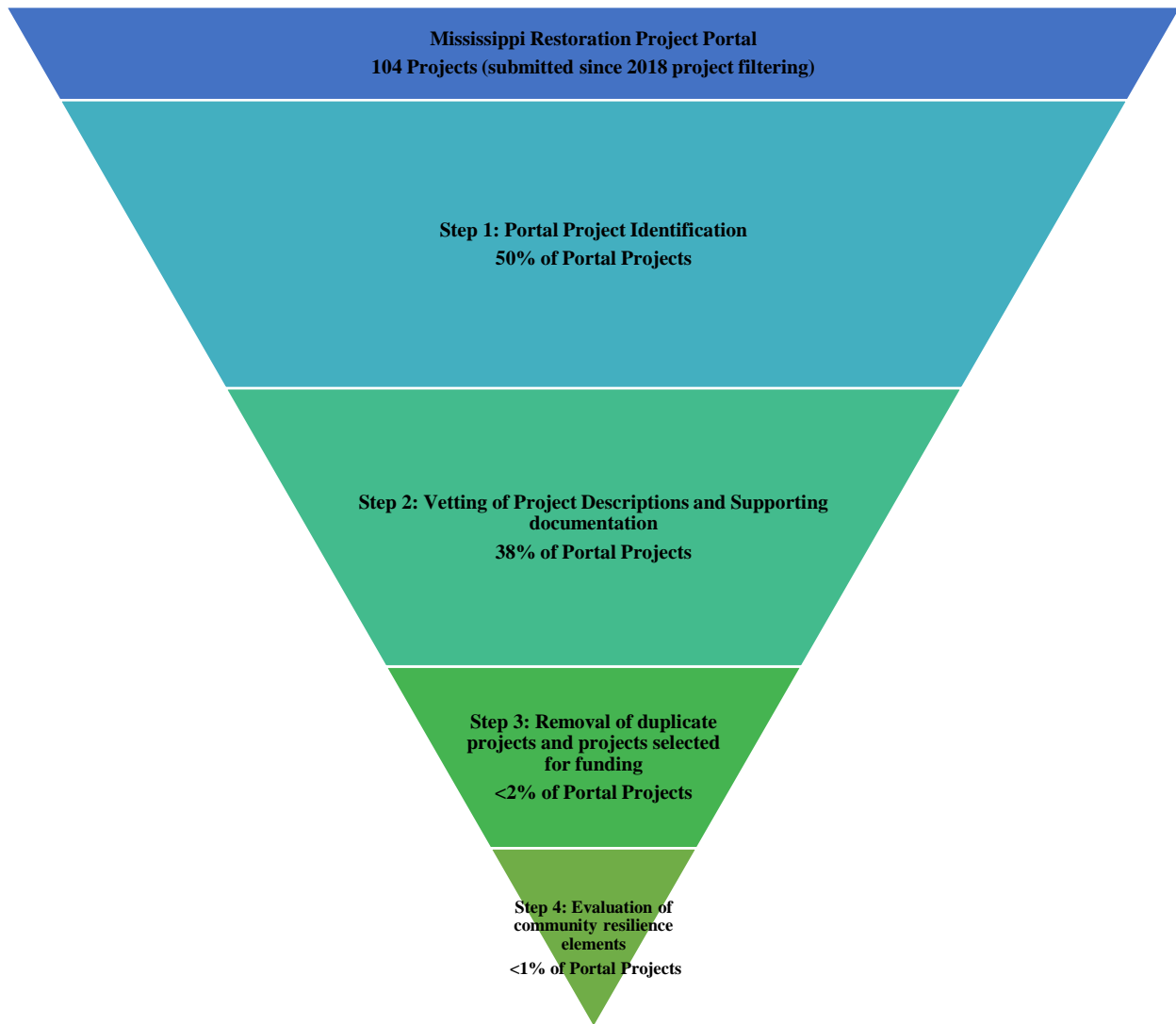
In the development of the 2018 MSEP Amendment, MDEQ received input from stakeholders that reaffirmed the priorities of water quality, restoring and revitalizing the economy, and community resilience. Stakeholders also requested that the focus on enhancing “Community Resilience” be a priority rather than just a consideration.

2019 Results of the Process Used to Verify Compliance

As planning commenced for the 2019 MSEP Amendment, MDEQ solicited additional stakeholder input, which began at the 2018 Restoration Summit. MDEQ stakeholder engagement has indicated that the priorities have not changed, reaffirming the priorities of water quality, restoring and revitalizing the economy, and community resilience.

