RESTORE Council Proposal Document

General Information

Proposal Sponsor: U.S. Department of Agriculture (USDA)

Title:
Gulf Coast Conservation Reserve Program

Project Abstract:
The U.S. Department of Agriculture (USDA), through the Natural Resources Conservation Service (NRCS), is requesting $10M in Council-Selected Restoration Component funding for the proposed Gulf Coast Conservation Reserve Program (GCCRP). This would include $800K in planning funds as FPL Category 1, as well as a separate $9.2M implementation component as an FPL Category 2 priority for potential funding. The GCCRP was established through the Council's 2015 Initial Funded Priorities List. USDA is currently implementing the program in Texas, Mississippi, Alabama, and Florida for the purpose of protecting and restoring critical wildlife habitat and improving water quality through the development of wildlife habitat, conservation, and forest management plans. The GCCRP proposal for FPL 3b will build upon the restoration and conservation progress made through the initial program funding, and would support the primary RESTORE Comprehensive Plan goal to restore water quality and quantity through the implementation of conservation practices and restoration activities to address the priority resource concerns identified in the planning phase.

The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those estuaries is influenced by what happens upstream along tributary rivers including the Mississippi. GCCRP activities will allow for conservation planning on private lands including, but not limited to, ecosystem restoration by conducting soil and water conservation for the benefit of water quality to priority bays and estuaries. Program duration is 4 years.

FPL Category: Cat1: Planning/ Cat2: Implementation

Activity Type: Program

Program: Gulf Coast Conservation Reserve Program

Co-sponsoring Agency(ies): N/A

Is this a construction project?:
Yes

RESTORE Act Priority Criteria:
(I) Projects that are projected to make the greatest contribution to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region, without regard to geographic location within the Gulf Coast region.
(III) Projects contained in existing Gulf Coast State comprehensive plans for the restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.

Priority Criteria Justification:
Projected to make the greatest contribution to restoring and protecting natural resources: The future health of the region's ecosystem will be decided on private lands. The five states on the Gulf

of Mexico--Alabama, Florida, Louisiana, Mississippi, and Texas--encompass more than 290 million acres. Private agricultural and forest lands account for 86 percent of those acres. Consequently, the management of private lands has a tremendous influence on the health of the region's industries and natural resources, including the quantity and quality of water flowing into the gulf's estuaries, fisheries and other wildlife. Through an incentive-based, voluntary approach, USDA partners with farmers, ranchers, and landowners on private lands to sustain and enhance natural resources across the region.

This program will serve to assist willing private landowners with implementing conservation measures that improve water and wildlife habitat conditions. The project will result in incremental improvements to water quality with comprehensive conservation measures being implemented in the watershed. The conservation implementation will be conducted with the landowner's conservation goals in mind, enabling greater ownership in conservation and management activities that affect water quality and wildlife habitat conditions within the Gulf Coast Region. Outcomes will include direct improvements in water quality, wetland and upland wildlife habitat, and forest health.

"ACT" principles to "Avoid, Control, and Trap" nutrients and sediments will be used. 1) avoiding excess nutrient loss; 2) utilizing conservation practices that control runoff losses in-field; and 3) trapping nutrient and sediment losses that cannot be avoided or controlled.

Contained in Existing Gulf Coast State Comprehensive Plans: GCCRP was established through the RESTORE Council's Initial FFPL in December 2015. USDA is currently implementing the program in Texas, Mississippi, Alabama, and Florida.

Project Duration (in years): 4

Goals

Primary Comprehensive Plan Goal:
Restore Water Quality and Quantity

Primary Comprehensive Plan Objective:
Restore, Improve, and Protect Water Resources

Secondary Comprehensive Plan Objectives:
Restore , Enhance, and Protect Habitats

Secondary Comprehensive Plan Goals:
Restore and Conserve Habitat

PF Restoration Technique(s):
Protect and conserve coastal, estuarine, and riparian habitats: Habitat management and stewardship
Reduce excess nutrients and other pollutants to watersheds: Agriculture and forest management
Reduce excess nutrients and other pollutants to watersheds: Stormwater management

Location

Location:
This program will be implemented on private lands in coastal watersheds in AL, FL, LA, MS, and TX.

HUC8 Watershed(s):
Please see the RESTORE Council Gulfwide location information available at:
https://restorethegulf.gov/sites/default/files/Gulfwide%20Watersheds_Counties_CongessionalDistricts.pdf

State(s):
Texas
Alabama
Mississippi
Louisiana
Florida

County/Parish(es):
Please see the RESTORE Council Gulfwide location information available at:
https://restorethegulf.gov/sites/default/files/Gulfwide%20Watersheds_Counties_CongessionalDistricts.pdf

Congressional District(s):
Please see the RESTORE Council Gulfwide location information available at:
https://restorethegulf.gov/sites/default/files/Gulfwide%20Watersheds_Counties_CongessionalDistricts.pdf

Narratives

Introduction and Overview:

The quality and, to a large extent, the quantity of fresh water entering the Gulf is affected by how those land uses are managed and whether they are converted to more intensive urban purposes. Thus, land protection and conservation aimed at private landowners is a priority for securing Gulf-wide ecosystem integrity. This action establishes the USDA's Gulf Coast Conservation Reserve Program as a Gulf-wide conservation program that targets priority conservation in both pristine and degraded habitats and in both agricultural and forestry lands. The GCCRP was established Initial Funded Priorities List (FPL) which was approved on December 2015. USDA is implementing the program in Texas, Mississippi, Alabama, and Florida for the purposes of protecting and restoring critical wildlife and improving water quality through the development of wildlife habitat, conservation, and forest management plans (https://www.restorethegulf.gov/sites/default/files/FPL_FS_K4_GW%20Conservation%20Reserve%20Program%20v11.15.15.pdf).

The distribution of agricultural land is important to wildlife conservation because farming is a major land use in many areas where federal land ownership is limited. Among USDA farm production regions, the federal government owns less than seven percent of all land in the Northeast, Southeast, Delta States, Corn Belt, Lake States, Northern Plains, Southern Plains, and Appalachia.9 Programs to protect wildlife species and their habitats in these areas will often need to include privately owned lands. Similarly, within the contiguous 48 states, the farm sector owns much, if not most, of the 82 million acres of rural nonfederal wetlands; cropland and pasture also account for 57 percent of the 101 million acres of converted wetlands.10 Hence, farm sector participation is key to any national effort to protect and restore wetlands and their dependent species https://digitalrepository.unm.edu/cgi/viewcontent.cgi?article=1673&context=nrj).

The intent of the program is to allow for conservation planning on private lands including, but not limited to, ecosystem restoration by conducting soil and water conservation for the benefit of water quality to priority bays and estuaries. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those estuaries is influenced by what happens upstream along tributary rivers including the Mississippi. USDA staff will engage state and local conservation partners in planning efforts to identify tracts of lands within the Gulf Coast Region that could benefit from conservation measures that would address natural resources and wildlife habitat degradation. These tracts of lands will be prioritized by watersheds (or sub-watersheds) that provide the most conservation benefit for the dollar invested. Conservation, forest management, and wildlife habitat plans will be developed to address the private landowners' conservation goals. The plans will document the natural resource concerns and conservation practices that would address the resource concerns. The plans will be developed with a regional perspective that fully considers the restoration and conservation needs of the Gulf Coast. Conservation practices that address water quality, wildlife habitat restoration and protection, and farmland preservation will be considered during the planning process. Conservation practices that address water quality, wildlife habitat restoration and protection, and farmland preservation would be implemented according to the Natural Resources Conservation Service (NRCS) and Forest Service (FS) practice standards. The agencies' existing conservation delivery system would be used to expedite the implementation efforts. This would involve coordination across all partner agencies, including other federal and state environmental agencies, local conservation districts, and nonprofit organizations with interest in natural resource conservation.

Proposed Methods:

Nutrient pollution adversely impacts water quality and poses a significant threat to localized watersheds across the entire Gulf Coast. Excessive nutrient enrichment, or eutrophication, of Gulf Coast estuaries and their watersheds is a chronic threat that can lead to hypoxia, harmful algal blooms, habitat losses, and fish kills. There are many existing local, state, regional, and federal programs across the Gulf that are working to address nutrient pollution, including the eight National Estuary Programs across the Gulf Coast, the Gulf of Mexico Alliance, EPA's Gulf of Mexico program, USDA's Gulf of Mexico Initiative, and the Gulf Coast Ecosystem Restoration Council. Building on these existing efforts, nutrient reductions can enhance overall ecosystem health by benefitting the estuaries that are integral habitat providing food, shelter, and nursery grounds for many of the Gulf's ecologically and economically important species (e.g., fish). The DWH incident resulted in impacts to ecological connectivity throughout nearshore habitats (see text box below that summarizes key aspects of the injury assessment that informed restoration planning). To restore these ecological linkages, the integrated restoration portfolio needs to include a portfolio of water quality and habitat restoration approaches that can provide large-scale benefits and address chronic threats to the Gulf ecosystem. Reducing nutrient loading is part of the portfolio that will mitigate the chronic and pervasive ecosystem threats incurred by eutrophic Gulf Coast waters https://www.gulfspillrestoration.noaa.gov/sites/default/files/wp-content/uploads/Chapter-5_Restoring-Natural-Resources_508.pdf).

About 20 elemental nutrients are essential for plant growth. Some of these nutrients are supplied naturally by the air, water, and soil. Fertilizers and manures are used to supplement the natural supplies for optimum crop growth. When nutrients are used correctly they are very beneficial, but when they are used in the wrong place at the wrong time they become pollutants. Both groundwater and surface water are very vulnerable to pollution. Water is one of our most valuable resources, and protecting it is an important concern.

The first line of defense to control nitrogen and phosphorus is the use of nutrient management. Managing nutrients is referred to as the 4Rs: Right rate, Right timing, Right source, and Right placement. Consistent use of the 4Rs will help prevent excess nutrient loss from agricultural fields into surface and ground water resources.

All nutrients can be lost when soil is eroded, but phosphorus is especially vulnerable. The primary way to prevent phosphorus loss is to control erosion. If no sediments leave the land, sediment-attached phosphorus does not leave, although soluble phosphorus may be lost (https://content.ces.ncsu.edu/best-management-practices-for-agricultural-nutrients).

As nutrient costs continue to rise, producers are paying closer attention to the cost of nutrient application and return. Good nutrient management practices for growing a profitable crop are very similar to those needed for improving waterbird habitat. Nutrient management that ensures good water quality will benefit waterbirds.

Integrated pest management (IPM) involves using the best management practice that benefits both the cropping system and wildlife habitat. In many cases, IPM uses multiple methods of control that are based on economic and pest thresholds. Prudent use of agrichemicals will benefit the economics of production and waterbirds.

Waterbirds and other wildlife can be found in areas surrounding fields. Field edges are critical habitat for many species. Some simple management can be used to enhance these environments.

A conservation buffer is a type of field edge where small areas or strips of land are left in permanent vegetation. Buffers are designed to intercept pollutants and manage other environmental concerns.

Strategically placed buffer strips can effectively mitigate the movement of sediment, nutrients and pesticides within farm fields. These same buffers provide food and cover for waterbirds and wildlife. Types of buffers are riparian buffers, filter strips, grassed waterways, shelterbelts, windbreaks, contour grass strips, shallow water areas for wildlife, field borders, alley cropping and vegetative barriers (https://www.uaex.edu/publications/pdf/FSA-9098.pdf).

The project activities will identify natural resource concerns on private property throughout the Gulf Coast Region. Water quality and wildlife habitat resource concerns will be prioritized on individual land units and conservation plans will be developed to address those resource concerns. Conservation planning and environmental due diligence efforts will be completed during initial phase of the program. The menu of conservations practices and a list of exemplar conservation practices available for implementation through the GCCRP are attached. Management practices such as nutrient management has been documented to have positive impact on the environment as outlined in the study: Long-term agro-economic and environmental assessment of adaptive nutrient management on cropland fields with established structural conservation practices. The study concluded that the results from this long-term evaluation of the agronomic, environmental, and economic impacts indicated that N application was reduced when rate recommendations were based on soil test recommendations and historical yield data compared to traditional rate recommendations. More importantly, although N rate was correlated with revenue, it was not correlated to profit, challenging the traditional view that more fertilizer increases profit up to a point (https://www.jswconline.org/content/75/3/416).

Conservation practices and restoration activities will be implemented to address water quality and wildlife habitat concerns on approximately 15,000 acres. The land will be subject to the NRCS conservation practice standards outlined in the conservation, forest management, and wildlife habitat plans developed in the planning phase of this program.

After the planning, engineering and compliance, USDA will enter into contracts with landowners to implement conservation practices on their property. Contracts will serve as an agreement to implement the conservation practices outlined in the conservation plan according to conservation practice standards and specifications (including any required property access agreement and activities related to project monitoring). It is typical for the landowner to implement the practices; however, if the landowner is not capable of carrying out the work, USDA could implement conservation practices through a federal contract or agreement with a third party.

Implementation of conservation practices includes implementation of construction or structural conservation practices (e.g., earth moving) and non-construction activities such as non-structural practices (e.g., vegetation management). All practices will be implemented according to the conservation practices standards and specifications.

Environmental Benefits:

This program will serve to assist willing private landowners with implementing conservation measures that improve water and wildlife habitat conditions. The project will result in incremental improvements to water quality with comprehensive conservation measures being implemented in the watershed. The conservation implementation will be conducted with the landowner's conservation goals in mind, enabling greater ownership in conservation and management activities that affect water quality and wildlife habitat conditions within the Gulf Coast Region. Outcomes will include direct improvements in water quality, wetland and upland wildlife habitat, and forest health.

We are becoming increasingly aware that almost everything we do may have some potential negative effect on the environment. Conservation practices or BMPs are designed to reduce the negative effects of agricultural production on surface and ground water resources. In some

especially sensitive areas, the acceptable level of production may be minimal, especially with respect to fertilization. In other places, fertilizers may be used along with BMPs. Fertilizers and other nutrient sources should never be applied haphazardly.

No single set of BMPs applies in all situations. The BMPs presented here are for nutrient management on a wide variety of agricultural lands across the state. The best set of practices for a specific cropping situation will depend on individual circumstances; however, it is always recommended to use a combination of BMPs to avoid, control, and trap nitrogen and phosphorus (https://content.ces.ncsu.edu/best-management-practices-for-agricultural-nutrients).

NRCS swiftly launched the Migratory Bird Habitat Initiative following the 2010 Deepwater Horizon oil spill to enable farmers to create and enhance habitat for migratory birds, providing an alternative to habitat in impacted coastal ecosystems. NRCS invested $40 million in the initiative, which led to conservation practices implemented on more than 470,000 acres in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri and Texas.

Mississippi State University completed a three-year evaluation of bird use of habitat and availability of food in rice fields, catfish ponds and wetlands managed through MBHI. The results were released in a report in fall 2014. This report includes findings that demonstrate the importance of landscape-level conservation efforts. The evaluation began in November 2010 (https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/initiatives/?cid=stelprdb1269772).

Waterbirds occupy an important niche in streamside and wetland habitats. Their presence indicates a healthy ecosystem and can add value to agricultural lands. Agricultural producers with water resources on their land can fine-tune their management practices to enhance wildlife and waterbird populations. Water resources may include a river or stream bank, flooded field, reservoir, shallow water area or farm pond. Best management practices for agricultural production will improve water quality and reduce soil erosion as well as improve waterbird habitat (https://www.uaex.edu/publications/pdf/FSA-9098.pdf).

Metrics:

Metric Title: COI003 : Outreach/ Education/ Technical Assistance - # people enrolled - BMPs
Target: 100
Narrative: People (landowners) enrolled into the program to implement conservation practices on their land.

Metric Title: COI002 : Outreach/ Education/ Technical Assistance - # people reached
Target: 300
Narrative: People (landowners) that USDA will engage for the purpose of implementing this program.

Metric Title: HM005 : Agricultural BMPs - acres under contracts/agreements
Target: 15,000
Narrative: Acres under contract in which conservation practices will be planned and implemented.

Risk and Uncertainties:

This project relies on voluntary incentive-based conservation on private land. It is possible that landowners who need to participate will not choose to participate. However, the RESTORE Act allows flexible incentives, providing a way to entice landowners to address resource concerns. In

addition, through a memorandum of understanding, NRCS will work hand-in-hand with the local Soil & Water Conservation Districts, who are landowners, themselves. This group of conservation minded volunteers will provide a bridge of trust, a way to gain access and cooperation to private land and landowners. Another area of risk and uncertainty is weather related, which can cause delays in implementation. NRCS will reserve up to 10% of the implementation funds to cover weather related problems. To account for all contingencies, the project timeline is set up for 8.5 years, allowing adequate time for implementation.

NRCS has flexibility and adaptive management built into its planning process. NRCS will also use scientifically developed and field-tested conservation practice standards, which reduces the risk of uncertainties and unintended impacts.

There a risk that future land use practices on participating private property could undermine or work at cross purposes with the expected ecosystem benefits of the program. Most of the practices in this project will address critically eroding areas, so the risk of land use changes of those specific areas would be minimal. The design process for erosion control structures can take into account predicted land use changes upstream that would increase peak runoff. Where appropriate, a safety factor can be built into the design process so that structures will function even if increased urbanization occurs in the watershed. The risk can be further mitigated by requiring the private landowner to agree to operate and maintain all conservation practices for the practice lifespan. Landowner maintenance is necessary to obtain the environmental and ecosystem benefits of this project and it will be required as a condition of project participation.

