Priority & Commitment To Plan Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Bayou Dularge Ridge Restoration, Marsh Creation & Hydrologic Restoration; Phase 1

PROPORAL NUMBER

USDA-T-1

LOCATION

Terrebonne Parish/Terrebonne Basin/LA

SPONSOR(S)

Department of Agriculture

TYPE OF FUNDING REQUESTED (Planning, Technical Assistance, Implementation)

Planning

REVIEWED BY:

Ebonye T. Allen

DATE:

16 February 2015

A. Comprehensive Plan Goals

Of the goals addressed by the proposal, which is the single primary goal?
Proposals should discuss how the proposed activity is designed to address the primary goal.
Check one:

- (●) Restore and Conserve Habitat – Restore and conserve the health, diversity and resilience of key coastal, estuarine and marine habitats.
- ( ) Restore Water Quality – Restore and protect water quality of the Gulf Coast region's fresh, estuarine and marine waters.
- ( ) Replenish and Protect Living Coastal and Marine Resources – Restore and protect healthy, diverse and sustainable living coastal and marine resources.
- ( ) Enhance Community Resilience – Build upon and sustain communities with capacity to adapt to short- and long-term changes.
- ( ) Restore and Revitalize the Gulf Economy – Enhance the sustainability and resiliency of the Gulf economy.

Notes:

As indicated in the proposal, the project components perform synergistically to provide benefits to over approximately 48,000 acres of wetlands through a combination of hydrologic restoration, marsh creation and ridge restoration. This project takes a regional ecosystem-based approach to restoration by: 1) reestablishing historic hydrologic and salinity conditions by reducing the artificial intrusion of Gulf marine waters into the Central Terrebonne marshes via the Grand Pass while enhancing the influence of the Atchafalaya River waters into the area and 2) creating/restoring a ridge feature and degraded marsh in the landbridge that separates Lake Mechant from Caillou Lake to insure the integrity of the ridge and its important function of sustaining optimal salinity gradients and promoting healthy marsh recovery in the region. The project would contribute to the

B. Comprehensive Plan Objectives

Proposals must clearly identify which objectives the proposal will address

1. Restore, Enhance, and Protect Habitats

- (●) YES
- ( ) NO
- ( ) Not articulated
- ( ) N/A

2. Restore, Improve, and Protect Water Resources

- (●) YES
- ( ) NO
- ( ) Not articulated
- ( ) N/A

3. Protect and Restore Living Coastal and Marine Resources

- (●) YES
- ( ) NO
- ( ) Not articulated
- ( ) N/A

4. Restore and Enhance Natural Processes and Shorelines

- (●) YES
- ( ) NO
- ( ) Not articulated
- ( ) N/A

Notes:

Please see Notes in Section A.

8. Of these objectives which is the single primary objective the proposal addresses?

Check one:

- (●) Restore, Enhance, and Protect Habitats
- ( ) Restore, Improve, and Protect Water Resources
- ( ) Protect and Restore Living Coastal and Marine Resources
- ( ) Restore and Enhance Natural Processes and Shorelines
- ( ) Promote Community Resilience
- ( ) Promote Natural Resource Stewardship and Environmental Education
- ( ) Improve Science-Based Decision-Making Processes

C. RESTORE Act and Comprehensive Plan Priority Criteria

All proposals must explain if the proposal addresses one or more of the priority criteria as established by the RESTORE Act and Initial Comprehensive Plan and, if so, how.

1. This project is 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.

(●) YES ( ) NO ( ) Not articulated ( ) N/A

2. This is a large-scale project/program that is projected to substantially contribute to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast ecosystem.

(●) YES ( ) NO ( ) Not articulated ( ) N/A

3. This project is 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.

(●) YES ( ) NO

4. This project will restore long-term resiliency of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands most impacted by the *Deepwater Horizon* oil spill.

(●) YES ( ) NO

5. Promote Community Resilience

( ) YES ( ) NO (●) Not articulated ( ) N/A

6. Promote Natural Resource Stewardship and Environmental Education

( ) YES ( ) NO (●) Not articulated ( ) N/A

Notes:

As stated in the proposal, this large-scale project will substantially contribute to restoration and protection of the natural resources and coastal wetlands of the Gulf Coast ecosystem. The proposal notes that the Wetland Value Assessment (WVA 2013) methodology (Variable 1 - Percent of Wetland Area Covered by Emergent Vegetation only) from the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) program was used to calculate the benefits of the project. Benefits are defined as the net acres of wetland area created, restored and/or protected during the life of the project. (The CWPPRA program generally evaluates the projects over a 20 year period to correspond to the program obligation to operate and maintain the project. Therefore, the benefits developed in this proposal will reflect those derived for CWPPRA projects with a

D. Comprehensive Plan Commitments

All proposals must demonstrate how the proposal will achieve any or all of the commitments in the Comprehensive Plan. The commitments in the Comprehensive Plan are as follows:

Does the proposal articulate how it will achieve the following commitments in the comprehensive plan?