MDEQ conducted the 2019 planning and project review process similar to the 2018 MSEP Amendment development process since the priorities mentioned above have remained the same as indicated by stakeholder engagement for this MSEP. The 2019 planning and project review process included reviewing all portal projects submitted between June 14th, 2018 and September 15th, 2019. The project filtering process is represented in the following table and figure:

Process	Factors Considered
Step 1: Portal Project Identification	Whether a project was identified as a community resilience activity; and/or prioritized community resilience as either a primary or secondary goal.
Step 2: Vetting of project descriptions	Evaluation of project description and supporting documentation to determine whether a project supports Community Resilience as a goal and activity classification.
Step 3: Duplicate projects and existing projects already selected for funding	Whether a project or program description was already selected for funding.
Step 4: Evaluation of community resilience project elements	Determine whether a project element promoted community resilience and, if implemented, would improve marine ecosystems, promote ecosystem health, and/ or decrease water pollution.



Following the project filtering process, remaining project ideas were evaluated for eligibility under the Oil Spill Impact Component; specifically: 1) eligibility of proposed activities with requirements of the RESTORE Act; and 2) review of proposed activity against applicable regulations, federal law compliance and OMB guidance. Additionally, preliminary environmental compliance requirements were considered. The remaining project conformed to eligibility requirements.

As a result of the above filtering process, the following project remained and has been selected for funding:

Mississippi Beachfront Resilience

- This is a new project for the 2019 MSEP Amendment. The purpose of this project is to enhance the resiliency of Mississippi Gulf Coast beaches by installing native plants and sand fencing to facilitate the formation of dune systems which will effectively mitigate beach erosion, as well provide additional boardwalk to the boardwalk system in order to mitigate sand migration.

Additionally, the following two previously approved projects, which were selected in previous MSEP Amendments, are being amended to include additional funding based on overall program needs exceeding currently allocated funding to continue to support the restoration priorities the projects assist with fulfilling:

Beneficial Use of Dredge Material for Marsh Creation and Restoration in Mississippi

- This program was approved on the 2018 MSEP Amendment. The purpose of this project is to provide resilience to Mississippi's coastal marsh ecosystem by supporting the state of Mississippi's existing program for the beneficial use of dredged material, which maximizes marsh creation and restoration from dredging projects within Hancock, Harrison, and Jackson Counties.

Mississippi Gulf Coast Water Quality Improvement Program

- The Mississippi Gulf Coast Water Quality Improvement Program was initially approved on the initial MSEP and funding was added on the 2017 MSEP Amendment (\$49 million total MSEP funding). The program was identified through the 2018 filtering process as a project for the addition of resilience elements.

Section II: Public Participation Statement

There were multiple phases of public engagement for the 2019 MSEP Amendment in order to gather the appropriate public participation necessary to conform with the public participation requirements outlined in 31 C.F.R. § 34.503(g). In accordance with 31 C.F.R. § 34.503(g), the MSEP will be available for public review and comment for a minimum of forty-five (45) days. Each activity on the MSEP will only be adopted after consideration of all meaningful input. MDEQ made the MSEP available for public comment and review in a manner that is consistent with other MDEQ-administered public comment periods related to the Deepwater Horizon oil spill.

Section III: Financial Integrity

On behalf of the State of Mississippi, MDEQ understands its fiduciary responsibilities under the RESTORE Act and is committed to maintaining the highest level of fiscal accountability and transparency to assure the public and Congress that funds have been managed appropriately to further the purposes of the RESTORE Act. These responsibilities include RESTORE Act project administration functions, such as maintaining financial records and ensuring complete and accurate reporting through project oversight. MDEQ's financial system was developed around the basic principles of sound financial management. These principles are internationally accepted accounting and financial management practices recognized worldwide by leading public and private sector organizations. The basic principles of sound financial management include, among others, principles of transparency, internal checks and balances, and independent external auditing.

Transparency – MDEQ is committed to maintaining transparency with the public and to reporting on RESTORE Act projects, programs, and activities.

Internal checks and balances – To maintain effective controls, MDEQ properly segregates duties among state personnel performing financial functions for RESTORE Act projects, programs, and activities.

Independent external auditing – All state agencies are subject to annual audits to be conducted by the Office of the State Auditor or its contracted designee as prescribed by state law. Agency audits are performed at the fund level in conjunction with the State Auditor's annual audit of the State's Comprehensive Annual Financial Report (CAFR).

These principles of sound financial management are designed to:

- Prevent corruption and reduce or eliminate financial risk and loss;
- Ensure that funds are spent in accordance with the respective grant awards, state law and federal law, as applicable;
- Ensure that personnel responsible for implementing the activities in the project work plans have the resources needed to support the job; and
- Assist state personnel in spending funds efficiently and effectively and report expenditures accurately.

MDEQ is responsible for:

- Fiscally managing and safeguarding RESTORE Act project funds;
- Disbursing funds to sub-recipients in a timely manner for reimbursement of eligible project expenditures;
- Keeping accurate and up-to-date records of all financial transactions related to project activities;
- Providing accurate financial reports as requested or required;
- Assisting state personnel with financial planning, budgeting, monitoring, and evaluation; and
- Assisting state personnel in understanding and complying with financial policies and procedures needed to ensure efficient and effective stewardship of RESTORE Act funds.

Effective financial operations depend on clear policies and procedures for different areas of activity, such as:

- Cash management policies (e.g., project budgets, requests for funds, and disbursement of funds);
- Personnel policies;
- Policies regarding delegation of signature authority for expenditures or reimbursements in excess of established thresholds;
- Purchasing and procurement laws, regulations, and policies;
- Policies regarding reimbursement of administrative expenses;
- Policies regarding supporting documentation required for disbursement of funds; and
- Policies establishing financial reporting requirements and schedules, including documented review processes by appropriate supervisory personnel.

Financial Controls

Financial controls are designed to enable state agencies to accomplish fiduciary responsibilities. These controls also reduce the risk of asset loss, ensure that RESTORE Act project documentation is complete and accurate, that financial reports are reliable, and ensure compliance with laws and regulations. A financial control system includes both preventative controls (designed to discourage errors or fraud) and detective controls (designed to identify an error or fraud after it has occurred).

Mississippi law requires each agency, through its governing board or executive head, to maintain continuous internal audit covering the activities of such agency affecting its revenue and expenditures, and maintain an adequate internal system of pre-auditing claims, demands and accounts to ensure that only valid claims, demands and accounts will be paid (Miss. Code Ann. § 7-7-3(6)(d), (2016)). Consistent with the RESTORE Act and the MSEP, sub-recipients must operate and use resources with minimal potential for waste, fraud, and mismanagement. The State's financial control system provides assurance that significant weaknesses that could affect the State's ability to meet its objectives would be prevented or detected in a timely manner.

Project management, other personnel, and those charged with governance will apply internal control processes that are designed to provide reasonable assurance in the reliability of project financial reporting. The system includes characteristics such as:

- Policies and procedures that provide for appropriate segregation of duties to reduce the likelihood of deliberate fraud;
- Personnel training materials that ensure employees are qualified to perform their assigned responsibilities;
- Sound practices to be followed by personnel in performing their duties and functions; and
- Proper authorization and recording procedures for financial transactions.

MDEQ's internal control system has been modeled after the Committee of Sponsoring Organizations (COSO) internal control framework and the following five inter-related components. Annually, each state agency is required to certify that it has performed an internal control risk assessment, identify weaknesses, and describe a corrective action plan, if applicable.

Control Environment – In Mississippi, responsibility for implementing internal controls at each state agency begins with the chief executive officer and extends to everyone in the agency. Each agency director personally holds those in leadership positions responsible for helping to design, implement, maintain, and champion an internal control program that encompasses all agency fiscal programs and related activities. Each agency's chief financial officer shares this leadership role, yet ultimate accountability remains with the agency head.

Only qualified, competent individuals are employed. These personnel are adequately trained to carry out their responsibilities and are required to explicitly and implicitly understand their responsibilities. State management provides its employees with the authority to perform the tasks assigned to them.

Risk Assessment – As part of establishing proper controls and procedures, an assessment is performed to identify, analyze, and manage risks relevant to achieving the state's goals and objectives for RESTORE Act projects. This assessment identifies internal and external events or circumstances that could adversely affect the state's ability to carry out its fiduciary responsibilities. Identified risks according to potential impact on the RESTORE Act projects and the likelihood of occurrence will be considered. The MSEP is considered in performing the risk assessment, incorporating the goals and objectives for the RESTORE Act activities while assessing the control environment, the overall financial management process, the role of the accounting system, and other financial management activities.

Identification of component systems comprising the complete accounting system is also included in the risk assessment process. Transaction cycles were identified and considered along with inherent risks. These will be continuously reviewed and strategies will be updated as needed to manage the risks.

Control Activities – MDEQ’s internal control activities include written policies, procedures, techniques, and mechanisms that help ensure management’s directives are carried out in compliance with the RESTORE Act criteria. Control activities help identify, prevent, or reduce the risks that can impede accomplishment of state objectives. Control activities occur throughout the financial department, at all levels and in all functions; control activities include things such as approvals, authorizations, verifications, reconciliations, documentation, separation of duties, and safeguarding of assets.

For each transaction cycle identified in the risk assessment, the flow of information through the process and the internal control activities taken will be documented and analyzed.

Documentation will include organizational charts, standard operation procedures, manuals, flowcharts, decision tables, questionnaires, and/or review checklists.

Communication and Information – The state’s financial system provides adequate processes and procedures to ensure that each agency or department has relevant, valid, reliable, and timely communications related to internal and external events to effectively run and control its operations. Agency directors are able to obtain reliable information to make informed business decisions, determine their risks, and communicate policies and other important information to those who need it.

Communication is vital to effective project management, and MDEQ’s financial information system has mechanisms in place to properly capture and communicate RESTORE Act project financial data at the level appropriate for sound financial management. Policy manuals, accounting and financial reporting manuals, internal memoranda, verbal directives, and management actions are a few of the means of communicating across state agencies.