Potential Risks and uncertainties for the water quality and wildlife habitat restoration

- The program relies on voluntary incentive-based conservation on private land. It is possible that landowners that need to participate will not choose to participate. Landowners in the targeted watersheds could decline to participate for various reasons.
- Weather related events such as hurricanes and tornadoes (droughts and flooding) could cause delays in conservation practice implementation. Previously implemented practices could also be impacted through weather related events creating the need for practices to be reapplied or repaired.
- Landuse change or activities on neighboring properties could undermine or work at cross purposes with the restoration efforts of the GCCRP. This could delay or suppress ecosystem benefits.
- Landuse change such as transition to a more intensive agricultural production or urbanization of participating properties at a future date could undo the gains made to decrease nutrient and sediment runoff and cause wildlife habitat segmentation.
- Sea level rise and climate change could create conditions that make agricultural production untenable; therefore, causing the landowner to transition to a more or less intense landuse.

The risk and uncertainties outlined above are not foreign to entities who engage in conservation and restoration of natural resources on private lands. Landowners are engaged through targeted outreach and education. Landowners are provided with financial and technical assistance to incentivize the adoption of conservation practices.

Farm-based, natural resource conservation policy effectively began as a product of the twin disasters of the 1930's: the Dust Bowl and the Great Depression. For much of its history its existence was closely linked to, if not dependent upon, commodity support policies, often as a tool to help manage or control production and supplies. The 1985 Farm Bill sent conservation policy off on a different trajectory. Over the last 20 years the policy focus has rapidly shifted away from land retirement towards conservation as a part of production — working lands conservation to address resource

concerns by building on stewardship principles at the heart of responsible farming (https://policymatters.illinois.edu/a-brief-history-of-farm-conservation-policy/).

Relative to landuse change, there is a continuous effort to protect, conserve, and preserve natural resources in response to urbanization. As long as there is farm production within the Gulf Coast region, there will be a need to work with landowners to minimize the runoff of nutrient sediments from their property. Also, there will continue to be opportunities to explore restoring and maximizing wildlife habit on agricultural lands and associated forested lands.

As outlined in Migratory Bird Habitat Initiative, conservation and restoration work on agricultural lands may provide an opportunity to address sea level rise and climate change with respect to wildlife habitat.

Conservation efforts on private lands play a critical role in providing habitat for a variety of wildlife species, including migratory birds. NRCS works with agricultural producers to create and enhance habitat for wetland-dependent migratory birds.

Millions of migratory birds, including ducks, geese, and shorebirds travel the Mississippi Flyway each year to winter in Gulf of Mexico-area ecosystems, or in the case of many shorebirds, Central and South America. A 2015 study released by Mississippi State University showed that wetlands created and enhanced by producers through MBHI provided migration and winter habitat for many more birds than unmanaged sites (https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/initiatives/?cid=steldevb1027669).

To address the risk and uncertainties described above, USDA will have to adaptively manage the program in order to respond to issue that arise associated with landowner's interest in program participation and increase urbanization of Gulf watersheds. USDA will also work with landowners to address site specific operation and maintenance issues associated with weather related events that negatively impact applied conservation practices. Corrective measures will be explored and implemented to ensure that the conservation practices are maintained for the practice useful life.

Monitoring and Adaptive Management:

Conservation practice implementation is based on site-specific needs to address water quality and/or wildlife habitat resource concerns. Technical assistance provided by professionals will help landowners to identify a suite of practices to address the resource concerns on their property. The suite of practices to address water quality and wildlife habitat is not finite. The list of conservation practices to be considered for implementation as a part of this program will be added as an attachment. The site-specific evaluation form that documents the anticipated environmental impacts and benefits of the suite of practices will also be included as an attachment.

Best Management Practices (BMPs) are farming methods that are designed to minimize adverse environmental effects while maintaining agricultural production. Nutrient BMPs, referred to as the 4Rs—Right rate, Right timing, Right source, and Right placement—should be used on all cropping systems and is the first line of defense. Additional BMPs should be used to control nutrients as they move from application area to the water resource. Put together, these BMPs form a system to avoid, control, and trap nutrients.

The first line of defense to control nitrogen and phosphorus is the use of nutrient management. Managing nutrients is referred to as the 4Rs: Right rate, Right timing, Right source, and Right placement. Consistent use of the 4Rs will help prevent excess nutrient loss from agricultural fields into surface and ground water resources (https://content.ces.ncsu.edu/best-management-practices-

for-agricultural-nutrients).

Anticipated environmental benefits from the implementation of a suite of conservation practices are documented in the Network Effects Diagrams. Network diagrams are flow charts of direct, indirect and cumulative effects resulting from installation of the practices. Completed network diagrams are an overview of expert consensus on the direct, indirect and cumulative effects of installing proposed practice installation. They show the potential positive and negative outcomes of practice installation.

Project performance will be captured to monitoring the progress of this project. In-steam water quality monitoring nor wildlife habitat surveys are planned for this project, so existing conservation/restoration modeling and projection tools will used to document the success of conservation practice implementation.

Monitoring and Adaptive Management: A Monitoring and Adaptive Management Plan (MAM Plan) for the Program will be developed according to standards outlined in Council Monitoring and Assessment Program. USDA will further develop the MAM Plan and conduct project monitoring according to the plan. USDA will work with landowners to address adaptive management considerations in response to monitoring requirements and measures. In-stream water quality monitoring; laboratory processing and analysis; identification and implementation of corrective actions; and reporting are among the activities associated with monitoring and adaptive management.

Operation and Maintenance will be evaluated by USDA as specified in the conservation practice standards and may include, but would not be limited to, addressing minor soil erosion or vegetation establishment issues due to weather-related events. Operation and maintenance activities will be identified by USDA based on site evaluations and performance monitoring data and reports.

Data Management:

To the extent practicable, all field data such as site-specific treatment recommendations, BMP standards and specifications, environmental and cultural resource assessments, and data generated during monitoring activities will be documented using standardized field datasheets. If standardized forms are unavailable or not readily amendable to record project-specific data, then project-specific datasheets will be drafted prior to conducting project implementation and monitoring. Electronic files of field sheets, notebooks, GIS data, photographs, certifications, authorizations, and payments will be retained by USDA. Relevant project data that are handwritten on hardcopy datasheets or notebooks will be converted to a digital format and filed electronically. Electronic files will be named with the date on which the file was created and will include information that describes by whom the file was created and any explanatory notes on the file contents. If a data file is revised, a new copy will be made and the original preserved. Data will be available to the public consistent with Federal records management requirements and retained for a minimum of 5 years.

Collaboration:

USDA will continue to collaborate and coordinate through an extensive network of conservation partners, including DWH Trustees, other state and local agencies, and private for- and nonprofit organizations. More specifically, USDA will engage its network of public and private partnerships that work collaboratively with farmers, ranchers, and private landowners to plan and install an array of conservation measures to address water quality and wildlife habitat concerns along the Gulf. This network is well-suited to provide cost effective and timely assistance to benefit the Gulf of Mexico ecosystem restoration effort. USDA will work closely with state and federal agencies in all states to help guide the prioritization and planning of GCCRP implementation.

Public Engagement, Outreach, and Education:

Landowner Outreach and Education: This activity will include, but is not limited to, engaging landowners within the project area to identify nutrient reduction opportunities on private lands. This activity will inform remaining phases of the Project.

Conservation Planning: Conservation Planning will be conducted on private lands to address nutrient reduction opportunities. Landowners that voluntarily signup for the program may receive technical assistance that could result in preparation of a conservation plan outlining best management practices to address nutrient reduction on their property. Technical assistance will be prioritized to address lands that are most vulnerable to nutrient loss. USDA will use existing conservation planning processes and tools to complete activities associated with this phase. A site-specific conservation plan will be developed by collaboratively working with individual landowners.

Leveraging:

Funds: $12,119,933.00
Type: Adjoining
Status: Committed
Source Type: Other Federal
Description: Funds committed to Gulf coast restoration through an executed agreement between USDA-Natural Resources Conservation Service and the National Fish and Wildlife Foundation. The funds the agreement has been committed.

Environmental Compliance:

The Natural Resources Conservation Service has categorical exclusions (CEs) which are actions that the Agency has determined do not individually or cumulatively have a significant effect on the human environment and, thus, should not require preparing an environmental assessment (EA) or environmental impact statement (EIS) under the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321-4347. NRCS CE actions promote restoration and conservation activities related to natural or human induced damage or alteration to watersheds. A list of exemplar CEs are listed below. A menu of CEs available for administering the GCCRP is attached (Categorical Exclusions for the Gulf Coast Conservation Reserve Program).

- Minor agricultural practices that are undertaken to maintain and/or restore ecological conditions in floodplains after a natural disaster or on lands impacted by human alteration. Examples of these practices include mowing, haying, grazing, fencing, off-stream watering facilities, and invasive species control which are undertaken when fish and wildlife are not breeding, nesting, rearing young , or during other sensitive timeframes .
- Soil erosion control measures on existing agricultural lands, such as grade stabilization structures (pipe drops), sediment basins, terraces, grassed waterways, filter strips, riparian forest buffer, and critical area planting.
- Water conservation activities on existing agricultural lands, such as minor irrigation land leveling, irrigation water conveyance (pipelines), irrigation water control structures, and various management practices.

NRCS has 70 years of experience with planning and implementation of on-going agricultural and grazing land management practices, soil erosion control measures and water conservation activities.

These activities have also been evaluated in Programmatic Environmental Assessments prepared for the Farmland Protection Program (2004 and 2009), Grasslands Reserve Program (2004 and 2009), Healthy Forest Reserve Program (2006), Environmental Quality Incentives Program (2004 and 2009), and Wetlands Reserve Program (2004 and 2009). One multi-state, regional EA for the application of

common NRCS conservation practices has also been prepared entitled " Environmental Assessment of NRCS conservation Practices Used to Address Natural Resource Concerns on Non-Federal Lands in the New England States and New York (2007)." Each of these EA's resulted in a Finding of No Significant Impact and is inclusive of comparable actions to those listed above which are being proposed as new categorical exclusions (https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/ecosciences/ec/?cid=nrcs143_026873).

USDA has advised the Council that these conservation practices are covered by USDA Categorical Exclusions (CEs). The Council is using these CEs for these activities, consistent with Section 4(d)(4) of the Council's National Environmental Policy Act (NEPA) Procedures, which enables the Council to use member CEs, where appropriate. Based on information provided by USDA, the Council has considered potential extraordinary circumstances, including potential negative effects to threatened and endangered species, essential fish habitat, Tribal interests and historic properties, where applicable, and has determined that no such circumstances apply. In using these CEs, the sponsor will employ the mitigation measures included in the USDA CE documentation pertaining to aquatic resources, protected species, and cultural and archeological resources.

In conjunction with the planning process illustrated in Figure 1, NRCS undertakes site specific environmental evaluations (EE) to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the CPA-52 (the NRCS EE form) before conservation/restoration implementation is initiated. The EE assesses the effects of conservation alternatives and provides information for the purpose of determining the need for additional consultation.

In situations where a single conservation practice may result in increased risk to the condition of another resource, additional conservation practices are integrated into the conservation plan to avoid creating new resource concerns. The EE process helps to ensure that all potential impacts to natural resources are identified and appropriate alternatives and practices are available to the landowner. Each conservation plan and contract/agreement will be accompanied by an EE.

Bibliography:

Natural Resources Conservation Service Compliance with NEPA Final Rule
Federal Register Vol. 75, No. 27, February 2010 Rules and Regulations
7 CFR Part 650 RIN 0578–AA55
https://digital.library.unt.edu/ark:/67531/metadc52610/m2/1/high_res_d/FR-2010-02-10.pdf

Assessment of the Effects of Conservation Practices on Cultivated Cropland in the Lower Mississippi River Basin
Conservation Effects Assessment Project (CEAP),
USDA, August 2013
https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1176978.pdf

Effects of Combined Conservation Practices on Soil and Water Quality in the Central Mississippi River Basin
C. Baffaut, F. Ghidey, R.N. Lerch, K.S. Veum, E.J. Sadler, K.A. Sudduth and N.R. Kitchen
Journal of Soil and Water Conservation May 2020, 75 (3) 340-351
https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1176978.pdf

Quantifying the Impacts of the Conservation Effects Assessment Project Watershed Assessments: The First Fifteen Years
D. Moriasi, L. Duriancik, E. Sadler, T. Tsegaye, J. Steiner, M. Locke, T. Strickland and D. Osmond
Journal of Soil and Water Conservation May 2020, 75 (3) 57A-74A
https://www.jswconline.org/content/75/3/57A

Long-term Agro-economic and Environmental Assessment of Adaptive Nutrient Management on Cropland Fields with Established Structural Conservation Practices
D.R. Smith, R.D. Harmel and R.L. Haney
Journal of Soil and Water Conservation May 2020, 75 (3) 416-425
https://www.jswconline.org/content/75/3/416

Element Losses From Fields in Conventional and Conservation Tillage in the Atlantic Coastal Plain, Georgia, United States
O. Pisani, D. Liebert, D.D. Bosch, A.W. Coffin, D.M. Endale, T.L. Potter and T.C. Strickland
Journal of Soil and Water Conservation May 2020, 75 (3) 376-386
https://www.jswconline.org/content/75/3/376

Best Management Practices To Minimize Agricultural Phosphorus Impacts on Water Quality
United States Department of Agriculture Agricultural Research Service ARS–163 July 2006
https://www.ars.usda.gov/is/np/BestMgmtPractices/Best%20Management%20Practices.pdf

Best Management Practices for Agricultural Nutrients SoilFacts
NC State Extension Publications Publication August 2017, AG-439-20
https://content.ces.ncsu.edu/best-management-practices-for-agricultural-nutrients

Management Practices for Enhancing Wildlife Habitat
M. Brittingham
Penn State Extension Publications Publication April 2016
https://extension.psu.edu/management-practices-for-enhancing-wildlife-habitat

Best Management Practices for Waterbirds on Agricultural Lands

T. McPeake
University of Arkansas Division of Agriculture; Agriculture and Natural Resources FSA9098
https://www.uaex.edu/publications/pdf/FSA-9098.pdf

Agricultural Best Management Practices for Water Quality
E. Brantley, L. Bell
Alabama Extension: Alabama A&M and Auburn Universities, Crop Production, October 2019
https://www.aces.edu/blog/topics/crop-production/agricultural-best-management-practices-for-water-quality/

Policy Considerations for Increasing Compatibilities between Agriculture and Wildlife
J. Lewandrowski, K. Ingram
Natural Resources Journal, Volume 39 (2), 1999
https://digitalrepository.unm.edu/cgi/viewcontent.cgi?article=1673&context=nrj

The Basics of Managing Wildlife on Agricultural Lands
B. MacGowan, B. Miller
Purdue University Forestry and Natural Resources: Wildlife Management FNR-193-W
https://www.extension.purdue.edu/extmedia/FNR/FNR-193-W.pdf

Effectiveness of Best Management practices in Improving Water Quality in a Pasture-dominated Watershed
Chaubey, L. Chiang, M.W. Gitau, and S. Mohamed
Journal of Soil and Water Conservation November/December Volume 65 (6) 2010
https://engineering.purdue.edu/ecohydrology/Pubs/2010%20JSWC%20Chaubey%20et%20al.pdf

Measuring effectiveness of Best Management Practices
Chesapeake and Atlantic Coastal Bays Trust Fund
https://dnr.maryland.gov/streams/Documents/MeasuringEffectivenessOfBMPsWEB.pdf

Conservation Planning
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/entsc/?cid=nrcs144p2_027212

Nine Step Conservation Planning Process
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/eqip/?cid=nrcs144p2_015695

Conservation Practices Standards and Information Sheet/Practice Overview
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/cp/ncps/?cid=nrcs143_026849

Conservation Practices Physical Effects (CPPE) and Network Effects Diagram
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/cp/ncps/?cid=nrcs143_026849

Conservation Effects Assessment Project
United States Department of Agriculture, Natural Resources Conservation Service

https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/

Effects of Agricultural Conservation Practices on Fish and Wildlife
S. Gagnon, J. Makuch, C. Haper
USDA: Agricultural Research Service, Lincoln, Nebraska, USDA-ARS / UNL Faculty 417, 2008
https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1422&context=usdaarsfacpub

National Best Management Practices for Water Quality Management on National Forest System Lands
Volume 1: National Core BMP Technical Guide
United States Department of Agriculture Forest Service FS-990a April 2012
https://www.fs.fed.us/naturalresources/watershed/pubs/FS_National_Core_BMPs_April2012.pdf

A Brief History of Farm Conservation Policy
J. Coppess
Department of Agricultural and Consumer Economics, College of ACES, University of Illinois, Policy Matters July 2014
https://policymatters.illinois.edu/a-brief-history-of-farm-conservation-policy/

A Comprehensive Restoration Plan for the Gulf of Mexico: Restoring Natural Resources
Final Programmatic Damage Assessment and Restoration Plan (PDARP) and Final Programmatic Environmental Impact Statement (PEIS)
5.5.4 Restoration Type: Nutrient Reduction (Nonpoint Source)
https://www.gulfspillrestoration.noaa.gov/sites/default/files/wp-content/uploads/Chapter-5_Restoring-Natural-Resources_508.pdf

Looking Forward: The Strategy of the Federal Members of the Hypoxia Task Force
Mississippi River/Gulf of Mexico Hypoxia Task Force
Hypoxia Task Force Federal Strategy – 2016 Update
https://www.epa.gov/sites/production/files/2016-12/documents/federal_strategy_updates_12.2.16.pdf

Gulf Hypoxia Action Plan 2008
Mississippi River/Gulf of Mexico Hypoxia Task Force
https://www.epa.gov/sites/production/files/2015-03/documents/2008_8_28_msbasin_ghap2008_update082608.pdf

