RESTORE ACT Direct Component Multiyear Plan Narrative

Department of the Treasury

OMB Approval No. 1505-0250

Directions: Use this form for the Initial Multiyear Plan and any subsequent amendments to an accepted Multiyear Plan. For amendments, include only new and/or materially modified activities.

Multiyear Plan Version (Initial or Amendment Number):	Amendment #2
Date of Initial Multiyear Plan Acceptance:	September 21, 2015
Date of Last Multiyear Plan Acceptance:	March 17, 2017

Eligible Applicant Name:	The Coastal Protection and Restoration Authority of Louisiana
Name and Contact Information of the Person to be contacted (POC) on matters concerning this Multiyear Implementation Plan:	
POC Name:	Katie Freer
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NARRATIVE DESCRIPTION:

1. A description of each activity, including the need, purpose, objective(s), milestones and location. Include map showing the location of each activity.

This Second Amendment to the State of Louisiana's RESTORE Act Multiyear Implementation Plan ("Second Amendment") is to revise two activities for the Calcasieu Ship Channel Salinity Control Measure Project (aka, "Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration Project"): an engineering and design activity and a construction activity.

The first activity for engineering and design of the Calcasieu Ship Channel Salinity Control Measure Project (aka, "Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration Project") was accepted in the initial Multiyear Implementation Plan and revised in Multiyear Implementation Plan Amendment #1, and a Direct Component grant has been awarded. This Second Amendment changes the scope of this project from reducing the rate of land loss through salinity control to instead achieve that goal primarily through other restoration measures that reduce flood stress, such as marsh drainage improvements and marsh creation and nourishment. As described in more detail below, the need for this change in project scope was confirmed through an extensive re-analysis of the project benefits and alternatives considering updated regional monitoring data, changes in operations of existing water control structures in the region, and new published peer-reviewed literature. This Second Amendment also decreases the Direct Component funding for this engineering and design activity to reflect the currently-anticipated funding need.

The second revised activity is the Calcasieu Ship Channel Salinity Control Measure Project (aka, Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration) – Construction. This Second Amendment increases funding to this construction activity. The scope of this activity will be based on the results of the engineering and design.

This Second Amendment also removes the measures of success previously defined for this project in prior versions of this Plan; revised performance measures will be defined in a forthcoming grant amendment request. Below is the revised need, purpose, objectives, milestones, and location reflecting this change to both the engineering and design activity as well as the construction activity.

- Need: The proposed Project is needed to reduce the conversion of land to open water as predicted by the Future Without Action (FWOA) model in the 2017 Coastal Master Plan. The FWOA model results predict the loss of approximately 470 square kilometers (116,000 acres) within the Calcasieu/Sabine Ecoregion over the next 50 years (Alymov et. al. 2017). Additionally, past land loss within the Basin, from 1932–2016, totals approximately 200 square miles (128,000 acres) (Couvillion et al. 2017). Wetland losses throughout this period coincided with significant alteration of hydrology in the Basin by expansion of navigation channels, impoundment of marshes, subsidence, and sea level rise. The recent analysis, Basin Summary Report for the Calcasieu-Sabine Basin[1] (McGinnis et al., 2019), indicates that present environmental, structural, and operational conditions have altered processes in the Basin such that persistent inundation and resulting flood stress is currently the main contributor to marsh vulnerability in this system, while salinity is currently better controlled than it was in previous decades. Both flood stress and high salinity pose critical threats to marsh health if not controlled.

  The issues raised in the Basin Summary Report for the Calcasieu-Sabine Basin (McGinnis et al., 2019) were the catalyst for a 1.5 year project reanalysis including literature review, consultation with experts, and alternatives analysis using a combination of desktop review, modeling using the Danish Hydraulic Institute's physics-based MIKE model, and machine learning.

  Through this robust reanalysis of expected project impacts, CPRA concluded that the original project should not proceed because 1) the wetland salinity reductions the project would achieve would be marginal, 2) the life safety risks posed by high velocities through navigation sills in the project's saltwater barriers and the reduction in fisheries access between the Gulf of Mexico and the lake would both be significant, and 3) mitigating the life safety and fisheries issues would reduce the already marginal salinity reduction benefits.

  The proposed path forward that CPRA identified through analysis of over 30 features and alternatives is a combination of large-scale marsh creation/nourishment and substantial marsh drainage improvements. The original project was designed to reduce the rate of land loss by maintaining brackish and, farther from Calcasieu Lake, fresh salinity regimes longer to maximize organic marsh accretion, thus maintaining sufficient elevation to mediate sea-level-rise-driven collapse for as long as possible. The project reanalysis showed that we can more reliably achieve and maintain marsh elevation through a combination of 1) continued active water management practices that reduce saltwater intrusion into the marshes through operation of the existing water control structures along the lake-rim, 2) implementing large-scale marsh drainage improvements that reduce the flood stress that is currently driving marsh vulnerability, and 3) constructing large-scale marsh creation and nourishment that increases elevation capital in some of the most degraded areas of the watershed. The geographic impact of the project no longer includes *all* wetlands connected to Calcasieu Lake, but based on the reanalysis the likelihood of project success is much greater across what is still a very large area. This approach will benefit the entire 65,000 acre Cameron Creole Watershed, which is the subregion of the Calcasieu-Sabine Basin where the original project benefits were predicted to be most concentrated.

  The project is consistent with marsh creation projects contained in the 2017 Coastal Master Plan (Projects 004.MC.10, 004.MC.19, and 004.MC.23) and is needed to address historic and ongoing land loss, the former resulting mainly from saltwater intrusion and at present from persistent flood stress and storm damage in the

[1] The 2019 Basin Summary Report for the Calcasieu-Sabine Basin is available at https://cims.coastal.louisiana.gov/RecordDetail.aspx?Root=0&sid=23810.

Calcasieu-Sabine (CS) Basin. This project will also mitigate damage to fish, wildlife and natural resources which rely on healthy marshes, allowing for the maintenance of thousands of acres of wetlands which serve as critical wildlife habitat and nurseries for fisheries.

- Purpose: The purpose of the proposed project is to reduce the rate of land loss within the CS Basin. Specifically, the proposed project is intended to reduce stress from inundation (and, if possible, salinity) within wetlands in order to maintain vegetative productivity and reduce conversion of wetlands to open water. Solutions to the flood stress problem can involve raising marsh elevation, improving marsh drainage, or both. Restoring this coastal ecosystem and lowering the risk associated with sea level rise, subsidence, and tropical events along the coast will also improve the long-term economic health of the region. By protecting the wetlands of the Chenier Plain, this project provides storm surge protection to communities and ports in the Lake Charles area.

- Objective: Design, construction, and monitoring of features designed to reduce stress from inundation to maintain vegetative productivity and reduce conversion of wetlands to open water. By allowing for the maintenance of thousands of acres of critical marsh environment which provide essential fish and wildlife habitat, the primary eligible activity of this project is to restore and protect the natural resources, ecosystems, fisheries, marine and wildlife habitats and coastal wetlands of the Gulf Coast region. (Eligible Activity (1)). Additionally, the project will be carried out in the Gulf Coast Region as defined in 31 C.F.R. §34.2 because it is located in Cameron Parish, and is anticipated to influence hydraulic conditions within the Calcasieu-Sabine basin, which is in the coastal zone defined under section 304 of the Coastal Zone Management Act of 1972 that border the Gulf of Mexico.

- Funds Requested: The estimated total cost of the project is approximately $260.97 million. This includes an estimated $25.6 million for engineering, design and permitting, an estimated $235.37 million for construction and any monitoring and adaptive management. This cost estimate is a planning-level estimate that utilized professional judgment of an interdisciplinary team of engineers and existing data on known topography, bathymetry and geotechnical characteristics of the project sites. As design advances these cost estimates will be revisited and are subject to change. All costs are reported in present dollar values and do not represent inflation or escalation.

  CPRA has previously been awarded a grant in the amount of $25,602,755.88 from the Direct Component to support engineering and design. These previously awarded grant funds are estimated to be sufficient to complete the engineering and design process, including development of final plans and specifications for bidding. The State of Louisiana currently has an additional $72,686,879.03 in net allocations available, which includes approximately $10.8M of engineering and design funds from the First Amended Multiyear Implementation Plan, all of which we are requesting in this Second Amendment to use for construction of this project. The total estimated funds that will be requested for this project from the Direct Component are approximately $260.97 million, which includes the previously awarded grant funds for E&D (~$25.6M), the balance of the previously requested funds in our First Amended Multiyear Implementation Plan (~$20.6M), the additional currently available funds (~$52.1M) and approximately $162.7 million which will be paid into the RESTORE Trust Fund through Year 15 (2031) and is therefore not currently available. The information learned through the design process of this project will help inform the construction sequence and methodology that may ultimately be used for this project and will help determine the approach to funding the project through completion. Additional funds for this project may be provided in the future from funds in the State's Coastal Protection and Restoration Fund, including without limitation revenues from the Gulf of Mexico Energy Security Act (GOMESA), and/or funds from other RESTORE funding components.

  The features currently proposed to reduce flood stress are 1) lake-rim drainage structures that would enable the marshes to drain into Calcasieu Lake more frequently and 2) large-scale marsh creation and nourishment. The 15%, 30%, 60%, and 95% engineering and design task descriptions do not change with this Second Amendment,

except to add stakeholder engagement and modeling to finalize feature selection and optimize the design concepts as part of the 15% design phase.

- High Level Milestones:
    1. 15% Design: Development of the project to the 15% design level
    2. 30% Design: Development of the project to the 30% design level
    3. Environmental Permits to Implement the Project: Work on this task will begin following completion of 15% engineering and design and will continue concurrently with the 30% and 95% design milestones
    4. 95% Design: Development of the project to the 95% design level
    5. Final Plans and Specifications for Bidding
    6. Award of Construction Contract
    7. Mobilization for Construction
    8. Completion of Construction
    9. Monitoring Events

- Estimated Project Schedule:
    1. 15% design milestone: January 2022
    2. 30% design milestone: June 2022
    3. 95% design milestone: January 2023
    4. Construction Contract Award: May 2023
    5. Construction Mobilization: August 2023
    6. Construction Completion: May 2026

The estimated timelines referenced above reflect an aggressive schedule which is driven by CPRA's sense of urgency for implementing large scale restoration projects. Given that RESTORE funds are subject to a 15-year payout, CPRA anticipates that it may need to access alternative funding streams for construction through its Coastal Protection and Restoration Fund which would be reimbursed with RESTORE funds as those become available over time. CPRA is also exploring available accelerated financing options in order to meet the estimated timelines described herein. CPRA is evaluating alternative funding streams and accelerated financing options because Treasury cannot award a project grant for Direct Component funds until sufficient deposits are available for distribution based on the amount of funds shown in the Gulf Coast Restoration Trust Fund Allocation Tables on Treasury's RESTORE Act website.