Monitoring – Monitoring of the internal control system will be performed to assess whether controls are effective and operating as intended. Monitoring is built into normal, recurring operations, is performed on a real-time basis, reacts dynamically to changing conditions, and is ingrained in each state agency. Ongoing monitoring occurs through routine managerial activities such as supervision, reconciliations, checklists, comparisons, performance evaluations, and status reports. Monitoring may also occur through separate internal evaluations (e.g., internal audits/reviews) or from external evaluations (e.g., independent audits, comparison to industry standards, surveys). Any deficiencies found during monitoring will be reported to the appropriate authority.

MDEQ requires prompt evaluation of any findings and recommendations. Formal procedures are documented for responding to findings and recommendations. Those that generate action items are properly outlined for timely response and resolution. Responsible parties are required to complete action items to correct or otherwise resolve the deficiencies within an established timeframe. The monitoring process also includes analysis of whether exceptions are reported and resolved quickly.

Accountability

While each state employee has personal internal control responsibility, the state director holds ultimate responsibility and assumes ownership for internal control over financial reporting of RESTORE Act funds. Other directors and managers support the state’s internal control philosophy, promote compliance, and maintain control within their areas of responsibility. Chief financial officers have key oversight and policy enforcement roles over fiscal matters. Other state personnel hold lead responsibility for compliance with nonfinancial aspects of laws, directives, policies, procedures, and codes of ethics.

The state director has designated a senior manager as the RESTORE Act project manager specialist who is responsible for coordinating the overall state-wide effort of evaluating, improving, and reporting on internal controls over RESTORE Act project management. A risk assessment of project internal control

systems will be performed annually. If the risk assessment indicates a high level of risk associated with the financial control system, internal controls will be evaluated. Any serious deficiencies will be reported to the appropriate authority.

Key Controls

MDEQ applies key controls for financial operating functions that serve as strategic risk mitigation tools within each area. These key controls are developed around financial management policies of segregation of duties, systematic reviews and reconciliations, and documented approval processes. These key controls serve as the framework for financial processes used in the flow of information for capturing and reporting financial data.

Other Financial Integrity Mechanisms

MDEQ has developed detailed written policies and procedures as part of its financial control systems and financial control system plan. The plan, policies, and procedures provide assurance that RESTORE Act funds are being safeguarded and that applicable statutes, rules, and regulations are being followed while also ensuring that the goals and objectives of the RESTORE Act are being met.

The financial control system plan is more than just a list of procedures or flowcharts of how activities operate. Rather, the plan is a comprehensive document that encompasses all components of internal controls. Likewise, the plan documents the financial control structure as it relates to those functions. Key financial integrity mechanisms of internal control over financial reporting are described in the following paragraphs.

Risk assessments of sub-recipients – Pursuant to the Uniform Guidance requirements in 2 C.F.R. § 200, MDEQ will emphasize components of sub-recipients' financial system internal checks and balances that address fraud, waste, and performance. MDEQ's financial management system is designed for the prevention of fraud, waste, and abuse. As such, risk assessments of all sub-recipients' financial management systems will be conducted before awarding RESTORE funding.

Project budgets – Project budgets represent the financial plans for projects throughout their lifespans. The budgets match planned expenditures with revenues that the state expects to receive, which is essential for effective cash flow planning and management. Budgets also help us prevent the misuse of project funds and control spending.

Segregation of duties – MDEQ employs several levels of control to achieve proper segregation of duties in financial processes. Departmental controls allow for proper segregation among functions related to the recording and reporting of project transactions. Supervisory approval is required for all expenditures by personnel independent of the recording process. Stewardship over project funds is essential for proper fiduciary accountability, and the State has established the framework to achieve this component of internal control.

Safeguarding of assets – Access to financial project information is restricted to essential personnel. Passwords and other physical safeguards are employed by the State to restrict access to financial data. By restricting access, risk of misappropriation and fraud is reduced because only the personnel who will be working on the financial data for the projects have access to those functions. Regular backups of financial information are done and stored off-site to minimize loss of data due to an unforeseen occurrence.

Sub-recipient monitoring – MDEQ developed a process for sub-recipient monitoring using an effective risk assessment model. As part of the initial risk assessment process, sub-recipients are required to complete an Organizational Self-Assessment (OSA) questionnaire and provide copies of standard financial policies and procedures that the state evaluates as part of designing the sub-recipient monitoring

program. The OSA is required to be updated annually by each sub-recipient. On-site assistance and reviews for a sub-recipient based on appropriate risk levels will be provided throughout the life of the projects. MDEQ will require and review financial and progress reports for accuracy, completeness, and alignment with RESTORE goals. Budget reports may also be required for comparison to actual expenditures, in detail if necessary.

MDEQ may also employ other financial integrity mechanisms if necessary or for specific RESTORE Act project types. Modifications will be based on updated risk assessments for the RESTORE Act financial control system.

Conflict of Interest

The processes that MDEQ uses to prevent conflicts of interest in the development and implementation of the MSEP, as required by 31 C.F.R. § 34.503(b)(3), are guided by Mississippi law. Under Mississippi Code § 25-4-1 *et seq.*, “it is the policy of the state that public officials and employees be independent and impartial, that governmental decisions and public policy be made on the proper channels of the government structure; that public office not be used for private gain other than the remuneration provided by law; that there be public confidence in the integrity of government; and that public officials be assisted in determinations of conflicts of interest.”