Gulf Coast Ecosystem Restoration Partnership Five-Year Report With USDA's NRCS
National Fish and Wildlife Foundation
Working with Private Landowners to Advance Gulf Restoration Goals, April 2020
https://www.nfwf.org/gulf-environmental-benefit-fund/gulf-coast-ecosystem-restoration-partnership-five-year-report

Gulf Coast Conservation Reserve Program
Gulf Coast Ecosystem Restoration Council Funded Priorities List Factsheets 2015
https://www.restorethegulf.gov/sites/default/files/FPL_FS_K4_GW%20Conservation%20Reserve%20Program%20v11.15.15.pdf

Migratory Bird Habitat Initiative
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/initiatives/?cid=steldevb1

027669

Evaluation of the Migratory Bird Habitat Initiative: Report of Findings
R. Kamiski and J. Brian Davis
Mississippi State University
Forest and Wildlife Research Center Mississippi State University Research Bulletin
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/initiatives/?cid=stelprdb1269772

Data Needs for Agri-Environmental Policy Modeling & Analysis
USDA Economic Research Service and Farm Foundation Workshop October 2007
https://www.farmfoundation.org/projects/data-needs-for-agri-environmental-policy-modeling-analysis-437-d1/

Effects of Agricultural Conservation Practices on Fish and Wildlife: A Conservation Effects Assessment Project (CEAP) Bibliography
S. Gagnon, J. Makuch, and C. Harper
National Agricultural Library Special Project (CEAP) Bibliography
Special Reference Briefs Series No. SRB 2008-01
https://www.nal.usda.gov/waic/effects-agricultural-conservation-practices-fish-and-wildlife

Conservation Effects Assessment Project (CEAP) Bibliography and Literature Reviews
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/ceap/blr/?cid=nrcs143_014146

Environmental Compliance
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/ecosciences/ec/?cid=nrcs143_026873
7 CFR 653 – Technical Standards. 1978. Title 7: Agriculture. Part 653: Technical Standards.
7 CFR 1466 – Environmental Quality Incentives Program. 2011. Title 7: Agriculture. Part 1466: Environmental Quality Incentives Program.
https://www.ecfr.gov/cgi-bin/text-idx?SID=724fb2e0fa14df4e6eda7af096a69bfd&mc=true&node=pt7.6.653&rgn=div5

Soil and Water Resources Conservation Act (RCA) Appraisal
U.S. Department of Agriculture, Natural Resources Conservation Service. 2011.
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/rca/?cid=nrcs143_014213

National Planning Procedures Handbook
U.S. Department of Agriculture, Natural Resources Conservation Service. Handbooks, Title 180, Part 600, 2016
https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=33234.wba

Gulf of Mexico Initiative
U.S. Department of Agriculture, Natural Resources Conservation Service.
http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/home/?&cid=stelprdb1046039

Budget

Project Budget Narrative:
The budget request for this program is $10,000,000 ($2 Million per Gulf State). 80% of the funds will be used for conservation practice implementation.

Total FPL 3 Project/Program Budget Request:
$ 10,000,000.00

Estimated Percent Monitoring and Adaptive Management: 5 %
Estimated Percent Planning: 8 %
Estimated Percent Implementation: 80 %
Estimated Percent Project Management: 5 %
Estimated Percent Data Management: 2 %
Estimated Percent Contingency: 0 %

Is the Project Scalable?:
Yes

If yes, provide a short description regarding scalability.:
The level of funding will directly impact the amount of best management practices that can be implemented to address water quality and wildlife habitat. An increase or decrease in the overall budget will result in an increase or decrease in the number of acres treated and the level of restoration achieved.

Environmental Compliance[1]

Environmental Requirement	Has the Requirement Been Addressed?	Compliance Notes (e.g.,title and date of document, permit number, weblink etc.)
National Environmental Policy Act	No	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to resources of concern.
Endangered Species Act	No	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to threatened and endangered species.
National Historic Preservation Act	No	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to cultural resources.
Magnuson-Stevens Act	N/A	Note not provided.

[11] Environmental Compliance documents available by request (restorecouncil@restorethegulf.gov).

Fish and Wildlife Conservation Act	No	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts fish and wildlife.
Coastal Zone Management Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to coastal resources.
Coastal Barrier Resources Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to coastal barrier resources.
Farmland Protection Policy Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to prime, unique, or

		agricultural lands of importance.
Clean Water Act (Section 404)	No	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to waters of the United States.
River and Harbors Act (Section 10)	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to rivers and harbors.
Marine Protection, Research and Sanctuaries Act	N/A	Note not provided.
Marine Mammal Protection Act	N/A	Note not provided.
National Marine Sanctuaries Act	N/A	Note not provided.
Migratory Bird Treaty Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to migratory birds.
Bald and Golden Eagle Protection Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before

		conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to Bald or Golden Eagles.
Clean Air Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to air quality.
Other Applicable Environmental Compliance Laws or Regulations	N/A	https://restorethegulf.gov/sites/default/files/FPL_EClib_GW_Gulf_Coast_Conservation_Reserve_CE_signed.pdf (also attached).

Maps, Charts, Figures

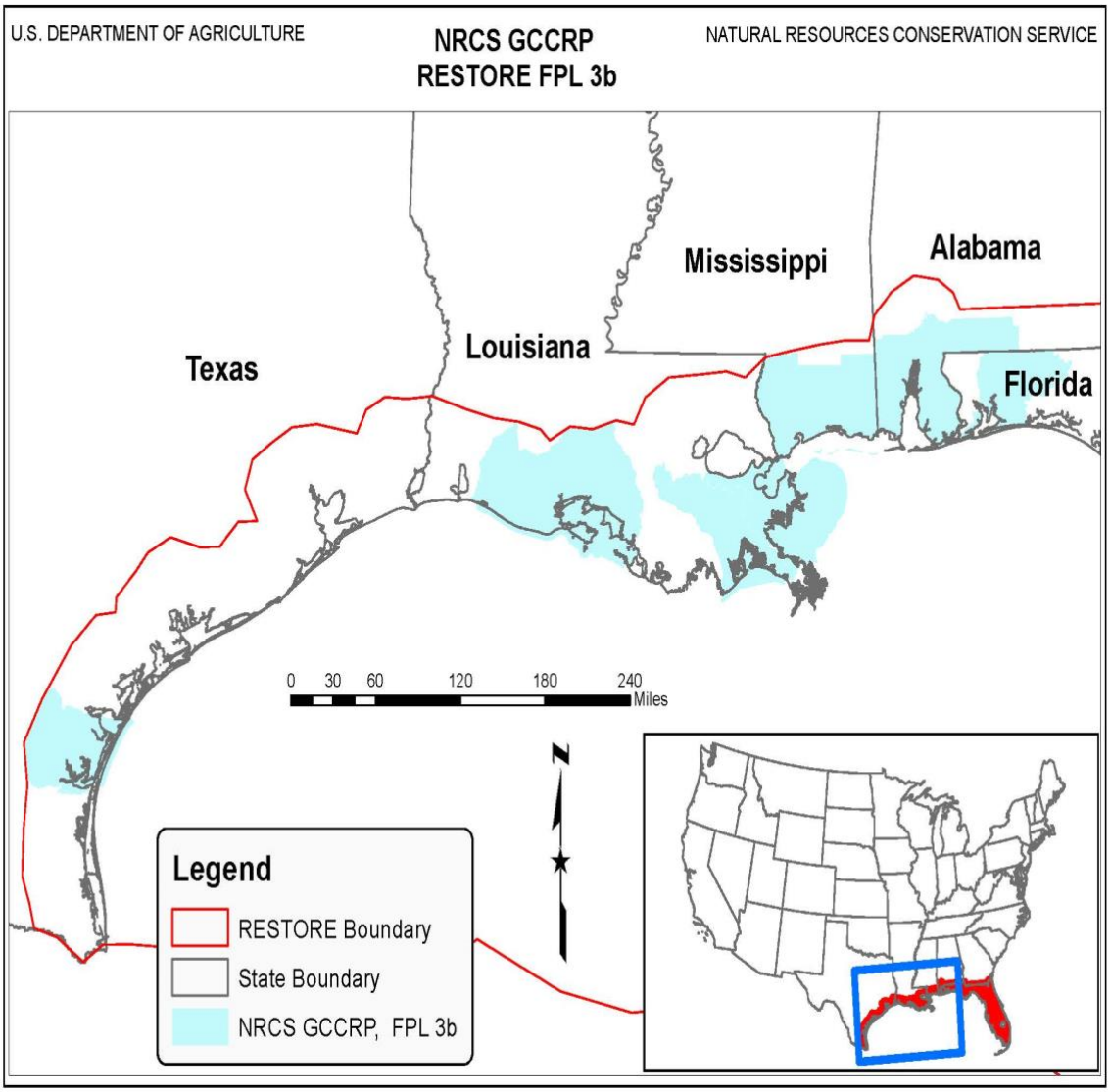

Figure 1: Project Location

RESTORE Council FPL 3 Proposal Document

General Information

Proposal Sponsor:
U.S. Department of Agriculture – Natural Resources Conservation Service

Title:
Gulf Coast Conservation Reserve Program

Project Abstract:
The Gulf Coast Conservation Reserve Program (GCCRP) was established through the RESTORE Council's Initial Funded Priorities List in December 2015. USDA is currently implementing the program in Texas, Mississippi, Alabama, and Florida for the purpose of protecting and restoring critical wildlife habitat and improving water quality through the development of wildlife habitat, conservation, and forest management plans. Conservation practices and restoration activities will be implemented to address the priority resource concerns identified in the planning phase. Wildlife habitat restoration and natural resource conservation measures will be prioritized on individual land units and implemented based on best available science. The GCCRP proposal for the Funded Priority List 3B will build upon the restoration and conservation progress made through the initial program funding. The intent of the program is to allow for conservation planning on private lands including, but not limited to, ecosystem restoration by conducting soil and water conservation for the benefit of water quality to priority bays and estuaries. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those estuaries is influenced by what happens upstream along tributary rivers including the Mississippi.

FPL Category: Cat1: Planning/ Cat1: Implementation

Activity Type: Program

Program: Gulf Coast Conservation Reserve Program

Co-sponsoring Agency(ies): N/A

Is this a construction project?:
No

RESTORE Act Priority Criteria:
(I) Projects that are projected to make the greatest contribution to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region, without regard to geographic location within the Gulf Coast region.
(III) Projects contained in existing Gulf Coast State comprehensive plans for the restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.

Priority Criteria Justification:
Projected to make the greatest contribution to restoring and protecting natural resources: The future health of the region's ecosystem will be decided on private lands. The five states on the Gulf of Mexico--Alabama, Florida, Louisiana, Mississippi, and Texas--encompass more than 290 million acres. Private agricultural and forest lands account for 86 percent of those acres. Consequently, the management of private lands has a tremendous influence on the health of the region's industries

and natural resources, including the quantity and quality of water flowing into the gulf's estuaries, fisheries and other wildlife. Through an incentive-based, voluntary approach, USDA partners with farmers, ranchers, and landowners on private lands to sustain and enhance natural resources across the region.

This program will serve to assist willing private landowners with implementing conservation measures that improve water and wildlife habitat conditions. The project will result in incremental improvements to water quality with comprehensive conservation measures being implemented in the watershed. The conservation implementation will be conducted with the landowner's conservation goals in mind, enabling greater ownership in conservation and management activities that affect water quality and wildlife habitat conditions within the Gulf Coast Region. Outcomes will include direct improvements in water quality, wetland and upland wildlife habitat, and forest health.

"ACT" principles to "Avoid, Control, and Trap" nutrients and sediments will be used. 1) avoiding excess nutrient loss; 2) utilizing conservation practices that control runoff losses in-field; and 3) trapping nutrient and sediment losses that cannot be avoided or controlled.

Contained in Existing Gulf Coast State Comprehensive Plans: GCCRP was established through the RESTORE Council's Initial FFPL in December 2015. USDA is currently implementing the program in Texas, Mississippi, Alabama, and Florida.

Project Duration (in years): 4

Goals

Primary Comprehensive Plan Goal:
Restore Water Quality and Quantity

Primary Comprehensive Plan Objective:
Restore, Improve, and Protect Water Resources

Secondary Comprehensive Plan Objectives:
Restore , Enhance, and Protect Habitats

Secondary Comprehensive Plan Goals:
Restore and Conserve Habitat

PF Restoration Technique(s):
Protect and conserve coastal, estuarine, and riparian habitats: Habitat management and stewardship
Reduce excess nutrients and other pollutants to watersheds: Agriculture and forest management
Reduce excess nutrients and other pollutants to watersheds: Stormwater management

Location

Location:
This program will be implemented on private lands in coastal watersheds in AL, FL, LA, MS, and TX.

HUC8 Watershed(s):
Please see the RESTORE Council Gulfwide location information available at:
https://restorethegulf.gov/sites/default/files/Gulfwide%20Watersheds_Counties_CongessionalDistricts.pdf

State(s):
Texas
Alabama
Mississippi
Louisiana
Florida

County/Parish(es):
Please see the RESTORE Council Gulfwide location information available at:
https://restorethegulf.gov/sites/default/files/Gulfwide%20Watersheds_Counties_CongessionalDistricts.pdf

Congressional District(s):
Please see the RESTORE Council Gulfwide location information available at:
https://restorethegulf.gov/sites/default/files/Gulfwide%20Watersheds_Counties_CongessionalDistricts.pdf

Narratives

Introduction and Overview:

The quality and, to a large extent, the quantity of fresh water entering the Gulf is affected by how those land uses are managed and whether they are converted to more intensive urban purposes. Thus, land protection and conservation aimed at private landowners is a priority for securing Gulf-wide ecosystem integrity. This action establishes the USDA's Gulf Coast Conservation Reserve Program as a Gulf-wide conservation program that targets priority conservation in both pristine and degraded habitats and in both agricultural and forestry lands. The GCCRP will be operated in a way similar to and parallel with the Environmental Quality Incentive Program, the Agricultural Conservation Easement Program, the Forest Legacy Program, the Land and Water Conservation Fund, and the Regional Conservation Partnership Program under the 2014 Farm Bill. The intent of the program is to allow for conservation planning on private lands including, but not limited to, ecosystem restoration by conducting soil and water conservation for the benefit of water quality to priority bays and estuaries. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those estuaries is influenced by what happens upstream along tributary rivers including the Mississippi. USDA staff will engage state and local conservation partners in planning efforts to identify tracts of lands within the Gulf Coast Region that could benefit from conservation measures that would address natural resources and wildlife habitat degradation. These tracts of lands will be prioritized by watersheds (or sub-watersheds) that provide the most conservation benefit for the dollar invested. Conservation, forest management, and wildlife habitat plans will be developed to address the private landowners' conservation goals. The plans will document the natural resource concerns and conservation practices that would address the resource concerns. The plans will be developed with a regional perspective that fully considers the restoration and conservation needs of the Gulf Coast. Conservation practices that address water quality, wildlife habitat restoration and protection, and farmland preservation will be considered during the planning process. Conservation practices that address water quality, wildlife habitat restoration and protection, and farmland preservation would be implemented according to NRCS and FS practice standards. The agencies' existing conservation delivery system would be used to expedite the implementation efforts. This would involve coordination across all partner agencies, including other federal and state environmental agencies, local conservation districts, and nonprofit organizations with interest in natural resource conservation.

Proposed Methods :

The project activities will identify natural resource concerns on private property throughout the Gulf Coast Region. Water quality and wildlife habitat resource concerns will be prioritized on individual land units and conservation plans will be developed to address those resource concerns. Conservation planning and environmental due diligence efforts will be completed during initial phase of the program.

Conservation practices and restoration activities will be implemented to address water quality and wildlife habitat concerns on approximately 15,000 acres. The land will be subject to the NRCS conservation practice standards outlined in the conservation, forest management, and wildlife habitat plans developed in the planning phase of this program.

After the planning, engineering and compliance, USDA will enter into contracts with landowners to implement conservation practices on their property. Contracts will serve as an agreement to implement the conservation practices outlined in the conservation plan according to conservation practice standards and specifications (including any required property access agreement and activities related to project monitoring). It is typical for the landowner to implement the practices; however, if the landowner is not capable of carrying out the work, USDA could implement conservation practices through a federal contract or agreement with a third party.

Implementation of conservation practices includes implementation of construction or structural conservation practices (e.g., earth moving) and non-construction activities such as non-structural practices (e.g., vegetation management). All practices will be implemented according to the conservation practices standards and specifications.

Environmental Benefits:

This program will serve to assist willing private landowners with implementing conservation measures that improve water and wildlife habitat conditions. The project will result in incremental improvements to water quality with comprehensive conservation measures being implemented in the watershed. The conservation implementation will be conducted with the landowner's conservation goals in mind, enabling greater ownership in conservation and management activities that affect water quality and wildlife habitat conditions within the Gulf Coast Region. Outcomes will include direct improvements in water quality, wetland and upland wildlife habitat, and forest health.

Metrics:

Metric Title: COI003 : Outreach/ Education/ Technical Assistance - # people enrolled - BMPs : Capacity, Outreach, Incentives
Target: 100
Narrative: People (landowners) enrolled into the program to implement conservation practices on their land.

Metric Title: COI002 : Outreach/ Education/ Technical Assistance - # people reached : Capacity, Outreach, Incentives
Target: 300
Narrative: People (landowners) that USDA will engage for the purpose of implementing this program.

Metric Title: HM005 : Agricultural BMPs - acres under contracts/agreements : Habitat Management
Target: 15,000
Narrative: Acres under contract in which conservation practices will be planned and implemented.