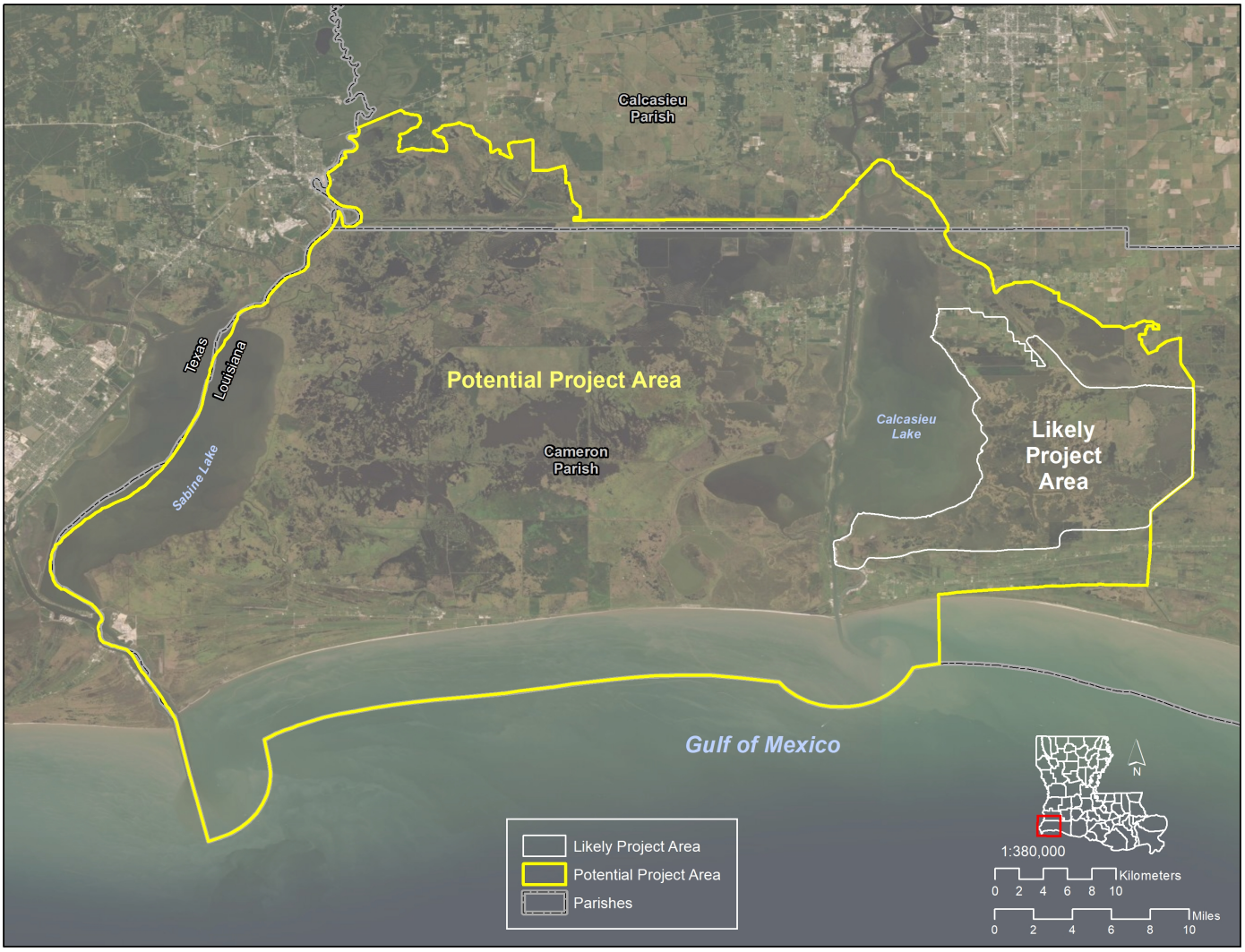

*Figure 1. Map of potential and likely project areas. T*he project will be located within the Calcasieu-Sabine Basin. The location will likely be within the 65,000 acre Cameron Creole Watershed, where the majority of the benefits of the original project were concentrated.

2. How the applicant made the multiyear plan available for 45 days for public review and comment, in a manner calculated to obtain broad-based participation from individuals, businesses, Indian tribes, and non-profit organizations, such as through public meetings, presentations in languages other than English, and postings on the Internet. The applicant will need to submit documentation (e.g., a copy of public notices) to demonstrate that it made its multiyear plan available to the public for at least 45 days. In addition, describe how each activity in the multiyear plan was approved after consideration of all meaningful input from the public and submit documentation (e.g., a letter from the applicant's leadership approving submission of the multiyear plan to Treasury or a resolution approving the applicant's multiyear plan).