Further, MDEQ requires, where applicable, the completion of a non-collusion and conflict of interest affidavit certifying that there are no present or currently planned interests (financial, contractual, organizational, or otherwise) relating to the work to be performed under any contract resulting from the proposed work that would create any actual or potential conflict of interest (or apparent conflicts of interest) (including conflicts of interest for immediate family members: spouses, parents, children) that would impinge on its ability to render impartial, technically sound, and objective assistance or advice or result in it being given an unfair competitive advantage. MDEQ also requires sub-recipients and contractors to notify MDEQ immediately of any potential or actual conflicts that may arise. If any potential or actual conflict cannot be resolved to MDEQ’s satisfaction, MDEQ reserves the right to terminate the sub-award agreement or contract in place pursuant to the Termination for Convenience clause of the sub-award agreement or contract.

Section IV: Overall Consistency with the Goals and Objectives of the Comprehensive Plan

Mississippi’s 2019 MSEP Amendment focuses on three of the goals identified in the Comprehensive Plan:

- Restore Water Quality – Restore and protect water quality of the Gulf Coast region’s fresh, estuarine, and marine waters.
- Restore and Revitalize the Gulf Economy – Enhance the sustainability and resiliency of the Gulf economy.
- Enhance Community Resilience – build upon and sustain communities with capacity to adapt to short- and long-term changes.

Mississippi’s 2019 MSEP Amendment focuses on four objectives identified in the Comprehensive Plan:

- Promote community resilience.
- Restore, improve, and protect water resources.
- Protect and restore living and coastal marine resources.

- Restore, enhance, and protect habitats.

Section V: Projects, Programs, and Activities

	<i>Project Title</i>	<i>Estimated Cost</i>	<i>Infrastructure (Yes/No)</i>	<i>Start Date</i>	<i>End Date</i>	<i>Primary Eligible Activity (number 1-11; see section 4.1.1 of Submittal Guidelines)</i>	<i>Informed by Best Available Science (Yes/No)</i>	<i>Status</i>
1	Mississippi Gulf Coast Water Quality Improvement Program	\$56 Million	No	08/01/2018	07/31/2023	1	Yes	Activity Approved (2016 Initial MSEP). Activity Amended (2017 MSEP Amendment). Activity Amended (2019 MSEP Amendment).
2	Pascagoula Oyster Reef Complex Relay and Enhancement	\$4.1 Million	No	08/01/2018	07/31/2023	1	Yes	Activity Approved (2016 Initial MSEP). Activity Amended (2017 MSEP Amendment).
3	Compatibility, Coordination, and Restoration Planning	\$1.8 Million	No	08/01/2018	07/31/2022	8	No	Activity Approved (2016 Initial MSEP). Activity Amended (2017 MSEP Amendment). Scope clarification (2018 MSEP Amendment).

4	Gulf of Mexico Citizen Led Initiative (GMCLI)	\$1.9 Million	No	08/01/2018	7/31/2023	1	Yes	Activity Approved (2017 MSEP Amendment)
5	Remote Oyster Setting Facility	\$9.36 Million	No	01/01/2019	12/31/2023	1	Yes	Activity Approved (2017 MSEP Amendment).
6	Coastal Headwater Land Conservation Program	\$8 Million	No	08/01/2018	12/31/2021	1	Yes	Activity Approved (2017 MSEP Amendment).
7	Round Island Living Shoreline Demonstration and Protection Project (Planning)	\$2.2 Million	No	08/01/2018	12/31/2020	8	Yes	Activity Approved (2017 MSEP Amendment).
8	Mississippi Sound Oyster Shell Recycling Program	\$650,000	No	12/01/2019	11/30/2021	1	Yes	Activity Approved (2018 MSEP Amendment).
9	Beneficial Use of Dredge Material for Marsh Creation and Restoration in Mississippi	\$19 Million	No	12/01/2019	11/30/2024	1	Yes	Activity Approved (2018 MSEP Amendment). Activity Amended (2019 MSEP Amendment).
10	Hancock County Marsh Living Shoreline Extension	\$6 Million	No	10/01/2019	09/30/2021	1	Yes	Activity Approved (2018 MSEP Amendment).
11	Mississippi Beachfront Resilience	\$5 Million	No	10/01/2020	12/31/2024	1	Yes	New Activity (2019 MSEP Amendment).

Activity #1: Mississippi Gulf Coast Water Quality Improvement Program

Project Summary

The Mississippi Gulf Coast Water Quality Improvement Program was approved in the 2016 MSEP and amended in the 2017 MSEP Amendment. This program will support the restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region through the implementation of water quality improvement projects. Activities within this program include implementation of new or repairing/upgrading existing stormwater and wastewater systems, systematic source tracking to identify sources and stressors of water quality impairment and monitoring of implemented projects. The program will also provide support to increase the analytical capacity of MDEQ's South Regional Office (SRO) in order to establish microbial analytical capability for the benefit and enhancement of water quality across the Mississippi Gulf Coast.