Risk and Uncertainties:

This project relies on voluntary incentive-based conservation on private land. It is possible that landowners who need to participate will not choose to participate. However, the RESTORE Act allows flexible incentives, providing a way to entice landowners to address resource concerns. In addition, through an MOU, NRCS will work hand-in-hand with the local Soil & Water Conservation Districts, who are landowners, themselves. This group of conservation minded volunteers will provide a bridge of trust, a way to gain access and cooperation to private land and landowners. Another area of risk and uncertainty is weather related, which can cause delays in implementation. NRCS will reserve up to 10% of the implementation funds to cover weather related problems. To account for all contingencies, the project timeline is set up for 8.5 years, allowing adequate time for implementation.

NRCS has flexibility and adaptive management built into its planning process. NRCS will also use scientifically developed and field-tested conservation practice standards, which reduces the risk of uncertainties and unintended impacts.

There a risk that future land use practices on participating private property could undermine or work at cross purposes with the expected ecosystem benefits of the program. Most of the practices in this project will address critically eroding areas, so the risk of land use changes of those specific areas

would be minimal. The design process for erosion control structures can take into account predicted land use changes upstream that would increase peak runoff. Where appropriate, a safety factor can be built into the design process so that structures will function even if increased urbanization occurs in the watershed. The risk can be further mitigated by requiring the private landowner to agree to operate and maintain all conservation practices for the practice lifespan. Landowner maintenance is necessary to obtain the environmental and ecosystem benefits of this project and it will be required as a condition of project participation.

Monitoring and Adaptive Management:

Monitoring and Adaptive Management: A Monitoring and Adaptive Management Plan (MAM Plan) for the Program will be developed according to standards outlined in Council Monitoring and Assessment Program. USDA will further develop the MAM Plan and conduct project monitoring according to the plan. USDA will work with landowners to address adaptive management considerations in response to monitoring requirements and measures. In-stream water quality monitoring; laboratory processing and analysis; identification and implementation of corrective actions; and reporting are among the activities associated with monitoring and adaptive management.

Operation and Maintenance will be evaluated by USDA as specified in the conservation practice standards and may include, but would not be limited to, addressing minor soil erosion or vegetation establishment issues due to weather-related events. Operation and maintenance activities will be identified by USDA based on site evaluations and performance monitoring data and reports.

Data Management:

To the extent practicable, all field data such as site-specific treatment recommendations, BMP standards and specifications, environmental and cultural resource assessments, and data generated during monitoring activities will be documented using standardized field datasheets. If standardized forms are unavailable or not readily amendable to record project-specific data, then project-specific datasheets will be drafted prior to conducting project implementation and monitoring. Electronic files of field sheets, notebooks, GIS data, photographs, certifications, authorizations, and payments will be retained by USDA. Relevant project data that are handwritten on hardcopy datasheets or notebooks will be converted to a digital format and filed electronically. Electronic files will be named with the date on which the file was created and will include information that describes by whom the file was created and any explanatory notes on the file contents. If a data file is revised, a new copy will be made and the original preserved. Data will be available to the public consistent with Federal records management requirements and retained for a minimum of 5 years.

Collaboration:

USDA will continue to collaborate and coordinate through an extensive network of conservation partners, including DWH Trustees, other state and local agencies, and private for- and nonprofit organizations. More specifically, USDA will engage its network of public and private partnerships that work collaboratively with farmers, ranchers, and private landowners to plan and install an array of conservation measures to address water quality and wildlife habitat concerns along the Gulf. This network is well-suited to provide cost effective and timely assistance to benefit the Gulf of Mexico ecosystem restoration effort. USDA will work closely with state and federal agencies in all states to help guide the prioritization and planning of GCCRP implementation.

Public Engagement, Outreach, and Education:

Landowner Outreach and Education: This activity will include, but is not limited to, engaging landowners within the project area to identify nutrient reduction opportunities on private lands. This activity will inform remaining phases of the Project.

Conservation Planning: Conservation Planning will be conducted on private lands to address nutrient reduction opportunities. Landowners that voluntarily signup for the program may receive technical assistance that could result in preparation of a conservation plan outlining best management practices to address nutrient reduction on their property. Technical assistance will be prioritized to address lands that are most vulnerable to nutrient loss. USDA will use existing conservation planning processes and tools to complete activities associated with this phase. A site-specific conservation plan will be developed by collaboratively working with individual landowners.

Leveraging:

Funds: $12,119,933.00
Type: Adjoining
Status: Committed
Source Type: Other Federal
Description: Funds committed to Gulf coast restoration through an executed agreement between USDA-Natural Resources Conservation Service and the National Fish and Wildlife Foundation. The funds the agreement has been committed.

Environmental Compliance:
USDA has advised the Council that these conservation practices are covered by USDA Categorical Exclusions (CEs). The Council is using these CEs for these activities, consistent with Section 4(d)(4) of the Council's National Environmental Policy Act (NEPA) Procedures, which enables the Council to use member CEs, where appropriate. Based on information provided by USDA, the Council has considered potential extraordinary circumstances, including potential negative effects to threatened and endangered species, essential fish habitat, Tribal interests and historic properties, where applicable, and has determined that no such circumstances apply. In using these CEs, the sponsor will employ the mitigation measures included in the USDA CE documentation pertaining to aquatic resources, protected species, and cultural and archeological resources.

In conjunction with the planning process illustrated in Figure 1, NRCS undertakes site specific environmental evaluations (EE) to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the CPA-52 (the NRCS EE form) before conservation/restoration implementation is initiated. The EE assesses the effects of conservation alternatives and provides information for the purpose of determining the need for additional consultation.

In situations where a single conservation practice may result in increased risk to the condition of another resource, additional conservation practices are integrated into the conservation plan to avoid creating new resource concerns. The EE process helps to ensure that all potential impacts to natural resources are identified and appropriate alternatives and practices are available to the landowner. Each conservation plan and contract/agreement will be accompanied by an EE.

Bibliography:

7 CFR 653 – Technical Standards. 1978. Title 7: Agriculture. Part 653: Technical Standards.
7 CFR 1466 – Environmental Quality Incentives Program. 2011. Title 7: Agriculture. Part 1466: Environmental Quality Incentives Program.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service. 2013. Assessment of the Effects of Conservation Practices on Cultivated Cropland in the Upper Mississippi River Basin.
http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/ceap/?cid=stelprdb1176990

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service. 2011. RCA Appraisal – Soil and Water Resources Conservation Act.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service. 2016. National Planning Procedures Handbook. Handbooks. Title 180. Part 600.
http://directives.sc.egov.usda.gov/

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service. 2016. GOMI.
http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/home/?&cid=stelprdb1046039

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service. 2016. Field Office Technical Guide, Section IV. Conservation Practice Standards.
U.S. Department of Agriculture (USDA), Natural Resources Conservation Service. 2016. Conservation Effects Assessment Project (CEAP)
http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service. 2016. General Manual http://directives.sc.egov.usda.gov/

Budget

Project Budget Narrative:
The budget request for this program is $10,000,000 ($2 Million per Gulf State). 80% of the funds will be used for conservation practice implementation.

Total FPL 3 Project/Program Budget Request:
$ 10,000,000.00

Estimated Percent Monitoring and Adaptive Management: 5 %
Estimated Percent Planning: 8 %
Estimated Percent Implementation: 80 %
Estimated Percent Project Management: 5 %
Estimated Percent Data Management: 2 %
Estimated Percent Contingency: 0 %

Is the Project Scalable?:
Yes

If yes, provide a short description regarding scalability.:
The level of funding will directly impact the amount of best management practices that can be implemented to address water quality and wildlife habitat. An increase or decrease in the overall budget will result in an increase or decrease in the number of acres treated and the level of restoration achieved.

Environmental Compliance[1]

Environmental Requirement	Has the Requirement Been Addressed?	Compliance Notes (e.g.,title and date of document, permit number, weblink etc.)
National Environmental Policy Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to resources of concern.
Endangered Species Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to threatened and endangered species.
National Historic Preservation Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to cultural resources.
Magnuson-Stevens Act	N/A	Note not provided.
Fish and Wildlife Conservation Act	N/A	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to

[1] Environmental Compliance document uploads available by request (restorecouncil@restorethegulf.gov).

		ensure there are no adverse impacts fish and wildlife.
Coastal Zone Management Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to coastal resources.
Coastal Barrier Resources Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to coastal barrier resources.
Farmland Protection Policy Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to prime, unique, or agricultural lands of importance.
Clean Water Act (Section 404)	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to waters of the United States.
River and Harbors Act (Section 10)	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to

		ensure there are no adverse impacts to rivers and harbors.
Marine Protection, Research and Sanctuaries Act	N/A	Note not provided.
Marine Mammal Protection Act	N/A	Note not provided.
National Marine Sanctuaries Act	N/A	Note not provided.
Migratory Bird Treaty Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to migratory birds.
Bald and Golden Eagle Protection Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to Bald or Golden Eagles.
Clean Air Act	Yes	These program activities are covered by USDA-NRCS Categorical Exclusions. NRCS undertakes site specific environmental evaluations to address NEPA requirements, other requirements for protection of the environment, and NRCS regulations. This evaluation will be documented in the environmental evaluation before conservation/restoration implementation is initiated. Avoidance and minimization measures will be applied to ensure there are no adverse impacts to air quality.
Other Applicable Environmental Compliance Laws or Regulations	N/A	https://restorethegulf.gov/sites/default/files/FPL_EClib_GW_Gulf_Coast_Conservation_Reserve_CE_signed.pdf (also attached).

Maps, Charts, Figures

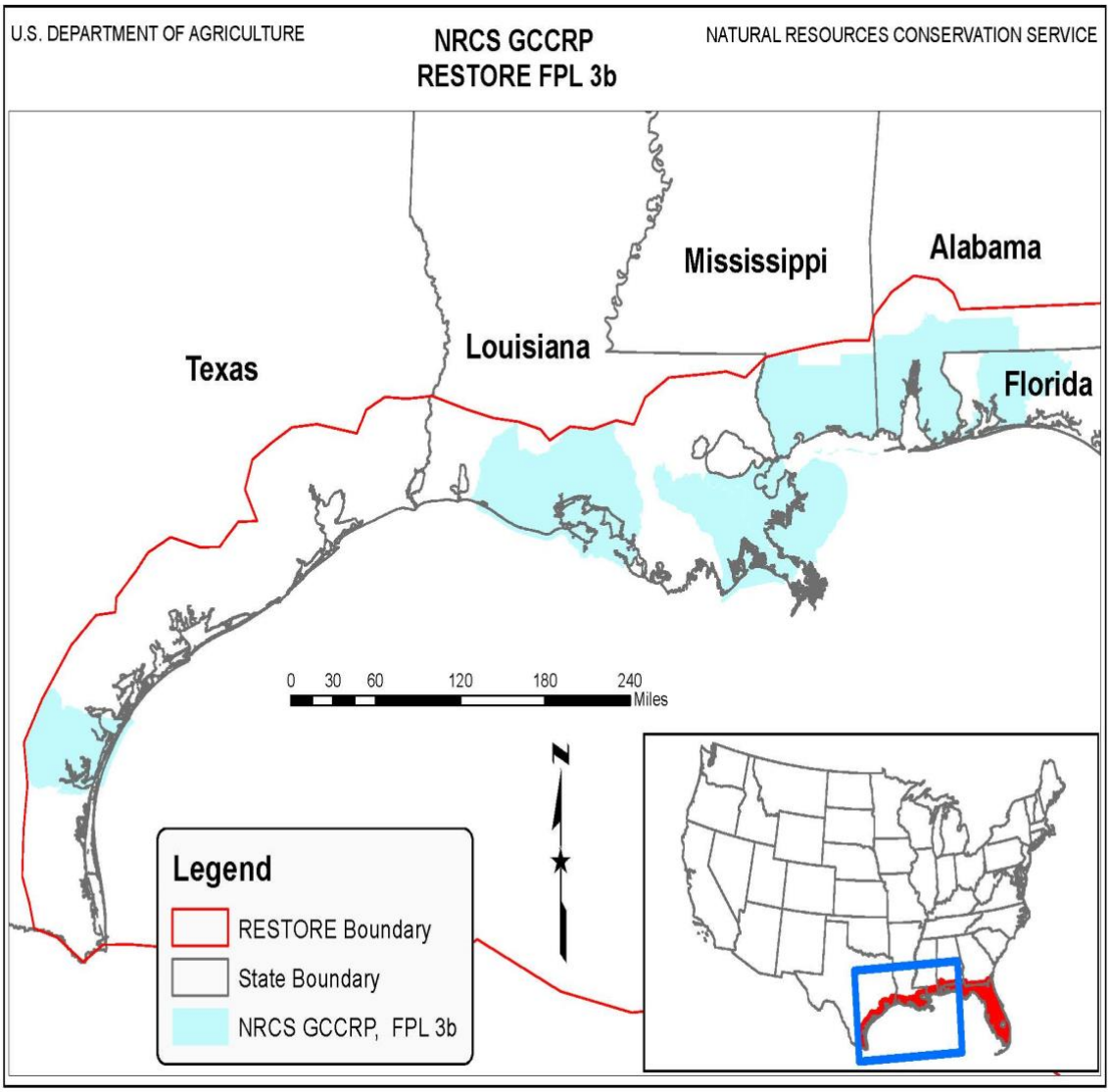

Figure 1 : Project Location

FPL 3b Internal Staff Review of Proposal Submitted 4/24/2020

Project/Program	Gulf Coast Conservation Reserve Program		
Primary Reviewer	John Ettinger	Sponsor	USDA
EC Reviewer	John Ettinger	Co-Sponsor	

1. Is/Are the selected Priority Criteria supported by information in the proposal?		Yes
Notes		

2. Does the proposal meet the RESTORE Act geographic eligibility requirement?		Yes
Notes		

3. Are the Comprehensive Plan primary goal and primary objective supported by information in the proposal?		Yes
Notes		

4. Planning Framework: If the proposal is designed to align with the Planning Framework, does the proposal support the selected priority approaches, priority techniques, and/or geographic area?		Yes
Notes		

5. Does the proposal align with the applicable RESTORE Council definition of project or program?		Yes
Notes		

6. Does the budget narrative adequately describe the costs associated with the proposed activity?		More information needed
Notes	Council staff recommend the sponsor reconsider the answer to the question "Is this a construction project?" If any of the potential conservation practices available under this program may involve construction, the question should be answered "yes".	

7. Are there any recommended revisions to the selected leveraged funding categories?			Yes
Notes	Council staff recommends clarifying the last sentence of the discussion of adjoining leveraging.		

8. Have three external BAS reviews been completed?	More information needed
Notes	Please see the external BAS review comments, and external reviews summary attached with these review comments.

9. Have appropriate metrics been proposed to support all primary and secondary goals?	Yes
Notes	

10. Environmental compliance: If FPL Category 1 has been selected for the implementation component of the project or program, does the proposal include environmental compliance documentation that fully supports the selection of Category 1?	No
Notes	The sponsor has provided the 2015 environmental compliance documentation used to approve this program in the Initial FPL. Council staff agrees that the proposed continuation of this program in FPL 3b can use the same approach to environmental compliance as was used in the Initial FPL. However, updated and additional information will be needed to ensure all applicable laws have been addressed for the current proposal. USDA will need to (1) ensure the four USDA-NRCS CEs (for AL, FL, MS and TX) used in the Initial FPL fully cover the specific activities in this FPL 3b proposal (these four CE documents will need to be updated to address the activities proposed for FPL 3b); (2) include a USDA-NRCS CE document for the Louisiana portion of the FPL 3b proposal; (3) include updated documentation from USFWS regarding compliance with the Endangered Species Act for the currently proposed activities in all five states; and (4) ensure that NHPA has been addressed for the program (in the Initial FPL, USDA achieved this by referencing in its CE the programmatic approaches and commitments it will use to comply with NHPA). Council staff also recommends revising the environmental compliance discussion to remove reference to the Council's 2015 findings, and replace it with a discussion of how USDA proposes to address NEPA and the laws applicable to the FPL 3b proposal. As currently written, the proposal appears to indicate that the Council has already made a finding for the FPL 3b proposal, which is not the case.

11. Geospatial Compliance: Have the appropriate geospatial files and associated metadata been submitted along with a map of the proposed project/program area?	Yes
Notes	

FPL3b BAS Review Summary -- Gulf Coast Conservation Reserve Program

May 2020

Overall the external Best Available Science reviews for the *Gulf Coast Conservation Reserve Program* proposal are mixed. While reviewers generally feel that the work would be beneficial, all reviewers are concerned by the lack of diversity in citations and the fact that such citations are not used in the proposal narrative text. Most reviewers would like to see a more in depth discussion of the applicant's previous history with similar programs and they wish a more thorough risk assessment was present in the proposal.

All reviewers note the lack of diversity in the bibliography section (all references are made to USDA materials) and wish that references were used throughout the proposal text instead of just listed at the end. Reviewer 1 further notes that most of the links in the Bibliography do not work or link to material other than what is stated. Reviewer 3 offers a list of non-USDA peer reviewed references which might be relevant to the proposal.

Reviewers 1 and 2 believe that the program's methods are reasonably supported and adapted to the Gulf region. Reviewer 3, however, believes the methodology should describe "what is there to assist private landowners with implementing conservation measures to improve water and wildlife habit conditions, why it matters, what is happening now, and the principles by which the applicant will manage the project and then establish details for maintenance, management, access, use and other issues." They further comment that the stated methods do not provide specifics as to how they will help achieve the goals/objectives of the program. For example, they question how the applicant will identify natural resources on private property. Reviewer 1 notes that methods will be developed in Phase 1 and no specific methods are listed in the proposal. Reviewer 2 writes that the methods are clearly described and based on the applicant's previous experiences.