The reanalysis of the Calcasieu Ship Channel Salinity Control Measures (aka, Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration) project, which led to the scope revision described in this Second Amendment, was presented and discussed at quarterly public meetings of the Chenier Plain Coastal Restoration and Protection Authority on November 19, 2019 in Lake Charles and on February 11, 2020 in Cameron. Additional project briefings at those quarterly public meetings were scheduled in May, July, and October 2020, but they were all cancelled due to COVID-19 and local hurricane impacts. A public meeting specifically dedicated to presenting the project re-analysis and proposed path forward and receiving public comments was held in Cameron on November 17, 2020. CPRA presented the re-analysis and proposed

scope change to the CPRA Board during the December 9, 2020 public Board Meeting and (virtually) at the Chenier Plain Coastal Restoration and Protection Authority's Board meeting on January 19, 2021.

A draft of this Second Amendment to the State of Louisiana's RESTORE Act Multiyear Implementation Plan was published and made available for public review and comment for a minimum of forty-five (45) days in a manner calculated to obtain broad-based participation from individuals, businesses, Indian tribes, and non-profit organizations in accordance with 31 C.F.R. 34.303(b)(8), was revised based on public comments received, and was adopted after consideration of all meaningful input from the public.

This Second Amendment to the State of Louisiana's RESTORE Act Multiyear Implementation Plan was made available on CRPA's website in draft form on December 9, 2020, and on December 10, 2020 CPRA issued a press release seeking public feedback until January 25, 2021, and directing anyone with comments to submit those via email to: coastal@la.gov, or via regular mail to: CPRA, Attn: Chuck Perrodin, P.O. Box 44027, Baton Rouge, LA 70804.

Advertisements to solicit public comment on the Draft Second Amendment to the State of Louisiana's RESTORE Act Multiyear Implementation Plan were also placed in the following press outlets across Coastal Louisiana during the public comment period:

Abbeville Meridional 12/16

Baton Rouge Advocate 12/15

Belle Chasse Plaquemines Gazette 12/15

Cameron Pilot 12/17

Franklin Banner-Tribune 12/16

Houma Daily Courier 12/14

Lafayette Daily Advertiser 12/16

Lake Charles American Press 12/14

New Orleans Advocate/Times-Picayune 12/15

In addition, letters were sent via email and certified mail/return receipt request to the following federally recognized Indian Tribes to inform them of the public comment period for the Draft Second Amendment to the State of Louisiana's RESTORE Act Multiyear Implementation Plan and inviting them to comment:

Chitimacha Tribe of Louisiana

Coushatta Tribe of Louisiana

Jena Band of Choctaw Indians

Tunica-Biloxi Indian Tribe

During the public comment period, CPRA received eight sets of public comments, three of which were from the same commenter. All public comments submitted during the public comment period were reviewed and considered by CPRA before preparing the final Second Amendment to the State of Louisiana's RESTORE Act Multiyear Implementation Plan. The Amendment was also revised and updated based on public comment, as detailed in **Appendix A**.

The public comments received are summarized below:

Comment: The Chenier Plain Coastal Restoration and Protection Authority, representing Vermilion, Calcasieu and Cameron parishes, expressed strong support for the scope change for the Calcasieu Sabine Large Scale Marsh and Hydrologic Restoration project.

Comment: The Cameron Parish Police Jury expressed strong support for the scope change for the Calcasieu Sabine Large Scale Marsh and Hydrologic Restoration project.

Comment: The Restore the Mississippi River Delta campaign (MRD), representing the National Audubon Society, the Coalition to Restore Coastal Louisiana, Environmental Defense Fund, National Wildlife Federation, and the Pontchartrain Conservancy collectively expressed support for the scope modifications for the Calcasieu Sabine Large Scale Marsh and Hydrologic Restoration project and also recommended reconsidering feasibility-phase CS-65 alternatives in the 2023 Coastal Master Plan and including number of acres restored and acres of coastal habitat loss prevented as measures of project performance.

Comment: Commenter submitted three sets of comments. The comments (i) objected to the amendment, (ii) requested an extension of the public comment period and a well-publicized virtual hearing specific to the project in February, and (iii) requested inclusion in the record of all of Commenter's previous comments and hearing testimonies starting in 1974 with the founding of Commenter's organization: Restore Explicit Symmetry To Our Ravaged Earth (RESTORE). Commenter's objections are largely based on the following: a concern that saltwater intrusion is the primary ecosystem problem in southwest Louisiana, that the Calcasieu Ship Channel is a main driver of saltwater intrusion, and that CPRA's justification for the scope change is based entirely on the *Basin Summary Report for the Calcasieu-Sabine Basin* (McGinnis et al., 2019). Commenter also expressed strong concern about converting Calcasieu/Sabine wetland vegetation from freshwater to saltwater species. Commenter further requested that CPRA obtain data on cattle and cattle herbivory and their environmental impact in southwest Louisiana and strongly objected to restoration dollars being applied in any form to maintenance of the Calcasieu Ship Channel, recommending instead that it be allowed to return to its original condition.

