Priority & Commitment To Plan Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Beneficial Use of Dredged Material to Create Emergent Tidal Marsh in Upper Mobile Bay

PROPORAL NUMBER

ACOE-5

LOCATION

Within the coastal zone boundaries of the Alabama Coastal Zone Management Program

SPONSOR(S)

Department of the Army

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

Planning/Implementation

REVIEWED BY:

Ebonye T. Allen

DATE:

15 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 stated in the proposal, the intent is to establish a large scale semi-contained dredged material placement area to create approximately 1,200 acres of brackish tidal marsh and submerged aquatic vegetation (SAV) habitats in northern Mobile Bay. The primary goal of this project is to restore and conserve habitat by creating and restoring an estimated 1,200 acres of estuarine tidal marsh through the placement of readily available sediment material from the Mobile Bay navigation channel, Alabama State Port Authority (ASPA) terminals, and local private dredging activities into the upper bay Beneficial Use (BU) area. The primary objective is to restore, enhance, and protect habitats by restoring the estuarine marsh through the construction of a semi-submerged containment area and placement of dredge material at a cost of about $23,000 per acre

B. Comprehensive Plan Objectives

Proposals must clearly identify which objectives the proposal will address

1. Restore, Enhance, and Protect Habitats

- [x] YES
- [ ] NO
- [ ] Not articulated
- [ ] N/A

2. Restore, Improve, and Protect Water Resources

- [x] YES
- [ ] NO
- [ ] Not articulated
- [ ] N/A

3. Protect and Restore Living Coastal and Marine Resources

- [x] YES
- [ ] NO
- [ ] Not articulated
- [ ] N/A

4. Restore and Enhance Natural Processes and Shorelines

- [x] YES
- [ ] NO
- [ ] Not articulated
- [ ] N/A

Notes:

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, the proposed project demonstrates a contribution to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, shorelines, and coastal wetlands of the Gulf Coast region, without regard to geographic location within the Gulf Coast region by beneficially utilizing dredged material. Information and lessons learned from this action can be applied to similar projects along the coastal areas throughout the Gulf of Mexico. Creating and restoring a large scale tidal marsh contributes substantially to restoring and protecting the natural resources of Gulf Coast ecosystem. The Alabama Coastal Plan recognizes the need for wise use of natural resources including sediments. The Coastal Zone Agency of the State initiated and directs the work of the Interagency Working Group (IWG). Emergent wetlands

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 decisions made pursuant to the project will be based on the best available science, and this project will evolve over time to incorporate new science, information, and changing conditions. Commitment to best available science is evidenced in the previously conducted hydrographic, SAV, and cultural resources surveys. The science associated with dredge material placement is well established, as demonstrated by the USACE, Mobile District's ongoing sediment management efforts in Alabama and northern Gulf coast as well as the significant efforts of the Mobile Bay NEP and others. The project offers substantial opportunities to document and build on collaborative efforts with different missions and purposes. The regional sediment management approach for beneficially using dredged material for conducting restoration

2. Regional Ecosystem-based Approach to Restoration

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, while the project promotes ecosystem-based restoration within a specific geographic area it is a foundational project that could be expanded or combined with other projects to elicit Gulf-wide benefit (see proposal Section 9). Creating and restoring the tidal marsh takes advantage of opportunities for mitigating the loss of resources and shorelines by keeping sediment into the system utilizing a regional approach. Doing so builds upon the USACE's strategies emphasizing the connection between maintenance dredging requirements of the navigation channel, beneficial uses for purposes of ecological restoration, and regional sediment management philosophies. Such restorative efforts are not only beneficial on a local scale, by retaining and returning sediments into natural systems this provides expanded benefits on larger regional

3. Engagement, Inclusion, and Transparency

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, the proposed project includes the support and participation from the diverse stakeholders who live, work, and play in the Gulf Coast region through involvement in the beneficial use process as well as the Mobile Bay NEP Comprehensive Conservation and Management Plan (CCMP) activities.