All reviewers would like to see a more in depth discussion of risk evaluation for achieving the objectives of the program over time. Reviewer 1 states that the included Monitoring and Adaptive Management plan and building trust with local Soil and Water Conservation Districts will help to mitigate future uncertainties, however they note the applicant does not discuss the risks of potential climate change or changing land use patterns. Reviewer 2 wonders how sea level rise in coastal areas might affect the program. Reviewer 3 is concerned that the proposal does not discuss short-term risks, or the potential for accessibility upgrades, code compliance upgrades, emergency stabilization plans, and environmental issues. This reviewer feels that risk could be better be mitigated by a more comprehensive Monitoring and Adaptive Management plan that incorporates best available science, and utilizing the strategy of "Plan-Act-Monitor-Evaluate-Learn-Adjust to maximize knowledge gaps that will be crucial to sustaining future improvements and adjustments in planning." However, it should be noted that detailed monitoring strategies and mitigation plans are not required at the proposal stage. All reviewers note that the proposal could include more detailed discussion evaluating past successes and failures of similar programs.

All reviewers note that the program identifies likely environmental benefits for the proposed activity, however they encourage better linkage between environmental benefits and environmental stressors through the use of scientific literature.

USDA Responses to FPL #3B Best Available Science (BAS) Review Comments for the Gulf Coast Conservation Reserve Program

USDA was pleased to receive the feedback from the Best Available Science review of the Gulf Coast Conservation Reserve Program (GCCRP) project proposal. The comments and USDA's response to the comments strengthens the description/documentation of the scientific validity of the approach to address water quality as outlined in the proposal. Given that the GCCRP was developed and initially funded in the RESTORE Initial Funded Priorities List, USDA did not prepare the FPL#3B project proposal from the perspective of presenting a new restoration approach, method, or technology. The proposal seeks to build upon similar and synergistic Gulf restoration activities to address water quality. USDA will amend the proposal where applicable to provide greater detail and/or clarity in response to the BAS Review comments. The amendment will include references that expound upon the planned restoration/conservation techniques, conservation planning, and implementation strategies; and similar restoration/conservation efforts. The amendment will also include language to address project risk and uncertainties and anticipated environmental benefits in greater detail.

The following responses to BAS Review comments are provided to address the information gaps identified in the project proposal:

Question 1:
Have the proposal objectives, including proposed methods, been justified using peer reviewed and/or publicly available information?

BAS Reviewers Comments:
One reference related to Assessment of Effects of conservation practices in upper Mississippi Basin 2013 was not at the link provided. A deeper search found a lower Mississippi Basin report from the same year, perhaps more relevant. Another reference, a Planning and Procedures Handbook link to a 2016 resource ended up at a list of 2020 resources.

The proposal does not include any references to peer reviewed or publicly available information. The rationale the applicant uses is based on sound ecological principles, however, no scientific references are offered.

The application includes a single primary goal and one secondary goal with objectives that align with the Restore Comprehensive Plan. The proposed methods in the application does not provide specifics to achieving the stated goals (or objectives) of the project.

What is the rationale for the application of specific techniques used to identify, select, process, and analyze information for conservation planning on private lands. It is not clear how the data will be collected or generated? And, how it will be analyzed? For example, how will the applicant identify natural resources on private property throughout the Gulf Coast? Will a survey or questionnaire be used? If so, the Restore Council will need to know if the applicant offered a reasonable range of answers to select from. When objectives are stated clearly and understood, this will allow the applicant to generate a list of risks. The application does not consistently provide citations of data sources to validate statements, and there is limited peer-reviewed evidence in the proposal application.

USDA Response:
The links outlined in the BAS Reviewer comments will be addressed by adding the correct links and providing the additional source suggested by BAS Reviewer 1 on the bibliography page.

Assessment of the Effects of Conservation Practices on Cultivated Cropland in the Lower Mississippi River Basin
Conservation Effects Assessment Project (CEAP),
USDA, August 2013
https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1176978.pdf

Effects of Combined Conservation Practices on Soil and Water Quality in the Central Mississippi River Basin
C. Baffaut, F. Ghidey, R.N. Lerch, K.S. Veum, E.J. Sadler, K.A. Sudduth and N.R. Kitchen
Journal of Soil and Water Conservation May 2020, 75 (3) 340-351
https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1176978.pdf

The reference to "Assessment of Effects of conservation practices in upper Mississippi Basin 2013" will be deleted. Also, the following references will be added to the bibliography page to address the "request/need" for additional peer reviewed (non-USDA) sources.

Quantifying the Impacts of the Conservation Effects Assessment Project Watershed Assessments: The First Fifteen Years
D. Moriasi, L. Duriancik, E. Sadler, T. Tsegaye, J. Steiner, M. Locke, T. Strickland and D. Osmond
Journal of Soil and Water Conservation May 2020, 75 (3) 57A-74A
https://www.jswconline.org/content/75/3/57A

Long-term Agro-economic and Environmental Assessment of Adaptive Nutrient Management on Cropland Fields with Established Structural Conservation Practices
D.R. Smith, R.D. Harmel and R.L. Haney
Journal of Soil and Water Conservation May 2020, 75 (3) 416-425
https://www.jswconline.org/content/75/3/416

Element Losses From Fields in Conventional and Conservation Tillage in the Atlantic Coastal Plain, Georgia, United States
O. Pisani, D. Liebert, D.D. Bosch, A.W. Coffin, D.M. Endale, T.L. Potter and T.C. Strickland
Journal of Soil and Water Conservation May 2020, 75 (3) 376-386
https://www.jswconline.org/content/75/3/376

Best Management Practices To Minimize Agricultural Phosphorus Impacts on Water Quality
United States Department of Agriculture Agricultural Research Service ARS–163 July 2006
https://www.ars.usda.gov/is/np/BestMgmtPractices/Best%20Management%20Practices.pdf

Best Management Practices for Agricultural Nutrients SoilFacts
NC State Extension Publications Publication August 2017, AG-439-20
https://content.ces.ncsu.edu/best-management-practices-for-agricultural-nutrients

Management Practices for Enhancing Wildlife Habitat
M. Brittingham
Penn State Extension Publications Publication April 2016
https://extension.psu.edu/management-practices-for-enhancing-wildlife-habitat

Best Management Practices for Waterbirds on Agricultural Lands
T. McPeake
University of Arkansas Division of Agriculture; Agriculture and Natural Resources FSA9098
https://www.uaex.edu/publications/pdf/FSA-9098.pdf

Agricultural Best Management Practices for Water Quality
E. Brantley, L. Bell
Alabama Extension: Alabama A&M and Auburn Universities, Crop Production, October 2019
https://www.aces.edu/blog/topics/crop-production/agricultural-best-management-practices-for-water-quality/

Policy Considerations for Increasing Compatibilities between Agriculture and Wildlife
J. Lewandrowski, K. Ingram
Natural Resources Journal, Volume 39 (2), 1999
https://digitalrepository.unm.edu/cgi/viewcontent.cgi?article=1673&context=nrj

The Basics of Managing Wildlife on Agricultural Lands
B. MacGowan, B. Miller
Purdue University Forestry and Natural Resources: Wildlife Management FNR-193-W
https://www.extension.purdue.edu/extmedia/FNR/FNR-193-W.pdf

Effectiveness of Best Management practices in Improving Water Quality in a Pasture-dominated Watershed
Chaubey, L. Chiang, M.W. Gitau, and S. Mohamed
Journal of Soil and Water Conservation November/December Volume 65 (6) 2010
https://engineering.purdue.edu/ecohydrology/Pubs/2010%20JSWC%20Chaubey%20et%20al.pdf

Measuring Effectiveness of Best Management Practices
Chesapeake and Atlantic Coastal Bays Trust Fund
https://dnr.maryland.gov/streams/Documents/MeasuringEffectivenessOfBMPsWEB.pdf

BAS Reviewers 3 provided several questions as outline above relative to how restoration/conservation needs assessment are conducted (how will the applicant identify natural resources on private property throughout the Gulf Coast?). The brief summary below is an attempt to address along with links that supports the conservation planning and implementation process.

USDA Response:
The success of conservation planning and implementation depends on the voluntary participation of clients. The planning process used by NRCS is based on the premise that clients will make and implement sound decisions if they understand their resources, natural resource problems, and the effects of their decisions. Landowners within select watersheds are provided an opportunity to attain greater knowledge regarding improving water quality and wildlife habitat through the education and outreach phase of the

program. Landowners within the program boundaries will be permitted to sign-up for the GCCRP if the landowners have resource concerns (water quality or wildlife habitat concerns) on their property that can be addressed through the implementation of conservation practices. A conservationist will assess the landowners concern and conduct an inventory and evaluations to determine a conservation system that will address the site-specific resource concerns. The agreed to conservation practices are outlined in a conservation plan that can be used to secure funding through the GCCRP.

1. Conservation Planning
   United States Department of Agriculture, Natural Resources Conservation Service
   https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/entsc/?cid=nrcs144p2_027212
2. Nine Step Conservation Planning Process
   United States Department of Agriculture, Natural Resources Conservation Service
   https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/eqip/?cid=nrcs144p2_015695
3. Conservation Practices Physical Effects (CPPE) and Network Effects Diagram
   United States Department of Agriculture, Natural Resources Conservation Service
   https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/cp/ncps/?cid=nrcs143_026849
4. Conservation Effects Assessment Project
   United States Department of Agriculture, Natural Resources Conservation Service
   https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/

Question 2:
If information supporting the proposal does not directly pertain to the Gulf Coast region, are the proposal's methods reasonably supported and adaptable to that geographic area?

BAS Reviewers Comments:
The proposal methods are not reasonably supported with evidence and adaptable to that geographic region. The methodology should describe in detail what is there to assist private landowners with implementing conservation measures to improve water and wildlife habit conditions, why it matters, what is happening now, and the principles by which the applicant will manage the project and then establish details for maintenance, management, access, use and other issues. Conservation planning for the proposal should identify policies that strike a balance between use and significance for the project.

USDA Response: Nutrient pollution adversely impacts water quality and poses a significant threat to localized watersheds across the entire Gulf Coast. Excessive nutrient enrichment, or eutrophication, of Gulf Coast estuaries and their watersheds is a chronic threat that can lead to hypoxia, harmful algal blooms, habitat losses, and fish kills. There are many existing local, state, regional, and federal programs across the Gulf that are working to address nutrient pollution, including the eight National Estuary Programs across the Gulf Coast, the Gulf of Mexico Alliance, EPA's Gulf of Mexico program, USDA's Gulf of Mexico Initiative, and the Gulf Coast Ecosystem Restoration Council. Building on these existing efforts, nutrient reductions can enhance overall ecosystem health by benefitting the estuaries that are integral habitat providing food, shelter, and nursery grounds for many of the Gulf's ecologically and economically important species (e.g., fish). The DWH incident resulted in impacts to ecological connectivity throughout nearshore habitats (see text box below that summarizes key aspects of the

injury assessment that informed restoration planning). To restore these ecological linkages, the integrated restoration portfolio needs to include a portfolio of water quality and habitat restoration approaches that can provide large-scale benefits and address chronic threats to the Gulf ecosystem. Reducing nutrient loading is part of the portfolio that will mitigate the chronic and pervasive ecosystem threats incurred by eutrophic Gulf Coast waters (https://www.gulfspillrestoration.noaa.gov/sites/default/files/wp-content/uploads/Chapter-5_Restoring-Natural-Resources_508.pdf).

The proposal methods are widely known and implemented. Federal, state, local units of government, the private sector and various institutions provide technical and financial assistance to landowners to address soil, water, and wildlife habitat resource concerns on private lands. The proposal methods are conducive for Gulf restoration and have been applied with success in the geographic region.

The GCCRP was established Initial Funded Priorities List (FPL) which was approved on December 2015. USDA is implementing the program in Texas, Mississippi, Alabama, and Florida for the purposes of protecting and restoring critical wildlife and improving water quality through the development of wildlife habitat, conservation, and forest management plans (https://www.restorethegulf.gov/sites/default/files/FPL_FS_K4_GW%20Conservation%20Reserve%20Program%20v11.15.15.pdf).

As another example of geographical relevance, I have provided language from an April 2020 report:

WASHINGTON, D.C. (April 14, 2020) - The National Fish and Wildlife Foundation (NFWF) today released its Gulf Coast Ecosystem Restoration Partnership report detailing the results of the first five years of a successful partnership with the USDA's Natural Resources Conservation Service (NRCS) to accelerate Gulf Coast private lands conservation.

NFWF and NRCS launched the Gulf Coast Ecosystem Restoration Partnership in late 2014. The partnership was designed to leverage NFWF's then-newly established Gulf Environmental Benefit Fund (GEBF) with a focus on conserving land, improving water quality, and restoring wetlands, while at the same time sustaining agricultural production across the region.

NFWF and NRCS are using their respective authorities – the GEBF, as well as the Environmental Quality Incentives Program and the Agricultural Conservation Easement Program – to support complementary projects, the synergies of which will leave lasting conservation legacies in priority landscapes across the five Gulf States.

To date, the partnership has invested more than $73 million in projects that will restore, enhance or protect more than 250,000 acres, over half of which are wetlands. More than 15,000 acres are being enrolled in perpetual conservation easements. The full report can be found at the following link: https://www.nfwf.org/gulf-environmental-benefit-fund/gulf-coast-ecosystem-restoration-partnership-five-year-report

Impacts of NRCS' Migratory Bird Habitat Initiative
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/initiatives/?cid=stelprdb1269772

Gulf of Mexico Initiative
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/initiatives/?cid=stelprdb1046039

Texas Coastal Waters: Nutrient Reduction Strategies Report
Parsons August 2019
https://www.gulfspillrestoration.noaa.gov/sites/default/files/Task%205_FNLWatershed%20Assessment_August2019_FINAL.pdf

Mississippi Coastal Nutrient Reduction Strategies Implementation Projects
Mississippi Department of Environmental Quality
https://www.mdeq.ms.gov/water/surface-water/nonpoint-source-pollution-program/nutrient-reduction-in-mississippi/mississippi-coastal-nutrient/

Memorandum of Agreement (MOA) to Reduce Nutrient Loading within Mississippi and to the Gulf Coast State and Federal Agencies and Nongovernmental Organizations October 2010
https://www.mdeq.ms.gov/water/surface-water/nonpoint-source-pollution-program/nutrient-reduction-in-mississippi/memorandum-of-agreement/

Cost-Effective Strategies for Reducing Cropland Nutrient Deliveries to the Gulf of Mexico
M. Ribaudo, E. Marshall, and M. Aillery
United States Department of Agriculture, Economic Research Service, Natural Resource and Environment September 2018
https://www.ers.usda.gov/amber-waves/2018/september/cost-effective-strategies-for-reducing-cropland-nutrient-deliveries-to-the-gulf-of-mexico/

Federal Support to Hypoxia Task Force States on Nutrient Reduction Strategies Report
Mississippi River Gulf of Mexico Watershed Nutrient Task Force
Hypoxia Task Force 2008 Action Plan Action Item 2 September 2012
https://www.epa.gov/sites/production/files/2015-03/documents/hypoxia_annual_federal_strategy_appendix-508.pdf

Reducing Nitrogen Loading to the Gulf of Mexico from the Mississippi River Basin: Strategies to Counter a Persistent Ecological Problem
W. Mitsch, J. Day, Jr., J. Wendell Gilliam, P. Groffman, D. Hey, G. Randall,and N. Wang
Counter a Persistent Ecological Problem, BioScience 373 Vol. 51 No. 5, May 2001
https://www.researchgate.net/publication/247844170_Reducing_Nitrogen_Loading_to_the_Gulf_of_Mexico_from_the_Mississippi_River_Basin_Strategies_to_Counter_a_Persistent_Ecological_Problem

2018 Farm Bill Rules: Environmental Quality Incentives Program Environmental Assessment and Finding of No Significant Impact
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/farmbill/?cid=stelprdb1263599

Question 3:
Are the literature sources used to support the proposal accurately and completely cited? Are the literature sources represented in a fair and unbiased manner?

BAS Reviewers Comments:
It appears that literature cited is all from the same source, USDA.

A broader representation of scientific sources is preferred.

The literature sources used to support the proposal are cited at the end of the proposal but not throughout the proposal. To validate the reliability of the data, the applicant should not rely on a single source for all evidence to avoid bias. Therefore, it is important to use multiple sources to ensure reasonable validity and reliability of statements within the proposal. To do this, the applicant should avoid relying on any single source of data (i.e. USDA) by using a process called triangulation to enhance the validity and reliability of statements. Triangulation means using multiple independent sources to identify conservation measures. Triangulation is like studying an object located inside a box by viewing it through various windows (or sources) cut into the sides of the box. Observing a phenomenon through multiple "windows" can help the applicant compare what is being seen through a variety of lenses.

USDA Response:
To address the concerns expressed by the BAS Reviewers, additional references were added to the bibliography page and reference are cited within the proposal (see reference list above).

Question 4:
Does the proposal evaluate uncertainties and risks in achieving its objectives over time? (e.g., is there an uncertainty or risk in the near- and/or long-term that the project/program will be obsolete or not function as planned?)

BAS Reviewers Comments:
How is sea level rise factored into the selection of priority lands for coastal areas?

The objectives in this project are not clearly delineated to evaluate uncertainties and risks. According to the Restore Council Comprehensive Plan, "While habitat protection and conservation are generally viewed as low risk restoration approaches, they are not without uncertainty." The applicant indicated "There [is] a risk that future land use practices on participating private property could undermine or work at cross purposes with the expected ecosystem benefits of the program." The applicant should consider the potential for accessibility upgrades, code compliance upgrades, emergency stabilization plan, and environmental issues.

USDA Response:
Risks and uncertainties for the water quality and wildlife habitat restoration activities as outlined in the proposal (and below) can be anticipated and adapted to.