Comment: Commenter requested an extension of the public comment period and a well-publicized virtual hearing specific to the project in February. In the alternative, Commenter requested that project scientists and management arrange for a virtual briefing with known interested parties.

CPRA acknowledges and appreciates all public comments received and has addressed the issues raised in these comments where possible. In cases where comments were either generally supportive or pertained to activities or recommendations that are outside of the purview of this Amendment, or are outside of the CPRA's direct authority, CPRA has considered and appreciates those comments but has not revised this Amendment based on that input at this time. In cases where public input requested additional or clarifying information, the Amendment has been updated to address these requests where possible, as provided in Appendix A.

CPRA also directly engaged commenters to provide additional information via a more detailed virtual briefing. CPRA remains committed to conducting additional briefings upon request. CPRA did not provide an extension to the public comment period given that the comment appeared to be based on an incorrect timeline of public engagement, a compelling basis for the extension was not provided, and the requesting party had sufficient time to submit three sets of comments within the original public comment period.

After the public comments were taken into consideration, the CPRA Board was provided with an explanation for how the public comment was addressed. The CPRA Board approved each activity included in the State's Second Amendment to the State of Louisiana's RESTORE Act Multiyear Implementation Plan and approved the Amendment for submission to Treasury on February 19, 2021, in accordance with 31 C.F.R. §34.303(b)(9).

3. How each activity included in the applicant's multiyear plan narrative meets all the requirements under the RESTORE Act, including a description of how each activity is eligible for funding based on the geographic location of each activity and how each activity qualifies for at least one of the eligible activities under the RESTORE Act.

Under 31 C.F.R. §34.303(d)(1) activities proposed for Direct Component funding must meet the statutory requirements for eligibility. The Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration Project proposed for Direct Component funding under this Second Amendment is an eligible activity under 31 C.F.R. §34.201 because by allowing for the maintenance of thousands of acres of critical marsh environment which provide essential fish and wildlife habitat, the project's primary purpose is to restore and protect the natural resources, ecosystems, fisheries, marine and wildlife habitats and coastal wetlands of the Gulf Coast region. (Eligible Activity (1)).

Under 31 C.F.R. §34.303(d)(2), each activity designed to protect or restore natural resources proposed for funding under the Direct Component must be based on best available science. Under 31 C.F.R. 34.2, "best available science" is defined as "science that maximizes the quality, objectivity, and integrity of information, including statistical information; uses peer reviewed and publicly available data; and clearly documents and communicates risks and uncertainties in the scientific basis for such projects." Louisiana's Coastal Master Plan is required by law to be updated every six years in order to take into account the best available science and the ever-changing conditions on the ground. (*See* La. R.S. 49:214.5.3.A.(1); Coastal Master Plan at pp. ES-2, 28, 48 & 79). The Coastal Master Plan, on which this Second Amended Multiyear Implementation Plan is based, is guided by a mission which is comprehensive in scope and based on a broad range of objectives, principles, decision drivers, metrics, and constraints. (Coastal Master Plan pp. 47-49; 63). This mission represents the result of a broad-based collaboration among local, state and national stakeholders and uses cutting edge technical analysis to take a long-term view "by implementing high-priority projects that improve long-term sustainability of other projects" so that CPRA can ensure "a solid foundation for the future investments in the coast, regardless of when those investments are made." (*Id.* at 45). All marsh creation and nourishment locations selected for the Calcasieu Salinity Control Measures (aka, Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration) project will be limited to those included in marsh creation projects consistent with the Coastal Master Plan. The Basin Summary Report for the Calcasieu-Sabine Basin (McGinnis et al., 2019) analyzed a decade of publicly-available monitoring data and concluded that drainage enhancements, including additional drainage structures on the Calcasieu Lake rim, would be beneficial to the marshes in the project area. Moreover, this project underwent a rigorous 1.5-year project scope reanalysis including literature review, consultation with experts, and alternatives analysis using a combination of desktop review, modeling using the Danish Hydraulic Institute's physics-based MIKE model, and machine learning, as detailed in item 1 above. As such, this is a project that is based on the best available science.

Additionally, the project will be carried out in the Gulf Coast Region as defined in 31 C.F.R. §34.2 because it is located in Cameron Parish, and is anticipated to influence hydraulic and wetland conditions within the Calcasieu-Sabine Basin, which is in the coastal zone defined under section 304 of the Coastal Zone Management Act of 1972 that border the Gulf of Mexico. (*See also* the map identified in response to Question 1 above).

4. Criteria the applicant will use to evaluate the success of the activities included in the multiyear plan narrative in helping to restore and protect the Gulf Coast Region impacted by the Deepwater Horizon oil spill.

Project performance measures will track the progress towards meeting management goals and objectives. Recommended Direct Component performance measures applicable to this project will include a) number of acres of wetlands restored and b) number of acres with restored hydrology.

Detailed post-construction monitoring requirements will be finalized upon completion of the project's engineering and design phase and further refined following construction. Monitoring will likely include the use of Coastwide Reference

Monitoring System (CRMS)[2] data to monitor marsh inundation and salinity trends, surface elevation trajectories, emergent vegetation, and land change. Other monitoring parameters for this project could include additional monitoring of hydrologic conditions near project features, land change at the project scale, and fish and wildlife monitoring.

5. How the activities included in the multiyear plan narrative were prioritized and list the criteria used to establish the priorities.

The Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration has been prioritized for RESTORE Direct Component funding due to its regional nature and far-reaching benefits to the overall ecological and economic recovery of the Gulf.

CPRA has a strong adaptive management program that both accommodates the dynamic nature of coastal processes while guiding a robust and continuous planning process consistent with the State's Coastal Master Plan. (CMP pp. ES-2 & 49). CPRA uses adaptive management in varying levels of project and program management – from the project level, to the larger hydrologic basin, to the overall master plan. (CMP p. 148). CPRA incorporates lessons learned every six years into updated master plans. The goal of this adaptive management program is to weave together an overarching framework that governs the master plan; all other CPRA planning efforts; and all other CPRA engineering, design, and monitoring activities. (See CMP p. 148 & Appendix F, Adaptive Management, to read more details). The Basin Summary Report for the Calcasieu-Sabine Basin is part of this Adaptive Management program and is the first summary report written for the Calcasieu-Sabine Basin by the CPRA. (*See* McGinnis et al., 2019, at p. 1).

In addition to the restoration programs that have existed in the past for the Calcasieu-Sabine Basin, new programs have been developed in the past decade to expand the scale of coastal restoration in the southwest Louisiana. (Basin Summary Report for the Calcasieu-Sabine Basin (McGinnis et al., 2019) p. 50). Louisiana's 2017 Master Plan proposes four (4) restoration strategies for the Calcasieu-Sabine Basin: hydrologic restoration along the Calcasieu Ship Channel and the GIWW just west of the Calcasieu Ship Channel, marsh creation throughout the basin (8 sites covering 65,400 acres[3]), shoreline protection along the Gulf of Mexico east of the Calcasieu Ship Channel (~4 miles), and oyster reef/living shoreline in the Calcasieu and Sabine Lakes. (CPRA 2017; see http://coastal.la.gov/our-plan/2017-coastal-master-plan/).

The Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration project proposed for Direct Component funding in this Second Amended Multiyear Implementation Plan is designed to combine certain elements of these existing restoration programs for the Calcasieu-Sabine Basin with the recommendations and findings in the Basin Summary Report for the Calcasieu-Sabine Basin. Therefore, this program would serve as an umbrella both for (i) marsh creation in the Calcasieu-Sabine Basin, and (ii) flood stress relief measures that would address the most urgent problem in the Calcasieu-Sabine Basin of prolonged flooding including, without limitation, additional drainage structures on the Calcasieu Lake Rim to help alleviate some of the flood stress in the Cameron-Creole Watershed southeast of Calcasieu Lake. *See* Basin Summary Report for the Calcasieu-Sabine Basin, at p. 52 (McGinnis et al., 2019).

6. If applicable, describe the amount and current status of funding from other sources (e.g., other RESTORE Act contribution, other third party contribution) and provide a description of the specific portion of the project to be funded by the RESTORE Act Direct Component.

CPRA has previously been awarded funds in the amount of $25,602,755.88 from the Direct Component to support engineering and design. These funds are estimated to be sufficient to complete the engineering and design process, including development of final plans and specifications for bidding. The State of Louisiana currently has an additional $72,686,879.03 in net allocations available, which includes approximately $10.8M of engineering and design funds from the First Amended Multiyear Implementation Plan, all of which we are requesting in this Second Amendment to use for construction of this project. The total estimated funds that will be requested for this project from the Direct Component

[2] Website available at https://lacoast.gov/crms/.

[3] Including Projects 004.MC.10, 004.MC.19, and 004.MC.23.

are $260.97 million, which includes the previously awarded funds, the currently available funds and approximately $162.7 million which will be paid into the RESTORE Trust Fund through Year 15 (2031) and is therefore not currently available.

The information learned through the design process of this project will help inform the construction sequence and methodology that may ultimately be used for this project and will help determine the approach to funding the project through completion. Given that RESTORE funds are subject to a 15-year payout, CPRA anticipates that it may need to access alternative funding streams for construction through its Coastal Protection and Restoration Fund, including without limitation revenues from the Gulf of Mexico Energy Security Act (GOMESA), and/or funds from other RESTORE funding components, which would be reimbursed with RESTORE funds as those become available over time. CPRA is also exploring available accelerated financing options in order to meet the estimated timelines described herein. CPRA is evaluating alternative funding streams and accelerated financing options because Treasury cannot award a project grant for Direct Component funds until sufficient deposits are available for distribution based on the amount of funds shown in the Gulf Coast Restoration Trust Fund Allocation Tables on Treasury's RESTORE Act website.

Appendix A

RESPONSE TO PUBLIC COMMENT ON THE DRAFT SECOND AMENDMENT TO THE STATE OF LOUISIANA'S RESTORE ACT MULTIYEAR IMPLEMENTATION PLAN

During the public comment period, CPRA received eight sets of public comments, three of which were from the same commenter. All public comments submitted during the public comment period were reviewed and considered by CPRA before preparing the final Second Amendment to the State of Louisiana's RESTORE Act Multiyear Implementation Plan. The public comments received are summarized below.