Project Modifications - 2019 MSEP Amendment

The 2019 MSEP Amendment increases the program budget by \$7 million to support activities approved in the 2016 MSEP.

The approved 2016 MSEP and 2017 MSEP Amendment can be found at the following links:

[2016 MSEP Amendment](#)

[2017 MSEP Amendment](#)

Activity #9: Beneficial Use of Dredge Material for Marsh Creation and Restoration in Mississippi

Project Summary

The Beneficial Use of Dredge Material for Marsh Creation and Restoration in Mississippi was approved on the 2018 MSEP Amendment. This program will support the restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region by creating new marsh and restoring and enhancing existing marsh through the beneficial use (BU) of dredge materials. This program will support the dredging needs in the three coastal counties and may utilize accumulated spoil materials to facilitate the material necessary for marsh restoration.

Project Modifications - 2019 MSEP Amendment

The 2019 MSEP Amendment increases the program budget by \$7 million to support activities approved in the 2018 MSEP Amendment.

The approved 2018 MSEP Amendment can be found at the following link:

[2018 MSEP Amendment](#)

Activity #11: Mississippi Beachfront Resilience

Project Summary

This program will support the restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region through the restoration and development of sand dunes, and protection of beaches with additional boardwalk on Mississippi Gulf Coast beaches. This program will mitigate beach erosion and promote the health and integrity of the beach ecosystem by utilizing methods which accelerate and maximize dune formation, such as planting native plants and installing sand fencing, and providing additional boardwalk to the concrete beach boardwalk/seawall system to provide resilience and mitigate sand migration.

The Mississippi Gulf Coast beaches are a unique coastal environment providing critical environmental and economic resiliency functions. The sand beaches are a protective buffer providing effective shoreline protection against coastal erosion and storm events. The sand beaches protect the seawall which was constructed to protect communities and critical infrastructure such as Highway 90 from storm surge. In addition, Mississippi beaches are essential to the Gulf Coast's economy, providing quality of life and recreational benefits to local residence and visitors, and supporting important ecosystem services.

Mississippi beaches experience erosion caused by storm events, wind, wave action and prevailing currents. Beach degradation compromises the shoreline and community protection functions and ecosystem services of the sand beach and seawall. Concrete boardwalks are in place on sections of the seawall, which enhance the storm and shoreline protection functions and the ecosystem services of the beach and seawall by reducing beach erosion. The boardwalks establish a vertical face on the seawall helping to catch windblown sand, which would otherwise migrate onto Highway 90, and improve the ability to maintain the beach profile. Preservation of the beaches and implementation of erosion control measures have been identified as a priority by local leadership and residents through multiple community driven sand beach planning efforts (e.g., Harrison County, 2008). To mitigate erosion and sand loss, native plants and sand fencing have been utilized to accelerate and maximize dune formation; and concrete boardwalks have been used to reduce sand migration from the beach onto the road, in order to maintain the beach. These methods have proven effective in Mississippi and other coastal communities.

This program will support the installation of additional native plants (e.g. sea oats), sand fencing, additional boardwalk to the concrete beach boardwalk system and may also consider other methods which effectively facilitate dune formation, mitigate beach erosion and reduce migration of beach sand. Additional activities may also include, but are not limited to, planning, any necessary permitting, program oversight and management, and coordination of sub-award(s) between MDEQ and any sub-recipients.

Need: Mississippi beaches are susceptible to erosion caused by storm events, wind, wave action and prevailing currents. Additional plantings of native plants such as sea oats, and additions to the concrete boardwalk system are needed to effectively mitigate erosion, reduce sand migration, and increase beach resiliency.

Purpose: Maximize and accelerate dune restoration and creation on coastal beaches and reduce sand migration in Mississippi.

Objective: The program will restore and create sand dunes in the Mississippi Gulf Coast Region by installing native plants and sand fencing to facilitate dune formation, as well as facilitate a reduction in sand migration through boardwalk additions.

Location: This project will take place in the Gulf Coast Region.

Timeline: This project is anticipated to start 10/01/2020 and end 12/30/2024.

Additional Information: The project will be administered by MDEQ.

Overall Economic or Ecological Contribution to the Recovery of the Gulf Coast: This project will allow the State of Mississippi to enhance the resiliency of coastal Mississippi beaches which provide important ecosystem services, support shoreline and community protection functions and are an essential component of the region’s tourism economy and quality life.

Eligibility and Statutory Requirements: This project is located in the Gulf Coast Region as defined by 31 C.F.R. § 34.2. This project qualifies as an eligible activity for funding under the Oil Spill Impact Component funding through 31 C.F.R. § 34.201(a) – restoration and protection of the natural resources, ecosystems, fisheries, marine, and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region, and 33 U.S.C. § 1321(t)(1)(B)(i)(I) of the RESTORE Act. The primary purpose of the project is restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.

Comprehensive Plan Goals and Objectives:

This project aligns with the following Comprehensive Plan goals:

- Enhance Community Resilience – build upon and sustain community with capacity to adapt to short- and long-term changes; and
- Restore and Conserve Habitat – restore and conserve the health, diversity, and resilience of key coastal, estuarine, and marine habitats.

This project supports the following Comprehensive Plan objectives:

- Promote Community Resilience; and
- Restore, Enhance, and Protect Habitats.

Major Milestones:

Milestone – Identify areas for dune formation and beach erosion mitigation activities. Define areas for dune grass plantings/fencing and boardwalks.

Milestone – Implement identified activities. Dune plants/fencing and concrete boardwalks will be implemented in defined areas.

Milestone – Monitoring dune development. Monitoring success tied to dune dimension and vegetation density to ensure a sustainable dune formation.

Success Criteria/Metrics/Outcomes:

The anticipated success criteria that will be measured are:

- Number of dune plants planted;
- Number of surviving dune plants 3 months post planting; and
- Feet of concrete boardwalk installed.

Activity	Anticipated Project Success Criteria/Metrics/Outcomes	Short-term outcome	Long-term outcome
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Dune formation and beach erosion mitigation activities	Multiple plants installed; new dunes formed in priority areas	Plant growth and dune establishment	Increase in dune dimension and resilience
Boardwalk system additions	Reduction in beach sand migration from beach	Less sand migration from beach to coastal road infrastructure	Increase resilience of the beach

Monitoring and Evaluation: Baseline information from aerial photography, and or drone work, will provide existing beach conditions (both dune dimension and acreage) from which to monitor performance of dune plantings and dune formation. As-built construction surveys will be provided for the concrete boardwalk additions to demonstrate implementation. Post construction monitoring will document plant mortality, and potentially acreage through time. Adaptive management procedures will be integrated into a monitoring framework to ensure project success.

Best Available Science: Beaches, in the overwhelming majority, need to serve both recreational and conservation purposes (McLachlan, et al., 2013). Storm events, wind, wave action and prevailing currents severely degrade beach habitats and dune systems, thus controlling erosion is needed to protect ecosystems as well as infrastructure assets. Dune restoration usually involves the establishment or re-establishment of native plants as well as dune fencing to anchor sand in place and build a dune. Restoring vegetation and the formation of coastal dunes is important to stabilize dunes (Broome, 2015), provide relief for nesting coastal birds in times of high water (Audubon *pers comm.*), provide a resilient barrier for storm surge to road infrastructure, and reduce the amount of sand being lifted onto adjacent transportation routes (Harrison County Sand Beach Authority, *pers comm.*). A variety of plants, both grasses and shrubs are native to coastal areas including Sea Oats (*Uniola paniculata*), and Bitter Panicum (*Panicum amarum*) as well as Marsh Elder and Wax Myrtle. New methodologies have emerged to increase and enhance plant survival in dune planting, with 6-8 vigorous shoots, between 10-16 inches in length, being deep planted (approx. 8-10 inches in depth) to maximize survival as the root zone is constantly close to moisture around 8" below the sand surface (Harrison County Sand Beach Authority *pers. comm*). Prevailing southeasterly winds blow sand from the beach onto adjacent roadways reducing the amount of sand on the beach and requiring beach re-nourishment (Melby and Cathcart 2007). Current stepped seawalls result in sand ramps and a significant amount of sand landing on adjacent roadways (Sand Beach Master Plan, 1986; Harrison County Sand Beach Authority *pers. comm*). Control of windblown sand is important mitigation of the loss of dune and beach habitat. In Virginia Beach, The Erosion Control and Hurricane Protection Program invested \$120 million in major features in 2002, including concrete capped seawall/boardwalk. In 2003 post Hurricane Isabel the Corps of Engineers noted little beach erosion and little damage to infrastructure in Virginia Beach where the seawall/concrete capped boardwalk was in place as compared to areas without it (Sorrell, 2005). On the coast of Mississippi, all sand accumulated and removed from beach roadways is not re-nourished onto the beach given possible contamination of oils, greases, etc., but rather taken to a landfill. Concrete boardwalks on the seawall were initially developed for pedestrian safety and access, but also serve a beach sand migration mitigation function. The boardwalk cap establishes a vertical face on the seawall helping to catch windblown sand which would otherwise migrate onto Highway 90 and improves the ability to maintain the beach profile (Sand Beach Master Plan, 1986, 2008). In conjunction, several beach erosion mitigation measures (dune restoration, beach grass re-establishment, and concrete seawall boardwalk construction) will improve the integrity of the beach ecosystem (Melby and Cathcart 2007). Any concrete infrastructure will be constructed according to standard engineering principles to maximize resilience and sustainability.

Budget/Funding**Estimated Cost of the Project and Amount to be Requested from Oil Spill Impact Component**

Funds: \$5 million (100% Implementation)

Partnerships/Collaboration:

- Hancock, Harrison, and Jackson Counties

Leveraged Resources: *Building on existing work.* Beach maintenance is an ongoing activity for Mississippi coast counties. The state of Mississippi recently announced \$200,000 in Gulf of Mexico Energy Security Act (GOMESA) funding for similar work (planting of sea oats) on the beach in Harrison County.

Funds Used as Non-Federal Match: None currently anticipated.

Other: None currently anticipated.

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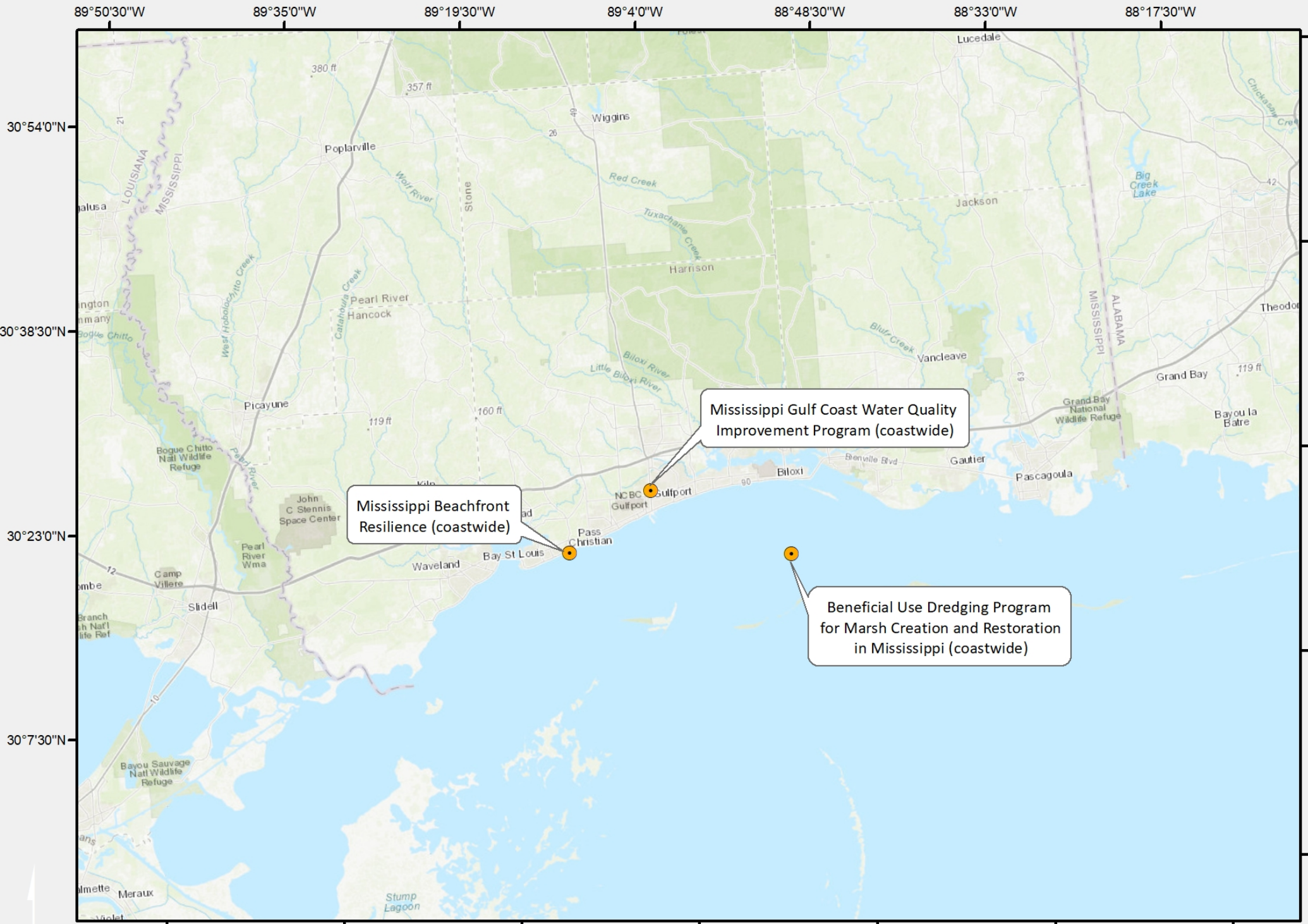
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McLachlan, A., Defeo, O., Jaramillo, E., Short, A.D. 2013. Sandy beach conservation and recreation: guidelines for optimizing management strategies for multi-purpose use. *Ocean and Coastal Management* 71, 256-268.

Melby, P., Cathcart, T. 2007. Experimental Beach Landscape 12 year study results. The Evolution of a model landscape design and management plan for the manmade beach in Harrison County, Mississippi. Available online: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.553.8469&rep=rep1&type=pdf> (last accessed 10.14.2019)

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● 2019 SEP Project Locations

0 5 10 20 Miles