- The program relies on voluntary incentive-based conservation on private land. It is possible that landowners that need to participate will not choose to participate. Landowners in the targeted watersheds could decline to participate for various reasons.
- Weather related events such as hurricanes and tornadoes (droughts and flooding) could cause delays in conservation practice implementation. Previously implemented practices could also be impacted through weather related events creating the need for practices to be reapplied or repaired.
- Landuse change or activities on neighboring properties could undermine or work at cross purposes with the restoration efforts of the GCCRP. This could delay or suppress ecosystem benefits.
- Landuse change such as transition to a more intensive agricultural production or urbanization of participating properties at a future date could undo the gains made to decrease nutrient and sediment runoff and cause wildlife habitat segmentation.
- Sea level rise and climate change could create conditions that make agricultural production untenable; therefore, causing the landowner to transition to a more or less intensive landuse.

The risk and uncertainties outlined above are not foreign to entities who engage in conservation and restoration of natural resources on private lands. Landowners are engaged through targeted outreach and education. Landowners are provided with financial and technical assistance to incentivize the adoption of conservation practices.

Farm-based, natural resource conservation policy effectively began as a product of the twin disasters of the 1930's: the Dust Bowl and the Great Depression. For much of its history its existence was closely linked to, if not dependent upon, commodity support policies, often as a tool to help manage or control production and supplies. The 1985 Farm Bill sent conservation policy off on a different trajectory. Over the last 20 years the policy focus has rapidly shifted away from land retirement towards conservation as a part of production — working lands conservation to address resource concerns by building on stewardship principles at the heart of responsible farming (https://policymatters.illinois.edu/a-brief-history-of-farm-conservation-policy/).

Relative to landuse change, there is a continuous effort to protect, conserve, and preserve natural resources in response to urbanization. As long as there is farm production within the Gulf Coast region, there will be a need to work with landowners to minimize the runoff of nutrient sediments from there property. Also, there will continue to be opportunities to explore restoring and maximizing wildlife habit on agricultural lands and associated forested lands.

As outlined in Migratory Bird Habitat Initiative, conservation and restoration work on agricultural lands may provide an opportunity to address sea level rise and climate change with respect to wildlife habitat.

Conservation efforts on private lands play a critical role in providing habitat for a variety of wildlife species, including migratory birds. NRCS works with agricultural producers to create and enhance habitat for wetland-dependent migratory birds.

Millions of migratory birds, including ducks, geese, and shorebirds travel the Mississippi Flyway each year to winter in Gulf of Mexico-area ecosystems, or in the case of many shorebirds, Central and South America. A 2015 study released by Mississippi State University showed that wetlands created and

enhanced by producers through MBHI provided migration and winter habitat for many more birds than unmanaged sites (https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/initiatives/?cid=steldevb1027669).

To address the risk and uncertainties described above, USDA will have to adaptively manage the program in order to respond to issues that arise associated with landowner's interest in program participation and increase urbanization of Gulf watersheds. USDA will also work with landowners to address site specific operation and maintenance issues associated with weather related events that negatively impact applied conservation practices. Corrective measures will be explored and implemented to ensure that the conservation practices are maintained for the practice useful life.

Question A:
Has the applicant provided reasonable justification that the proposal is based on science that uses peer-reviewed and publicly available data?

BAS Reviewers Comments:
All linked documents appear to be publicly available. Not all documents are publicly accessible based on the links provided. Documents are all from USDA – no variation.

No peer-reviewed data was cited in the text or provided in the reference table.

USDA Response:
To address the concerns expressed by the BAS Reviewers, additional peer reviewed references were added to the bibliography page and reference are cited within the proposal. Additionally, all of the reference links were checked to ensure that they functioned properly.

Question B:

Has the applicant provided reasonable justification that the proposal is based on science that maximizes the quality, objectivity, and integrity of information (including, as applicable, statistical information)?

BAS Reviewers Comments:
The objectivity of the information is questioned since the applicant only references the agencies own documents. Otherwise, the quality and integrity of the information are good.

The applicant proposal does not utilize the best available science.

USDA Response:
To address the concerns expressed by the BAS Reviewers, additional references were added to the bibliography page and reference are cited within the proposal.

Conservation Practices Physical Effects (CPPE) and Network Effects Diagram
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/cp/ncps/?cid=nrcs143_026849

Conservation Effects Assessment Project
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/

Relative to best available science, the benefits of the implementation of conservation and restoration practices on agricultural and forested lands for the purpose of improving water quality and wildlife habitat has been well studied. The effects and benefits of the practices have been analyzed and captured through peer review and public feedback.

CEAP is a multi-agency effort to quantify the environmental effects of conservation practices and programs and develop the science base for managing the agricultural landscape for environmental quality. Project findings will be used to guide USDA conservation policy and program development and help conservationists, farmers and ranchers make more informed conservation decisions.

Assessments in CEAP are carried out at national, regional and watershed scales on cropland, grazing lands, wetlands and for wildlife. The three principal components of CEAP—the national assessments, the watershed assessment studies, and the bibliographies and literature reviews— contribute to building the science base for conservation. That process includes research, modeling, assessment, monitoring and data collection, outreach, and extension education. Focus is being given to translating CEAP science into practice (https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/).

Unprecedented capacity for natural resource assessment and analysis has been developed through CEAP—integrating for the first time investments such as the National Resources Inventory (NRI), geospatial databases, conservation practice implementation data, and partner monitoring data—with powerful and improved analytical models and methods.

CEAP has created a large partnership that has energized the conservation and research communities. Through the partnership, CEAP has leveraged the funding and expertise of more than 60 partners including Federal and State agencies, universities, and non-profit organizations. The project embodies a model of shared leadership with key partners, USDA's Agricultural Research Service, National Institute of Food and Agriculture, and Farm Service Agency among many others.

There are currently more than 60 collaborators engaged in CEAP projects or outreach activities, and this list is constantly growing. Some key agencies and other partners are mentioned below, though this is not a comprehensive list.

The American Association for the Advancement of Science honored CEAP on March 15, 2011, as an "Exemplary Collaborative Case Study" as part of the Agriculture, Food, Nutrition and Natural Resources R&D Round Table. Case studies were selected based on a history of successful collaboration among Federal and non-Federal or private partnerships that have yielded significant impacts for taxpayers through benefits to agriculture, food, nutrition, or natural resources (https://www.farmfoundation.org/projects/data-needs-for-agri-environmental-policy-modeling-analysis-437-d1/).

Effects of Agricultural Conservation Practices on Fish and Wildlife: A Conservation Effects Assessment Project(CEAP) Bibliography
S. Gagnon, J. Makuch, and C. Harper
National Agricultural Library Special Project (CEAP) Bibliography
Special Reference Briefs Series no. SRB 2008-01
https://www.nal.usda.gov/waic/effects-agricultural-conservation-practices-fish-and-wildlife

Question C:
Has the applicant provided reasonable justification that the proposal is based on science that clearly documents and communicates risks and uncertainties in the scientific basis for such projects/programs?

BAS Reviewers Comments:
There are many sources found when you download the spreadsheet found at this link https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/ Too many to review all of them.

The applicant does not provide clear documentation of the risks and certainties of the project. Refer to previous feedback in the section.

USDA Response:
To address the concerns expressed by the BAS Reviewers, additional peer reviewed references were added to the bibliography page and reference are cited within the proposal. Additionally, all of the reference links were checked to ensure that they functioned properly.

Conservation Practices Physical Effects (CPPE) and Network Effects Diagram
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/cp/ncps/?cid=nrcs143_026849

Conservation Effects Assessment Project
United States Department of Agriculture, Natural Resources Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/

Risk and uncertainties are addressed in greater detail under “Question 4”. The proposal will be amended to provide the greater level of detail as documented above.

Question B: Does the project/program have clearly defined goals objectives?

BAS Reviewers Comments:
This is not clearly defined in the project. Refer to previous comments.

USDA Response:
The Gulf Coast Conservation Reserve Program (GCCRP) will be established through USDA in Alabama, Florida Louisiana, Mississippi and Texas for the purposes of protecting and restoring critical wildlife and

improving water quality through the development of wildlife habitat, conservation, and forest management plans.

The project activities will identify natural resource concerns on private property throughout the Gulf Coast Region. Water quality and wildlife habitat restoration will be prioritized on agricultural lands. Conservation planning and environmental due diligence efforts will be completed during this phase of the project. Conservation practices and restoration activities will be implemented after the planning phase. Land enrolled in the program will be subject to the conservation practices as outlined in the conservation plans developed in the planning phase of the program.

This program will serve to assist willing private landowners with implementing conservation measures that improve water and wildlife habitat conditions. The program will result in incremental improvements to water quality as a result of conservation measures being implemented in the watershed. The conservation implementation will be conducted with the landowner's conservation goals in mind, enabling greater ownership in conservation and management activities that affect water quality and wildlife habitat conditions within the Gulf Coast Region. Outcomes will include direct improvements in water quality, wetlands, and upland wildlife habitat.

Nutrient pollution adversely impacts water quality and poses a significant threat to localized watersheds across the entire Gulf Coast. Excessive nutrient enrichment, or eutrophication, of Gulf Coast estuaries and their watersheds is a chronic threat that can lead to hypoxia, harmful algal blooms, habitat losses, and fish kills. There are many existing local, state, regional, and federal programs across the Gulf that are working to address nutrient pollution, including the eight National Estuary Programs across the Gulf Coast, the Gulf of Mexico Alliance, EPA's Gulf of Mexico program, USDA's Gulf of Mexico Initiative, and the Gulf Coast Ecosystem Restoration Council. Building on these existing efforts, nutrient reductions can enhance overall ecosystem health by benefitting the estuaries that are integral habitat providing food, shelter, and nursery grounds for many of the Gulf's ecologically and economically important species (e.g., fish). The DWH incident resulted in impacts to ecological connectivity throughout nearshore habitats (see text box below that summarizes key aspects of the injury assessment that informed restoration planning). To restore these ecological linkages, the integrated restoration portfolio needs to include a portfolio of water quality and habitat restoration approaches that can provide large-scale benefits and address chronic threats to the Gulf ecosystem. Reducing nutrient loading is part of the portfolio that will mitigate the chronic and pervasive ecosystem threats incurred by eutrophic Gulf Coast waters (https://www.gulfspillrestoration.noaa.gov/sites/default/files/wp-content/uploads/Chapter-5_Restoring-Natural-Resources_508.pdf).

Question C:
Has the proposal provided a clear description of the methods proposed, and appropriate justification for why the method is being selected (e.g., scientifically sound; cost-effectiveness)?

BAS Reviewers Comments:
The methods will be determined in phase one – ID natural resource concerns on all properties and develop conservation plans. No specific methods were listed, only a couple examples. Data sources list many methods, although we don't know which ones will be employed.

Refer to my previous comments related to the proposal methodology.

USDA Response:
Conservation activities are those actions, undertaken using acceptable tools and protocols, that are used to identify, inventory, assess, evaluate, or otherwise measure the presence and extent of a natural resource concern and how to address the natural resource concern through one or more conservation practices. Information gathered as a result of these actions must be essential to the development of a plan that furthers the purposes of a conservation program, including a plan that addresses the adoption or adaptation of conservation practices in order to achieve a conservation benefit.

Technical guides are the primary scientific references for NRCS. They contain technical information about the conservation of soil, water, air, and related plant and animal resources. Technical guides used in each field office are localized so that they apply specifically to the geographic area for which they are prepared. These documents are referred to as Field Office Technical Guides (FOTGs). These documents are the foundation of what is in FOTG, but all of these documents are further developed for local use (https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/fotg/).

Conservation practice implementation is based on site-specific needs to address water quality and/or wildlife habitat resource concerns. Technical assistance provided by professionals will help landowners to identify a suite of practices to address the resource concerns on their property. The suite of practices to address water quality and wildlife habitat is not finite (https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/cp/ncps/?cid=nrcs143_026849).

Conservation planning will be provided through conservation technical assistance for this program. Assistance will be provided to land users to address opportunities, concerns, and problems related to the use of natural resources and to help land users make sound natural resource management decisions on private, tribal, and other non-federal lands. The conservation planning tools for assisting landowners to address resource concerns on their property are identified below:

Conservation Practice Standards
The conservation practice standard contains information on why and where the practice is applied, and it sets forth the minimum quality criteria that must be met during the application of that practice in order for it to achieve its intended purpose(s).

The menu of conservations practices and a list of exemplar conservation practices available for implementation through the GCCRP are attached.

Conservation Practice Information Sheet
The conservation practice information sheet contains a photograph of the installed practice, plus a definition or description of the practice, where it is commonly used and a brief description of the conservation effects of this practice when it is properly applied.

Conservation Practice Physical Effects
The conservation practice physical effects (CPPE) document provides guidance on how the application of that practice will affect the resources (soil, water, air, plants, animals and human) and the resource concerns associated with each of those resources. The CPPE reflects the best estimate of the effects, either positive or negative, of that practice on the resource concerns.

Conservation Practice Job Sheets
The conservation practice job sheets provide detailed guidance on the application of the practice and contain worksheets that can be used to document the practice plan and design for a specific site. National conservation practice job sheets are available for a limited number of practices.

Network Effects Diagrams
NRCS utilizes network diagrams of featured practices, or related sets of practices which act together to achieve desired purposes. Network diagrams are flow charts of direct, indirect and cumulative effects resulting from installation of the practices. Completed network diagrams are an overview of expert consensus on the direct, indirect and cumulative effects of installing proposed practice installation. They show the potential positive and negative outcomes of practice installation, and are useful as a reference point for next steps, and as a communication tool with partners and the public.

Question D:
Does the project/program identify the likely environmental benefits of the proposed activity? Where applicable, does the application discuss those benefits in reference to one or more underlying environmental stressors identified by best available science and/or regional plans?

BAS Reviewers Comments:
Yes/No. The benefits of the proposed project are clearly described. The applicant does not discuss those benefits in reference to one or more identified environmental stressors.

The applicant identifies environmental benefits in the proposal, but they are not comprehensive. No evidence is provided to validate the reliability of the statements.

USDA Response:
Conservation practice implementation is based on site-specific needs to address water quality and/or wildlife habitat resource concerns. Technical assistance provided by professionals will help landowners to identify a suite of practices to address the resource concerns on their property. The suite of practices to address water quality and wildlife habitat is not finite. The list of conservation practices to be considered for implementation as a part of this program will be added as an attachment. The site-specific evaluation form that documents the anticipated environmental impacts and benefits of the suite of practices will also be included as an attachment.

Anticipated environmental benefits from the implementation of a suite of conservation practices are documented in the Network Effects Diagrams. Network diagrams are flow charts of direct, indirect and cumulative effects resulting from installation of the practices. Completed network diagrams are an overview of expert consensus on the direct, indirect and cumulative effects of installing proposed practice installation. They show the potential positive and negative outcomes of practice installation. The environmental evaluation form to be used in administering environmental compliance for the GCCRP is attached (GCCRP Environment Evaluation Form).

Question E:
Does the project/program have measures of success (i.e., metrics) that align with the primary Comprehensive Plan goal(s)/objectives? (Captures the statistical information requirement as defined by RESTORE Act).

BAS Reviewers Comments:
Adaptive management (AM) is an approach to implementing, monitoring, and evaluating actions to learn and adjust to those actions. How the applicant will use this meticulous approach is not clear. Planning through an adaptive management process requires a careful plan which includes metrics to identify successes (or failures); a clear management and monitoring strategy for implementing the project; and evaluating results. This is not clearly stated in the project.

USDA Response:
The three metrics chosen for this program will document the success of conservation practice implementation to address water quality and wildlife habitat resource concerns. Achieving the proposed metrics will have a direct correlation with program outcomes of reducing nutrient and sediment runoff (primary) and improving wildlife habitat (secondary) on agricultural and forested lands.

Question F:
Does the proposal discuss the project/program's vulnerability to potential long-term environmental risks (i.e., climate, pollution, changing land use)? (Captures risk measures as defined under best available science by the RESTORE Act).

BAS Reviewers Comments:
The only mention was potential weather during the process. No mention of climate change or changing land use. They did mention the landowner would agree to maintain all conservation practices for the practice lifespan.

The proposal discusses and address risk around potential changing land use, but does not address vulnerability to climate change impacts.

The applicant mentions weather related and other risks and uncertainties with no evidence of mitigation for potential long-term environmental risks. There is one statement in the application related to mitigation which does not provide adequate evidence.

USDA Response:
Risk and uncertainties are addressed in greater detail under “Question 4”. The proposal will be amended to provide the greater level of detail as documented above.

Anticipated environmental impacts from the implementation of a suite of conservation practices are documented in the Network Effects Diagrams. Network diagrams are flow charts of direct, indirect and cumulative effects resulting from installation of the practices. Completed network diagrams are an overview of expert consensus on the direct, indirect and cumulative effects of installing proposed practice installation. They show the potential positive and negative outcomes of practice installation.

The Natural Resources Conservation Service has categorical exclusions (CEs) which are actions that the Agency has determined do not individually or cumulatively have a significant effect on the human environment and, thus, should not require preparing an environmental assessment (EA) or environmental impact statement (EIS) under the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321-4347. NRCS CE actions promote restoration and conservation activities related to natural or human induced damage or alteration to watersheds. A list of exemplar CEs are listed below. A menu of

CEs available for administering the GCCRP is attached (Categorical Exclusions for the Gulf Coast Conservation Reserve Program).

- Minor agricultural practices that are undertaken to maintain and/or restore ecological conditions in floodplains after a natural disaster or on lands impacted by human alteration. Examples of these practices include mowing, haying, grazing, fencing, off-stream watering facilities, and invasive species control which are undertaken when fish and wildlife are not breeding, nesting, rearing young, or during other sensitive timeframes .
- Soil erosion control measures on existing agricultural lands, such as grade stabilization structures (pipe drops), sediment basins, terraces, grassed waterways, filter strips, riparian forest buffer, and critical area planting.
- Water conservation activities on existing agricultural lands, such as minor irrigation land leveling, irrigation water conveyance (pipelines), irrigation water control structures, and various management practices.

NRCS has 70 years of experience with planning and implementation of on-going agricultural and grazing land management practices, soil erosion control measures and water conservation activities. From the information collected on environmental reviews for these actions, the 14 States responded that NRCS has prepared 88,103 environmental evaluations for conservation practices that would be undertaken to restore or maintain ecological functions on agricultural land uses. Of the 88,103 EEs prepared, 81,692 EEs were for agriculture and land management actions (such as conservation tillage, nutrient management, fences, stack houses, stream crossings, water management actions, wetland restoration, etc.); 3,891 EEs were for re-establishing vegetation; 124 EEs were for acquisition and restoration of floodplain easement; 99 EEs for the acquisition of an easement to prevent development, and 1,257 EEs for development of habitat for fish and wildlife. These evaluations of conservation practice implementation resulted in findings that an EA or EIS would not need to be prepared due to minor effects on the environment.

These activities have also been evaluated in Programmatic Environmental Assessments prepared for the Farmland Protection Program (2004 and 2009), Grasslands Reserve Program (2004 and 2009), Healthy Forest Reserve Program (2006), Environmental Quality Incentives Program (2004 and 2009), and Wetlands Reserve Program (2004 and 2009). One multi-state, regional EA for the application of common NRCS conservation practices has also been prepared entitled " Environmental Assessment of NRCS conservation Practices Used to Address Natural Resource Concerns on Non-Federal Lands in the New England States and New York (2007)." Each of these EA's resulted in a Finding of No Significant Impact and is inclusive of comparable actions to those listed above which are being proposed as new categorical exclusions (https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/ecosciences/ec/?cid=nrcs143_026873).

Question G:
Does the project/program consider other applicable short-term implementation risks and scientific uncertainties? Such risks may include the potential for unanticipated adverse environmental and/or socioeconomic impacts from project implementation. Is there a mitigation plan in place to address these risks? Any relevant scientific uncertainties and/or data gaps should also be discussed. (Captures risk measures as defined under best available science by the RESTORE Act)

BAS Reviewers Comments:
The project does not consider other applicable short-term implementation risks and scientific uncertainties, and there is no mitigation plan in place to address the risks and scientific uncertainties. There are gaps in the ecosystem that can significantly impact a project's ability to thrive; therefore, it is important to close the gap in data. In this project, to close the data gap, the applicant needs to demonstrate how policies will be put in place that focus data collection on identifiable risks and uncertainties; ensure that funding the project will be aimed at closing the data gaps; and encourage leaders to understand the benefits of data.

USDA Response:
Risk and uncertainties are addressed in greater detail under "Question 4 and F". The proposal will be amended to provide the greater level of detail as documented above.

Environmental impacts are addressed in greater detail under "Question F". The proposal will be amended to provide the greater level of detail as documented above and below.

Anticipated environmental impacts from the implementation of a suite of conservation practices are documented in the Network Effects Diagrams. Network diagrams are flow charts of direct, indirect and cumulative effects resulting from installation of the practices. Network diagrams are an overview of expert consensus on the direct, indirect and cumulative effects of installing proposed practice installation. They show the potential positive and negative outcomes of practice installation.

Question H. Does the project/program consider recent and/or relevant information in discussing the elements above?

BAS Reviewers Comments:
The project does not consider current and relevant information to discuss closing the data gap to address risks and uncertainties. Monitoring and evaluating conservation effectiveness continue to be a challenging undertaking. The benefits of conservation efforts are critical to the planning and decision-making process of ecosystem conservation (and restoration) projects. The absence of a defined methodology capable of integrating applicable data at a scale and resolution suitable to drive informed decision making can be a blind spot; therefore, a data-driven framework is critical to addressing the data to summarize risks, threats, and potential benefits.

USDA Response:
Network diagrams are flow charts of direct, indirect and cumulative effects resulting from installation of the practices. Network diagrams are an overview of expert consensus on the direct, indirect and cumulative effects of installing proposed practice installation. They show the potential positive and negative outcomes of practice installation.

Question J:
Has the project/program identified a monitoring and data management strategy that will support project measures of success (i.e., metrics). If so, is appropriate best available science justification provided? If applicable, how is adaptive management informed by the performance criteria? (Captures statistical information requirement a defined by the RESTORE Act)

BAS Reviewers Comments:
The application does not provide specifics on evaluating past successes and failures of similar efforts.

USDA Response:
Project performance will be captured by monitoring the progress of this project. Neither in-steam water quality monitoring nor wildlife habitat surveys are planned for this project, so existing conservation/restoration modeling and projection tools will used to document the success of conservation practice implementation.

Anticipated environmental impacts from the implementation of a suite of conservation practices are documented in the Network Effects Diagrams. Network diagrams are flow charts of direct, indirect and cumulative effects resulting from installation of the practices. Completed network diagrams are an overview of expert consensus on the direct, indirect and cumulative effects of installing proposed practice installation. They show the potential positive and negative outcomes of practice installation.

BAS Reviewers Comments:
If we are going to be successful with our ecosystem, we must transform how we perform science and management. We must learn that we do not manage complex ecosystems, we manage our interaction with them. We cannot have simple answers to complex questions.

USDA Response:
NRCS has 70 years of experience with planning and implementation of on-going agricultural and grazing land management practices, soil erosion control measures and water conservation activities. From the information collected on environmental reviews for these actions, the 14 States responded that NRCS has prepared 88,103 environmental evaluations for conservation practices that would be undertaken to restore or maintain ecological functions on agricultural land uses. Of the 88,103 EEs prepared, 81,692 EEs were for agriculture and land management actions (such as conservation tillage, nutrient management, fences, stack houses, stream crossings, water management actions, wetland restoration, etc.); 3,891 EEs were for re-establishing vegetation; 124 EEs were for acquisition and restoration of floodplain easement; 99 EEs for the acquisition of an easement to prevent development, and 1,257 EEs for development of habitat for fish and wildlife. These evaluations of conservation practice implementation resulted in findings that an EA or EIS would not need to be prepared due to minor effects on the environment.

These activities have also been evaluated in Programmatic Environmental Assessments prepared for the Farmland Protection Program (2004 and 2009), Grasslands Reserve Program (2004 and 2009), Healthy Forest Reserve Program (2006), Environmental Quality Incentives Program (2004 and 2009), and Wetlands Reserve Program (2004 and 2009). One multi-state, regional EA for the application of common NRCS conservation practices has also been prepared entitled " Environmental Assessment of NRCS conservation Practices Used to Address Natural Resource Concerns on Non-Federal Lands in the New England States and New York (2007)." Each of these EA's resulted in a Finding of No Significant Impact and is inclusive of comparable actions to those listed above which are being proposed as new categorical exclusions **(https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/ecosciences/ec/?cid=nrcs143_026873**

Please summarize any additional information needed below:

BAS Reviewers Comments:
The applicant noted that "The intent of the program is to allow for conservation planning on private lands including, but not limited to ecosystem restoration by conducting soil and water conservation for the benefit of water quality to priority bays and estuaries." There is not much evidence in the project to determine if this can be achieved.

If we are going to be successful with our ecosystem, we must transform how we perform science and management. We must learn that we do not manage complex ecosystems, we manage our interaction with them. We cannot have simple answers to complex questions.

USDA Response:
To address the concerns expressed by the BAS Reviewers, additional peer reviewed references were added to the bibliography page and reference are cited within the proposal.

Gulf Coast Ecosystem Restoration Council

FPL 3b Internal Best Available Science Review Panel Summary

July 2020

Introduction

On Tuesday, June 30, and Wednesday July 1, 2020 the RESTORE Council convened the Funded Priorities List (FPL) 3b Internal Best Available Science (BAS) Review Panel. The purpose of this internal panel was to use Council member-agency expertise to address external BAS review comments provided for FPL 3b submitted project/program proposals, and potentially identify project/program synergies not identified prior to proposal submission. The ultimate goal of the panel was to provide Council members with substantive best available science content to inform their decision-making.

The internal panel was convened via webinar with representatives from each of the Council's eleven member agencies present. Each BAS Panel member was provided the following:

1) Full FPL 3b proposals
2) 3 external BAS reviews for each proposal
3) Summary of external BAS reviews for each proposal
4) Proposal Sponsor's response to the BAS reviews summary
5) Any proposed revisions to the proposal

Proposal sponsors provided a brief synopsis of their proposal to the panel, a summary of comments made in external reviews, and discussed their proposed response to the external reviews. Council staff then solicited feedback from the panel on the proposal sponsor's presentation of comments and responses to those comments, and any additional BAS concerns. Council staff also solicited feedback on any existing or future synergies with other Gulf restoration activities. The proceedings of the meeting for this proposal are summarized below.

Sponsor: USDA

Gulf Coast Conservation Reserve Program

Feedback from the panel on the proposal sponsor's presentation of comments and responses to those comments, and any additional BAS concerns:

References: Include additional peer-reviewed references and publications.

- Although panelists feel the addition of the Bibliography helped to address this BAS concern, panelists also feel that inclusion of the references within the text

of the narrative will further strengthen the proposal, and better address this concern.
- USDA agrees to revise the proposal to include additional in-text citations.

Justification: Discuss rationale for the application of specific techniques used to identify, select, process, and analyze information for conservation planning.
- Panelists feel that inclusion of the references within the text of the narrative will further strengthen the proposal, and better address this concern.
- The BAS Panel agrees that USDA has appropriately addressed this comment.

Environmental benefits: Justify validity of the proposed environmental benefits.
- Panelists feel that inclusion of the references within the text of the narrative will further strengthen the proposal, and better address this concern.
- USDA agrees to revise the proposal to include additional in-text citations.

Risks and uncertainties: Outline risks and uncertainties.
- Panelists feel that inclusion of the references within the text of the narrative will further strengthen the proposal, and better address this concern.
- The BAS Panel agrees that USDA has appropriately addressed this comment.

Panel comments on existing or future synergies with proposed activity:
Panel members had no further comments on proposal synergies.

SCIENCE EVALUATION

Bucket 2: Comprehensive Plan Component

Proposal Title: Gulf Coast Conservation Reserve Program
Location (If Applicable): Gulf-wide
Council Member Bureau or Agency: U.S. Department of Agriculture
Type of Funding Requested: Planning / Implementation

Reviewed by: Reviewer 1
Date of Review: April 28, 2020

Best Available Science:

These 4 factors/elements help frame the reviewer's answers to A, B and C found in next section:

Question 1.	
Have the proposal objectives, including proposed methods, been justified using peer reviewed and/or publicly available information?	Yes
Comments:	
Listed 7 Technical Standards references, 6 of which were USDA dated from 2011-2016. One reference related to Assessment of Effects of conservation practices in upper Mississippi Basin 2013 was not at the link provided. A deeper search found a lower Mississippi Basin report from the same year, perhaps more relevant. Another reference, a Planning and Procedures Handbook link to a 2016 resource ended up at a list of 2020 resources.	

Question 2.	
If information supporting the proposal does not directly pertain to the Gulf Coast region, are the proposal's methods reasonably supported and adaptable to that geographic area?	Yes
Comments:	
The 3 resources I was actually able to access did pertain to the Gulf Coast region.	

Question 3.	
Are the literature sources used to support the proposal accurately and completely cited? Are the literature sources represented in a fair and unbiased manner?	No
Comments:	
It appears that literature cited is all from the same source, USDA. There were no notations in the proposal related to which reference was being sited (i.e. no references to literature cited within the proposal narrative). There was simply a list of USDA literature in the Bibliography section.	

Question 4.	
Does the proposal evaluate uncertainties and risks in achieving its objectives over time? (e.g., is there an uncertainty or risk in the near- and/or long-term that the project/program will be obsolete or not function as planned?)	Yes
Comments:	
Includes a 10% reserve for weather-related issues. Proposal notes that uncertaintly will be minimized by working with local Soil & Water Conservation Districts, building trust	

Based on the answers to the previous 4 questions, and *giving deference to the sponsor to provide within reason the use of best available science,* the following three questions can be answered:

Question A	
Has the applicant provided reasonable justification that the proposal is based on science that uses peer- reviewed and publicly available data?	Yes
Comments:	
All linked documents appear to be publicly available. Not all documents are publicly accessible based on the links provided. Documents are all from USDA – no variation.	

Question B	
Has the applicant provided reasonable justification that the proposal is based on science that maximizes the quality, objectivity, and integrity of information (including, as applicable, statistical information)?	Yes
Comments:	
It appears they are justifying based on past experience with this program. They use USDA resources for justification.	

Question C	
Has the applicant provided reasonable justification that the proposal is based on science that clearly documents and communicates risks and uncertainties in the scientific basis for such projects/programs?	Yes
Comments:	
There are many sources found when you download the spreadsheet found at this link https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/ Too many to review all of them.	

Science Context Evaluation:

Question A	
Has the project/program sponsor or project partners demonstrated experience in implementing a project/program similar to the one being proposed?	Yes
Comments:	
Several ongoing programs by applicant are currently underway.	

Question B	
Does the project/program have clearly defined goals objectives?	Yes
Comments:	
Acreages and numbers of participants/landowners are clearly defined.	

Question C	
Has the proposal provided a clear description of the methods proposed, and appropriate justification for why the method is being selected (e.g., scientifically sound; cost-effectiveness)?	No
Comments:	
The methods will be determined in phase one – ID natural resource concerns on all properties and develop conservation plans. No specific methods were listed, only a couple examples. Data sources list many methods, although we don't know which ones will be employed.	

Question D	
Does the project/program identify the likely environmental benefits of the proposed activity? Where applicable, does the application discuss those benefits in reference to one or more underlying environmental stressors identified by best available science and/or regional plans?	Yes
Comments:	
Focus will be on critically eroding areas. Conservation goals are erosion control and nutrient reduction.	

Question E	
Does the project/program have measures of success (i.e., metrics) that align with the primary Comprehensive Plan goal(s)/objectives? (Captures the statistical information requirement as defined by RESTORE Act)	Yes
Comments:	
Very basic – number of landowners contacted, participating and number of acres	

Question F	
Does the proposal discuss the project/program's vulnerability to potential long-term environmental risks (i.e., climate, pollution, changing land use)? (Captures risk measures as defined under best available science by the RESTORE Act)	No
Comments:	
The only mention was potential weather during the process. No mention of climate change or changing land use. They did mention the landowner would agree to maintain all conservation practices for the practice lifespan.	

Question G	
Does the project/program consider other applicable short-term implementation risks and scientific uncertainties? Such risks may include the potential for unanticipated adverse environmental and/or socio-economic impacts from project implementation. Is there a mitigation plan in place to address these risks? Any relevant scientific uncertainties and/or data gaps should also be discussed. (Captures risk measures as defined under best available science by the RESTORE Act)	Yes
Comments:	
Monitoring and Adaptive Management plan will be utilized and assessed throughout. Included in the plan are in-stream monitoring, lab analysis, implementation of identified corrective actions and reporting. Site evaluations will be utilized as well.	

Question H	
Does the project/program consider recent and/or relevant information in discussing the elements above?	Yes
Comments:	
They conclude that since their target is erosion, the land-use changes will in their target area will be minimal.	

Question I	
Has the project/program evaluated past successes and failures of similar efforts? (Captures the communication of risks and uncertainties in the scientific basis for such projects as defined by the RESTORE Act)	No
Comments:	
The discussion of potential risks does not include past successes or failures.	

Question J	
Has the project/program identified a monitoring and data management strategy that will support project measures of success (i.e., metrics). If so, is appropriate best available science justification provided? If applicable, how is adaptive management informed by the performance criteria? (Captures statistical information requirement a defined by the RESTORE Act)	Yes
Comments:	
They discuss data management on standardized field data sheets to include BMPs, resource assessments including environmental and cultural, and monitoring data. They will create a data sheet if there is not one applicable to the site. They discuss the maintenance of records over time.	

Please summarize any additional information needed below:
Click here to enter text.

SCIENCE EVALUATION

Bucket 2: Comprehensive Plan Component

Proposal Title: Gulf Coast Conservation Reserve Program
Location (If Applicable): Gulf-wide
Council Member Bureau or Agency: U.S. Department of Agriculture
Type of Funding Requested: Planning / Implementation

Reviewed by: Reviewer 2
Date of Review: May 10, 2020

Best Available Science:

These 4 factors/elements help frame the reviewer's answers to A, B and C found in next section:

Question 1.	
Have the proposal objectives, including proposed methods, been justified using peer reviewed and/or publicly available information?	No
Comments:	
The proposal does not include any references to peer reviewed or publicaly available information. The rationale the applicant uses is based on sound ecological principles, however, no scientific references are offered.	

Question 2.	
If information supporting the proposal does not directly pertain to the Gulf Coast region, are the proposal's methods reasonably supported and adaptable to that geographic area?	Yes
Comments:	
Yes, the proposal mentions conservation practice standards and includes a bibliography with relevant methods.	

Question 3.	
Are the literature sources used to support the proposal accurately and completely cited? Are the literature sources represented in a fair and unbiased manner?	Yes
Comments:	
Yes, however, it would be helpful if the literature soruces were cited in text to better track how the applicant is referencing them. It is worth noting that all of the literature sources in the bibliography are authored by the applicant agency. A broader representation of scientific sources is preferred.	