4. Leveraging Resources and Partnerships

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, the proposed project has the continued involvement of the IWG established to evaluate and provide guidance pertaining to alternative sediment management practices in Mobile Bay. The IWG consists of local, State and Federal agencies as well as academia and other non-governmental entities. The project offers substantial opportunities to document and build on these collaborative efforts with different missions and purposes. The approach taken to beneficially use dredged material in conducting restoration practices provides the ability to coordinate and collaborate; integrate numerous tools, technology, and data; leverage funding; and enhance partnerships. A large portion of the project i.e. long-term creation of wetlands, are leveraged against funds provided through a number of interests including USACE, ASPA, and local navigation industry.

5. Delivering Results and Measuring Impacts

(●) YES ( ) NO

Notes:

As stated in the proposal, the proposed project, which includes monitoring and adaptive management, shows the importance of achieving tangible results over a specified time frame and ensuring that funds are invested in a way to benefit the ecosystem of the Gulf of Mexico.

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 proposed 1,200-acre tidal marsh area would be monitored to ensure the project meets the goal of retaining dredged material according to the State of Alabama coastal zone program. Prior to construction, the IWG would develop a monitoring protocol for this restoration site. The protocol would include project goals, objectives, performance criteria, monitoring methods and schedule, and potential adaptive management measures. RESTORE funding would cover the cost of the monitoring program since this site would be constructed and filled under this project proposal. Costs have been estimated based on the assumptions that: 1) the primary monitoring data for evaluating achievement of the ecological success criteria would consist of aerial photography; and 2) regular site visits to be conducted to monitor of the progression of

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, by restoring estuarine marshes, the proposed project addresses a significant ecosystem issue in that the effect of removal of sediment from the natural system results in a gradual recession of estuarine wetlands and submerged aquatic vegetation (SAV) beds in the north and west portions of the Bay (Byrnes et al. 2013). Such resources provide a degree of storm protection and as well providing valuable ecosystem services to the Bay. These resources improve water quality and provide habitat for variety of marine wildlife associated with estuarine areas. Creating and restoring the marsh benefit humans supporting local fisheries, oyster production, and enhancing ecotourism. All of these services provide a

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

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, creating and restoring the tidal marsh takes advantage of opportunities for mitigating the loss of Bay resources and shorelines by reintroducing sediment into the basin through the placement of dredge material which will allow the sediment to an integral part of the Bay's natural sediment system. Doing so builds upon the USACE's strategies emphasizing the connection between maintenance dredging requirements of the Bay channel, beneficial uses for purposes of ecological restoration, and Regional Sediment Management (RSM) philosophies. Lessons learned from this effort would be applied to other efforts in coastal Alabama as well as the northern Gulf coast.

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

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, the proposed project has the continued involvement of the IWG established to evaluate and provide guidance pertaining to alternative sediment management practices in Mobile Bay. The project offers substantial opportunities to document and build on these collaborative efforts with different missions and purposes. Opportunities that could be applied in other areas of the southeast and the nation include: collaboration and support; fine grained sediment transport modeling; information exchange and dissemination; knowledge management; training; and integration of the regulatory, planning, engineering, and operational processes. The RSM approach for beneficially using dredged material for conducting restoration practices provides the ability to coordinate and collaborate; integrate numerous tools, technology, and data; leverage funding;

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:

As stated in the proposal, by leveraging other efforts of the local navigation industry the opportunity exists to utilize local workers and would benefit the local economy by providing a cost effective means of disposing of suitable dredged material. Creation of wetlands in this part of Mobile Bay would benefit the recreational fishing industry, particularly those individuals who fish for personal use along the US Highway 90 Causeway. This area provides excellent fishing opportunities for individuals who do not have the resources necessary to own and utilize watercraft. Many of the individuals who take advantage of this land-based fishing opportunity are from the north Mobile and Pritchard communities.