Comment: The Chenier Plain Coastal Restoration and Protection Authority, representing Vermilion, Calcasieu and Cameron parishes, expressed strong support for the scope change for the Calcasieu Sabine Large Scale Marsh and Hydrologic Restoration project.

Response: CPRA appreciates this comment.

Comment: The Cameron Parish Police Jury expressed strong support for the scope change for the Calcasieu Sabine Large Scale Marsh and Hydrologic Restoration project.

Response: CPRA appreciates this comment.

Comment: The Restore the Mississippi River Delta campaign (MRD), representing the National Audubon Society, the Coalition to Restore Coastal Louisiana, Environmental Defense Fund, National Wildlife Federation, and the Pontchartrain Conservancy collectively expressed support for the scope modifications for the Calcasieu Sabine Large Scale Marsh and Hydrologic Restoration project and also recommended reconsidering feasibility-phase CS-65 alternatives in the 2023 Coastal Master Plan and including number of acres restored and acres of coastal habitat loss prevented as measures of project performance.

Response: CPRA appreciates this comment. We will confer with the 2023 Coastal Master Plan about the request to reanalyze project alternatives considered during the feasibility phase. CPRA also clarified the description of potential monitoring activities to better support tracking project performance related to the recommended measures.

Comment: Commenter submitted three sets of comments. The comments: (i) objected to the amendment, (ii) requested an extension of the public comment period and a well-publicized virtual hearing specific to the project in February, and (iii) requested inclusion in the record of all of Commenter's previous comments and hearing testimonies starting in 1974 with the founding of Commenter's organization: Restore Explicit Symmetry To Our Ravaged Earth (RESTORE). Commenter's objections are largely based on the following: a concern that saltwater intrusion is the primary ecosystem problem in southwest Louisiana, that the Calcasieu Ship Channel is a main driver of saltwater intrusion, and that CPRA's justification for the scope change is based entirely on the *Basin Summary Report for the Calcasieu-Sabine Basin* (McGinnis et al., 2019). Commenter further requested that CPRA obtain data on cattle and cattle herbivory and their environmental impact in southwest Louisiana and strongly objected to any restoration dollars being applied in any form to maintenance of the Calcasieu Ship Channel, recommending instead that it be allowed to return to its original condition.

Response: CPRA appreciates this comment and has engaged directly with the Commenter to discuss his concerns and will continue to do so as requested. CPRA has also revised the Amendment to confirm that saltwater intrusion remains a critical issue for Southwest Louisiana. CPRA has further included the following information in its Final Second Amendment to the State of Louisiana's RESTORE Act Multiyear Implementation Plan in order to address some of this Commenter's concerns:

The original project focused on re-channelizing the Calcasieu Ship Channel as a mechanism for reducing land loss. An early draft of the *Basin Summary Report for the Calcasieu-Sabine Basin* (McGinnis et al., 2019) raised critical questions about whether the original project would be able to achieve the intended large-scale land change benefits. Those questions triggered a 1.5-year reanalysis of project benefits and impacts to determine the implications of the report's findings to the project. The project reanalysis effort included literature review, consultation with experts, and alternatives analysis using a combination of desktop review, modeling using the Danish Hydraulic Institute's physics-based MIKE model, and machine learning.

Through this robust reanalysis of expected project impacts, CPRA concluded that the original project should not proceed because 1) the wetland salinity reductions the project would achieve would be marginal, 2) the life safety risks posed by high velocities through navigation sills in the project's saltwater barriers and the reduction in fisheries access between the Gulf of Mexico and the lake would both be significant, and 3) mitigating the life safety and fisheries issues would reduce the already marginal salinity reduction benefits.

The proposed path forward that CPRA identified through analysis of over 30 features and alternatives is a combination of large-scale marsh creation/nourishment and substantial marsh drainage improvements. The original project was designed to reduce the rate of land loss by maintaining brackish and, farther from Calcasieu Lake, fresh salinity regimes longer to maximize organic marsh accretion, thus maintaining sufficient elevation to mediate sea-level-rise-driven collapse for as long as possible. The project reanalysis showed that we can more reliably achieve and maintain marsh health through a combination of 1) continued active water management practices that reduce saltwater intrusion into the marshes through operation of the existing water control structures along the lake-rim, 2) implementing large-scale marsh drainage improvements that reduce the flood stress that is currently driving marsh vulnerability, and 3) constructing large-scale marsh creation and nourishment that increases elevation capital in some of the most degraded areas of the watershed. The geographic impact of the project no longer includes *all* wetlands connected to Calcasieu Lake, but based on the reanalysis the likelihood of project success is much greater across what is still a very large area. This approach will benefit the entire 65,000 acre Cameron Creole Watershed, which is the subregion of the Calcasieu-Sabine Basin where the original project benefits were predicted to be most concentrated.

The Basin Summary Report is not the basis for the project scope change; the 1.5-year reanalysis is. While it was in progress, CPRA gave presentations on the project reanalysis effort at quarterly public Chenier Plain Coastal Restoration and Protection Authority Board Meetings in Lake Charles and Cameron. CPRA also held a public meeting in November 2020 in Cameron to present and discuss the reanalysis results. CPRA also presented this effort and the Multiyear Implementation Plan amendment to the public at the December 2020 CPRA Board Meeting and (virtually) during the January 2021 public meeting of the Chenier Plain Coastal Restoration and Protection Authority Board held in Abbeville and broadcast via Zoom.

CPRA also appreciates the comment concerning the environmental impact of cattle herbivory in Southwest Louisiana but this issue is outside of the purview of this Amendment.

Comment: Commenter requested an extension of the public comment period and a well-publicized virtual hearing specific to the project in February. In the alternative, Commenter requested that project scientists and management arrange for a virtual briefing with known interested parties.

Response: CPRA appreciates this comment and has engaged directly with the Commenter to schedule the requested virtual briefing, which was held on Thursday, February 4 for two hours. CPRA will schedule any follow up or additional briefings upon request.

RESTORE ACT Direct Component Multiyear Plan Matrix — Department of the Treasury									OMB Approval No. 1505-0250
Applicant Name:	Coastal Protection and Restoration Authority								
1. MULTIYEAR PLAN VERSION (INITIAL OR AMENDMENT NUMBER):		Amendment #2	2a. DATE OF INITIAL MULTIYEAR PLAN ACCEPTANCE (mm/dd/yyyy):			9/21/2015	2b. DATE OF LAST MULTIYEAR PLAN ACCEPTANCE:		3/17/2017
3. CUMULATIVE DIRECT COMPONENT ALLOCATION AVAILABLE FOR DISTRIBUTION TO APPLICANT:			$98,289,634.91		4. TOTAL ALLOCATIONS PLUS KNOWN FUNDS NOT YET DEPOSITED IN TRUST FUND FOR DIRECT COMPONENT:				$260,970,986.60
5. Primary Direct Component Eligible Activity Further Described in Application (Static Field)	6. Activity Title (Static Field)	7. Location (Static Field)	8. Estimated Total Funding Contributions For Proposed Activity(ies)(refer to Instructions)				9. Proposed Start Date mm/dd/yyyy	10. Proposed End Date mm/dd/yyyy	11. Status (refer to Instructions)
			8a. Direct Component Contribution	8b. Other RESTORE Act Contribution	8c. Other Third Party Contribution	8d. Total Contribution			
Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region	Houma Navigation Canal Lock Complex	Terrebonne Basin	$16,000,000.00		$18,389,521.00	$34,389,521.00	11-2016	04-2018	Initial MYIP Activity - Deleted in Amendment #1
Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region	Calcasieu Ship Channel Salinity Control Measures	Calcasieu, Cameron and Vermilion Parishes	$16,000,000.00		$15,000,000.00	$31,000,000.00	11-2015	05-2018	Initial MYIP Activity - Funded Activity at $16,000,000 with no 3rd party contribution
Planning assistance	Adaptive Management	Louisiana coastal area	$2,400,000.00			$2,400,000.00	11-2015	05-2018	Initial MYIP Activity - Deleted in Amendment #1
	Houma Navigation Canal Lock Complex	Terrebonne Basin	-$16,000,000.00		-$18,389,521.00	-$34,389,521.00			Amendment #1 - Deleted Activity
	Adaptive Management	Louisiana coastal area	-$2,400,000.00			-$2,400,000.00			Amendment #1 - Deleted Activity
Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region	Calcasieu Ship Channel Salinity Control Measures	Calcasieu, Cameron and Vermilion Parishes	$20,400,000.00		-$15,000,000.00	$5,400,000.00	06-2017	12-2019	Amendment #1 - Amended to add $20,400,000 in DC funds for a total project amount of $36,400,000 and delete 3rd party contribution of $15,000,000 from project
Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region	Calcasieu Ship Channel Salinity Control Measures - Construction	Calcasieu, Cameron and Vermilion Parishes	$45,569,002.00		$217,226,998.00	$262,796,000.00	01-2020	12-2022	Amendment #1 - New Activity
Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region	Calcasieu Ship Channel Salinity Control Measures - Construction	Calcasieu, Cameron and Vermilion Parishes			-$217,226,998.00	-$217,226,998.00			Amendment #2 - Amended to delete 3rd party contribution, increase DC share to 100%

Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region	Calcasieu Ship Channel Salinity Control Measures (aka, Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration) - Engineering & Design	Cameron Parish	-$10,797,244.12			-$10,797,244.12	02-2021	05-2023	Amendment #2 - Changed activity description and reduced DC funds required for project E&D for a total project E&D DC amount of $25,602,755.88
Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region	Calcasieu Ship Channel Salinity Control Measures (aka, Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration) - Implementation: Construction & Monitoring	Cameron Parish	$189,799,228.72			$189,799,228.72	05-2023	05-2033	Amendment #2 - Revised the total project implementation amount to $235,368,230.72
						$0.00			
						$0.00			
						$0.00			
						$0.00			
						$0.00			
	12. ESTIMATED TOTAL FUNDING CONTRIBUTIONS FOR ACTIVITY(IES) (refer to Instructions)		$260,970,986.60	$0.00	$0.00	$260,970,986.60	**Please note: Grant awards may reflect non-material changes in proposed dates and estimated funding.**		