Question 4.	
Does the proposal evaluate uncertainties and risks in achieving its objectives over time? (e.g., is there an uncertainty or risk in the near- and/or long-term that the project/program will be obsolete or not function as planned?)	Need more information
Comments:	
How is sea level rise factored into the selection of priority lands for coastal areas?	

Based on the answers to the previous 4 questions, and *giving deference to the sponsor to provide within reason the use of best available science,* the following three questions can be answered:

Question A	
Has the applicant provided reasonable justification that the proposal is based on science that uses peer- reviewed and publicly available data?	Yes
Comments:	
The proposal appears to be based in science by proposing the Avoid, Control, Trap approach for nutrients and sediment. Additonally, the applicant proposes to prioritize areas for greatest conservation need and parallels the program to other successful science-based programs, such as EQIP.	

Question B	
Has the applicant provided reasonable justification that the proposal is based on science that maximizes the quality, objectivity, and integrity of information (including, as applicable, statistical information)?	Need more information
Comments:	
The objectivity of the information is questioned since the applicant only references the agencies own documents. Otherwise, the quality and integrity of the information are good.	

Question C	
Has the applicant provided reasonable justification that the proposal is based on science that clearly documents and communicates risks and uncertainties in the scientific basis for such projects/programs?	Yes
Comments:	
Yes, the details included in the Monitoring and Adaptive Management section identify appropriate steps and approaches to document and respond to risks and uncertainties. For example, in-stream monitoring combined with analyisis and implementation of corrective actions are included and reflect an adaptive management approach.	

Science Context Evaluation:

Question A	
Has the project/program sponsor or project partners demonstrated experience in implementing a project/program similar to the one being proposed?	Yes
Comments:	
Very much so	

Question B	
Does the project/program have clearly defined goals objectives?	Yes
Comments:	
Click here to enter text.	

Question C	
Has the proposal provided a clear description of the methods proposed, and appropriate justification for why the method is being selected (e.g., scientifically sound; cost-effectiveness)?	Yes
Comments:	
A clear description of the methods is included, and appear to be based on the methods used in other programs the applicant administers.	

Question D	
Does the project/program identify the likely environmental benefits of the proposed activity? Where applicable, does the application discuss those benefits in reference to one or more underlying environmental stressors identified by best available science and/or regional plans?	Need more information
Comments:	
Yes/No. The benefits of the proposed project are clearly described. The applicant does not discuss those benefits in reference to one or more identified environmental stressors.	

Question E	
Does the project/program have measures of success (i.e., metrics) that align with the primary Comprehensive Plan goal(s)/objectives? (Captures the statistical information requirement as defined by RESTORE Act)	Yes
Comments:	
Click here to enter text.	

Question F	
Does the proposal discuss the project/program's vulnerability to potential long-term environmental risks (i.e., climate, pollution, changing land use)? (Captures risk measures as defined under best available science by the RESTORE Act)	Yes
Comments:	
The proposal discusses and address risk around potential changing land use, but does not address vulnerability to climate change impacts.	

Question G	
Does the project/program consider other applicable short-term implementation risks and scientific uncertainties? Such risks may include the potential for unanticipated adverse environmental and/or socio-economic impacts from project implementation. Is there a mitigation plan in place to address these risks? Any relevant scientific uncertainties and/or data gaps should also be discussed. (Captures risk measures as defined under best available science by the RESTORE Act)	Yes
Comments:	
Yes, the applicant proposes to use an adaptive management approach.	

Question H	
Does the project/program consider recent and/or relevant information in discussing the elements above?	Yes
Comments:	
The applicant does discuss relevant hypothetical situations that create risk.	

Question I	
Has the project/program evaluated past successes and failures of similar efforts? (Captures the communication of risks and uncertainties in the scientific basis for such projects as defined by the RESTORE Act)	No
Comments:	
The applicant references parallel programs that this program is modeled after but it does not go into detail about past success and failures of those programs. This type of analysis is encouraged and would provide helpful lessons learned.	

Question J	
Has the project/program identified a monitoring and data management strategy that will support project measures of success (i.e., metrics). If so, is appropriate best available science justification provided? If applicable, how is adaptive management informed by the performance criteria? (Captures statistical information requirement a defined by the RESTORE Act)	Yes
Comments:	
The applicant has outlined the appropriate steps to develop a monitoring and adaptive management plan during the planning phase of the project. Adaptive management appears to be informed by project-level montitoring and data analysis to determine appropriate corrective actions and operations and maintenance activities.	

Please summarize any additional information needed below:
Click here to enter text.

SCIENCE EVALUATION

Bucket 2: Comprehensive Plan Component

Proposal Title: Gulf Coast Conservation Reserve Program
Location (If Applicable): Gulf-wide
Council Member Bureau or Agency: U.S. Department of Agriculture
Type of Funding Requested: Planning / Implementation

Reviewed by: Reviewer 3
Date of Review: 05/08/2020

Best Available Science:

These 4 factors/elements help frame the reviewer's answers to A, B and C found in next section:

Question 1.	
Have the proposal objectives, including proposed methods, been justified using peer reviewed and/or publicly available information?	Need more information
Comments:	
The application includes a single primary goal and one secondary goal with objectives that align with the Restore Comprehensive Plan. The proposed methods in the application does not provide specifics to achieving the stated goals (or objectives) of the project. What is the rationale for the application of specific techniques used to identify, select, process, and analyze information for conservation planning on private lands. It is not clear how the data will be collected or generated? And, how it will be analyzed? For example, how will the applicant identify natural resources on private property throughout the Gulf Coast? Will a survey or questionnaire be used? If so, the Restore Council will need to know if the applicant offered a reasonable range of answers to select from. When objectives are stated clearly and understood, this will allow the applicant to generate a list of risks.	

The application does not consistently provide citations of data sources to validate statements, and there is limited peer-reviewed evidence in the proposal application.

Question 2.	
If information supporting the proposal does not directly pertain to the Gulf Coast region, are the proposal's methods reasonably supported and adaptable to that geographic area?	Need more information
Comments:	
Pursuant to the Department of the Treasury regulations for the Gulf Coast Restoration Trust Fund, "[a]n activity selected by the Council is to be carried out in the Gulf Coast Region when, each severable part of the activity is primarily designed to restore or protect that geographic area. The applicant location for the project will be implemented on private lands in coastal watersheds in AL, FL, LA, MS, and TX, which directly pertain to the Gulf Coast region. However, the proposal methods are not reasonably supported with evidence and adaptable to that geographic region. The methodology should describe in detail what is there to assist private landowners with implementing conservation measures to improve water and wildlife habit conditions, why it matters, what is happening now, and the principles by which the applicant will manage the project and then establish details for maintenance, management, access, use and other issues. Conservation planning for the proposal should identify policies that strike a balance between use and significance for the project. NOTE: Identify NRCS as National Resource Conservation Services when first mentioned.	

Question 3.	
Are the literature sources used to support the proposal accurately and completely cited? Are the literature sources represented in a fair and unbiased manner?	Need more information
Comments:	

The literature sources used to support the proposal are cited at the end of the proposal but not throughout the proposal. To validate the reliability of the data, the applicant should not rely on a single source for all evidence to avoid bias. Therefore, it is important to use multiple sources to ensure reasonable validity and reliability of statements within the proposal. To do this, the applicant should avoid relying on any single source of data (i.e. USDA) by using a process called triangulation to enhance the validity and reliability of statements. Triangulation means using multiple independent sources to identify conservation measures. Triangulation is like studying an object located inside a box by viewing it through various windows (or sources) cut into the sides of the box. Observing a phenomenon through multiple "windows" can help the applicant compare what is being seen through a variety of lenses.

Question 4.	
Does the proposal evaluate uncertainties and risks in achieving its objectives over time? (e.g., is there an uncertainty or risk in the near- and/or long-term that the project/program will be obsolete or not function as planned?)	Need more information
Comments:	
The objectives in this project are not clearly delineated to evaluate uncertainties and risks. According to the Restore Council Comprehensive Plan, "While habitat protection and conservation are generally viewed as low risk restoration approaches, they are not without uncertainty." The applicant indicated "There [is] a risk that future land use practices on participating private property could undermine or work at cross purposes with the expected ecosystem benefits of the program." The applicant should consider the potential for accessibility upgrades, code compliance upgrades, emergency stabilization plan, and environmental issues.	

Based on the answers to the previous 4 questions, and *giving deference to the sponsor to provide within reason the use of best available science,* the following three questions can be answered:

Question A	
Has the applicant provided reasonable justification that the proposal is based on science that uses peer- reviewed and publicly available data?	No
Comments:	

No peer-reviewed data was cited in the text or provided in the refrence table. To be effective, conservation planning must include best available science and evidence of biodiversity and humans that are driving the change in the ecosystem (Marshall, Wintle, Southwell, & Kujala, 2020; Pressey, Cabeza, Watts, Cowling, & Wilson, 2007; Smith et al, 2019; Wallace, Kim, Rogers, & Jago, 2020; Watson, Galford, Sonter, Koh, & Ricketts, 2019).

References

Marshall, E., Wintle, B. A., Southwell, D., & Kujala, H. (2020). What are we measuring? A review of metrics used to describe biodiversity in offsets exchanges. Biological Conservation, 241, 108250.

Pressey, R. L., Cabeza, M., Watts, M. E., Cowling, R. M., & Wilson, K. A. (2007). Conservation planning in a changing world. Trends in ecology & evolution, 22(11), 583-592.

Smith, R. J., Bennun, L., Brooks, T. M., Butchart, S. H., Cuttelod, A., Di Marco, M., ... & Knight, A. T. (2019). Synergies between the key biodiversity area and systematic conservation planning approaches. Conservation Letters, 12(1), e12625.

Wallace, K. J., Kim, M. K., Rogers, A., & Jago, M. (2020). Classifying human wellbeing values for planning the conservation and use of natural resources. Journal of Environmental Management, 256, 109955.

Watson, K. B., Galford, G. L., Sonter, L. J., Koh, I., & Ricketts, T. H. (2019). Effects of human demand on conservation planning for biodiversity and ecosystem services. Conservation Biology, 33(4), 942-952.

Question B	
Has the applicant provided reasonable justification that the proposal is based on science that maximizes the quality, objectivity, and integrity of information (including, as applicable, statistical information)?	No
Comments:	
The applicant proposal does not utilize the best available science.	

Question C

Has the applicant provided reasonable justification that the proposal is based on science that clearly documents and communicates risks and uncertainties in the scientific basis for such projects/programs?	No
Comments:	
The applicant does not provide clear documentation of the risks and certainties of the project. Refer to previous feedback in the section.	

Science Context Evaluation:

Question A	
Has the project/program sponsor or project partners demonstrated experience in implementing a project/program similar to the one being proposed?	No
Comments:	
There is no clear evidence in the proposal that the applicant organization has indentfied evidence.	

Question B	
Does the project/program have clearly defined goals objectives?	No
Comments:	

This is not clearly defined in the project. Refer to previous comments.

Question C	
Has the proposal provided a clear description of the methods proposed, and appropriate justification for why the method is being selected (e.g., scientifically sound; cost-effectiveness)?	Need more information
Comments:	
Refer to my previous comments related to the proposal methodology.	

Question D	
Does the project/program identify the likely environmental benefits of the proposed activity? Where applicable, does the application discuss those benefits in reference to one or more underlying environmental stressors identified by best available science and/or regional plans?	Need more information
Comments:	
The applicant identifies environmental benefits in the proposal, but they are not comprehensive. No evidence is provided to validate the reliability of th statements.	

Question E	
Does the project/program have measures of success (i.e., metrics) that align with the primary Comprehensive Plan goal(s)/objectives? (Captures the statistical information requirement as defined by RESTORE Act)	Need more information
Comments:	

Adaptive management (AM) is an approach to implementing, monitoring, and evaluating actions to learn and adjust to those actions. How the applicant will use this meticulous approach is not clear. Planning through an adaptive management process requires a careful plan which includes metrics to identify successes (or failures); a clear management and monitoring strategy for implementing the project; and evaluating results. This is not clearly stated in the project.

Question F	
Does the proposal discuss the project/program's vulnerability to potential long-term environmental risks (i.e., climate, pollution, changing land use)? (Captures risk measures as defined under best available science by the RESTORE Act)	Need more information
Comments:	
The applicant mentions weather related and other risks and uncertainties with no evidence of mitigation for potential long-term environmental risks. There is one statement in the application related to mitigation which does not provide adequate evidence.	

Question G	
Does the project/program consider other applicable short-term implementation risks and scientific uncertainties? Such risks may include the potential for unanticipated adverse environmental and/or socio-economic impacts from project implementation. Is there a mitigation plan in place to address these risks? Any relevant scientific uncertainties and/or data gaps should also be discussed. (Captures risk measures as defined under best available science by the RESTORE Act)	Need more information
Comments:	
The project does not consider other applicable short-term implementation risks and scientific uncertainities, and there is no mitigation plan in place to address the risks and scientific uncertainties. There are gaps in the ecosystem that can significantly impact a project's ability to thrive; therefore, it is important to close the gap in data. In this project, to close the data gap, the applicant needs to demonstrate how policies will be put in place that focus data collection on identifiable risks and uncertainties; ensure that funding the project will be aimed at closing the data gaps; and encourage leaders to understand the benefits of data.	

Question H	
Does the project/program consider recent and/or relevant information in discussing the elements above?	No
Comments:	
The project does not consider current and relevant information to discuss closing the data gap to address risks and uncertainties. Monitoring and evaluating conservation effectiveness continues to be a challenging undertaking. The benefits of conservation efforts are critical to the planning and decision-making process of ecosystem conservation (and restoration) projects. The absence of a defined methodology capable of integrating applicable data at a scale and resolution suitable to drive informed decision making can be a blind spot; therefore, a data-driven framework is critical to addressing the data to summarize risks, threats, and potential benefits.	

Question I	
Has the project/program evaluated past successes and failures of similar efforts? (Captures the communication of risks and uncertainties in the scientific basis for such projects as defined by the RESTORE Act)	No
Comments:	
The application does not provide specifics on evaluating past successes and failures of similar efforts.	

Question J	
Has the project/program identified a monitoring and data management strategy that will support project measures of success (i.e., metrics). If so, is appropriate best available science justification provided? If applicable, how is adaptive management informed by the performance criteria? (Captures statistical information requirement a defined by the RESTORE Act)	Need more information

Comments:

The applicant identified a monitoring and adaptive management plan in nthe project which does not include the appropriate best available science to validate the reliability of the strategy. The phases of an adaptive management approach involve Plan-Act-Monitor-Evaluate-Learn-Adjust to maximize knowledge gaps that will be crucial to sustaining future improvements and adjustments in planning. The "learn by doing" concept of adaptive management that is mentioned in the project, with a carefully thought out monitoring plan, supported by stakeholders will promote an improved understanding of the processes that impact conservation planning on private lands to guide essential modifications to management and appropriate actions to attain them.

Please summarize any additional information needed below:

The applicant noted that "The intent of the program is to allow for conservation planning on private lands including, but not limited to ecosystem restoration by conducting soil and water conservation for the benefit of water quality to priority bays and estuaries." There is not much evidence in the project to determine if this can be achieved. In the proposal, there is a mention of agricultural and forest management, that may be critical to achieving goals in the project if further explored with details. According to Keles (2019), "Forests are among the most important ecosystems that provide various hydrological services including water production and protection because the majority of water available on the earth comes from forested catchments. The forests provide quality and continuous water yield as well as protective services such as flood control, soil protection, landslide protection, avalanche protection, and prevention against rock falls, which are related to water." To achieve flood control and soil protection through conservation planning efforts is critical in agricultural and forest management.

In the 2016 Comprehensive Plan Update (RESTORE Council Comprehensive Plan Update), it is noted that "The environment of the Gulf Coast region was significantly injured by the Deepwater Horizon oil spill, as well as from chronic and acute harm caused by other past and on-going human actions. Restoring an area as large and complex as the Gulf Coast region is a challenging and costly undertaking."

Global climate change, sea-level rise, and other anthropogenic (human-driven) environmental changes, which include agriculture, aquaculture, coastal development, flood control, geophysical resource harvesting, marine transport, and recreation and tourism will continue to cause biodiversity loss in the environment, along with species extinctions that will require ongoing effective programmatic changes. In addition to the RESTORE Council Planning Framework, the utilization of a comprehensive conceptual framework of the human ecological system like the Drivers–Pressures–Stressors–Condition–Responses (DPSCR) conceptual framework can be tailored to address the Gulf of Mexico ecosystem programs to maximize environmental, financial, project, and social benefits with the best available science (BAS) to inform project prioritization and planning process (Harwell, et al., 2019; Moss, Carruthers, Bienn, Mcinnis, & Dausman, 2020).

If we are going to be successful with our ecosystem, we must transform how we perform science and management. We must learn that we do not manage complex ecosystems, we manage our interaction with them. We cannot have simple answers to complex questions.

References:

Harwell, M. A., Gentile, J. H., McKinney, L. D., Tunnell Jr, J. W., Dennison, W. C., Kelsey, R. H., ... & Tunnell, J. (2019). Conceptual framework for assessing ecosystem health. Integrated Environmental Assessment and Management, 15(4), 544-564. Retrieved from https://setac.onlinelibrary.wiley.com/doi/epdf/10.1002/ieam.4152

Keleş, S. (2019). An assessment of hydrological functions of forest ecosystems to support sustainable forest management. Journal of Sustainable Forestry, 38(4), 305-326.

Moss, L. C., Carruthers, T. J., Bienn, H., Mcinnis, A., & Dausman, A. M. (2020). Gulf-wide data synthesis for restoration planning: Utility and limitations. Shore & Beach, 88(1), 23. Retrieved from https://thewaterinstitute.org/assets/docs/reports/Gulf-wide-data-synthesis-for-restoration-planning.pdf