1. Science-based Decision-Making

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, the U.S. Geological Survey National Wetland Research Center (NWRC) provided an analysis of land loss for each of the project areas which includes a hypertemporal rate of loss derived from multiple images of LandSat data over a period ranging from 1984 to 2013. An analysis was performed on each of the project's three components – hydrologic restoration, marsh creation and ridge restoration. Each of these components requires a different approach to arrive at benefits, and therefore are treated individually for the purposes of analysis. The benefits of the three components can then be added together to yield total net benefits for the combined elements. All benefits are reported as acres. This project has also utilized various forms of computer modeling to generate project effects and benefits. The project objective to reduce the

2. Regional Ecosystem-based Approach to Restoration

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, this project takes a regional ecosystem-based approach to restoration by: 1) reestablishing historic hydrologic and salinity conditions by reducing the artificial intrusion of Gulf marine waters into the Central Terrebonne marshes via the Grand Pass while enhancing the influence of the Atchafalaya River waters into the area and 2) creating/restoring a ridge feature and degraded marsh in the landbridge that separates Lake Mechant from Caillou Lake to insure the integrity of the ridge and its important function of sustaining optimal salinity gradients and promoting healthy marsh recovery in the region.

3. Engagement, Inclusion, and Transparency

( ) YES ( ) NO (●) Not articulated

Notes:

4. Leveraging Resources and Partnerships

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, (and Section D.2) this project is a component of a much broader effort to restore coastal Louisiana. The project has been identified in the Louisiana State Master Plan (CPRA 2012) as a priority location and these components have been developed in collaboration with Louisiana Coastal Protection and Restoration Authority, Terrebonne Parish, and private landowners that are within the footprint of the project. In addition, the project has been vetted through a process of engineering and environmental scrutiny that includes the participation of several state and federal agencies including U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, NOAA National Marine Fisheries, U.S. Army Corp of Engineers, and the Louisiana Department of Wildlife and Fisheries.

5. Delivering Results and Measuring Impacts

(●) YES ( ) NO

Notes:

As stated in the proposal, by reducing the cross-section of Grand Pass and restoring the integrity of the land bridge that separates the two large lake systems (Lake Mechant and Caillou Lake), the project will result in 233 acres from the hydrologic restoration, 282 acres from the marsh creation and 25 acres of ridge for a total 540 acres of total direct net acres of benefit.

The proposal commits that monitoring of this project will include annual inspections of the structural features and environmental monitoring via the Coastwide Reference Monitoring System (CRMS) that has been set up and is funded

E. Meeting Commitments and Tracking and Measuring Progress

1. Does the proposal articulate how it will meet and achieve its commitments?

(●) YES ( ) NO ( ) Not articulated

2. Does the proposal have a plan for tracking and measuring progress?

(●) YES ( ) NO

Notes:

As stated in the proposal, the hydrologic restoration component consists of an engineered rock structure that may need periodic maintenance to maintain elevation in order to be fully effective. NRCS usually projects the costs of maintaining a structure based upon best available design information, including expected settlement. In the design phase of the project, geotechnical analyses are done on the soils to determine load bearing and the design will account for expected settlement. The analysis will also determine volume of rock material that will be needed to maintain the structure over time. This is budgeted in the calculation of the cost of the project. Monitoring of this structure will include annual inspections of the structure by the project team. Environmental monitoring will be included the Coastwide Reference Monitoring System (CRMS) that has

F. Proposal Emphasis Areas

Does the submission describe how the proposed project or program addresses the following four considerations:

1. Is the proposed activity **foundational** in the sense that the project or program forms an initial core step (or steps) in addressing a significant ecosystem issue, and can future activities be tiered to substantially increase the benefits?

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, salinity has been documented to directly affect plant productivity (LCA 2004, Appendix C). Plant production is an important component of marsh stability in that it provides the organic fraction of the marsh soils. Large areas of marsh loss have occurred in areas where marsh vegetation has been impacted by saltwater intrusion. This is particularly true in the highly organic fresh and intermediate marshes which are almost exclusively maintained by plant production. Salinity increase progressively impacts productivity and, although salinity may not kill the plant directly, reduces the rate of production of a broad area, translating into a lack of organic matter production and a reduction in the internal accumulation of organic

2. Will the proposed activity be **sustainable** over time?

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, through the management of salinity intrusion where salinity was historically and naturally moderated through intact land features, the project will result in 233 acres from the hydrologic restoration, 282 acres from the marsh creation and 25 acres of ridge for a total 540 acres of total direct net acres of benefit-which, if managed, over time will also provide sustainable marsh habitat over time.

3. Is the proposed activity **likely to succeed**?

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, the project objective to reduce the volume flow of saline water moving through Grand Pass into Lake Mechant to reduce salinity intrusion into the upper basin has been demonstrated through two independent modeling efforts (NRCS preliminary modeling and FTN hydrodynamic model).

The proposal also discusses that working on the coast of Louisiana is a challenge; it is very difficult to move equipment into very remote locations that have elements of sensitivity. The coastal wetlands provide habitat for numerous fish and wildlife species and provide socioeconomic resources including commercial fishing (crabs, shrimp, and oysters), recreation fishing,

4. Does the proposed activity **benefit** the human **community**?
(examples of benefits may include, but are not limited to: how a project will utilize local workers, how a project will benefit geographically or socially vulnerable communities, how a project will benefit the natural resources critical to natural-resource dependent industries such as fisheries, tourism, etc.)

- ○ YES
- ○ NO
- ◉ Not articulated

Notes: