Priority & Commitment To Plan Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Alabama Submerged Aquatic Vegetation Restoration and Monitoring Project

PROPORAL NUMBER

AL-5

LOCATION

Mobile and Baldwin Counties, Alabama

SPONSOR(S)

Alabama

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

Planning/Technical Assistance/Implementation

REVIEWED BY:

Ebonye T. Allen

DATE:

30 January 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, Alabama seeks to utilize RESTORE Act funds to further the State's comprehensive efforts to sustain and restore submerged aquatic vegetation (SAV) in coastal Alabama. These efforts advance the goals and objectives of the Comprehensive Conservation and Management Plan (CCMP) of the Mobile Bay National Estuary Program (MBNEP 2014) and supports ongoing efforts of the NOAA funded Alabama Coastal Zone Management Program. While the proposed projects are targeted to the State of Alabama, SAV losses are documented throughout the Gulf (Handley, 1995). Alabama proposes the development of a model SAV restoration and monitoring program that is foundational in nature and can be applied Gulf-wide.

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, SAV (or seagrass) is an important natural resource in freshwater, brackish water, and marine ecosystems that provides food for waterfowl and other animals, as well as habitat for ecologically and economically important species (Manlove et al., 2002). It is estimated that over 70% of recreationally- and commercially-important fish and invertebrates in the Gulf of Mexico spend some portion of their lives in seagrass systems in near shore subtidal and intertidal zones (Florida Fish and Wildlife Commission, 2003). SAV has also been widely recognized for its importance in the sustainability and ecological function of aquatic habitats (e.g. Kenworthy et al., 1988; Fredette et al., 1990). Growth and extent of SAV is highly dynamic and can be affected by climate (e.g., tropical events, drought), hydrological processes (e.g., currents

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, this project seeks to collect the data necessary to foster science based decision making with respect to SAV status, trends, and restoration needs. Aerial digital ortho-imagery of coastal waters will be obtained on a regular interval, approximately every 2-3 years, depending on suitability of water conditions, weather, and tides during the SAV growing season (July-September); imagery will be analyzed to determine SAV coverage and create a GIS shapefile of coverage, with species composition noted for each polygon. Imagery acquisition, imagery analysis and field work to ground-truth SAV species and coverage will be conducted in accordance with NOAA protocols. A report on SAV coverage, species composition and status and trends will be developed from each monitoring event. Two sampling events are proposed,

2. Regional Ecosystem-based Approach to Restoration

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the submission, there has been a documented downward trend in the extent of SAV Gulf-wide over the last 50 years, with most estuaries showing loss rates ranging from 20% to 100% (Handley 1995). As described in the proposal, efforts proposed in Alabama can be scaled to the entire Gulf region. Alabama proposes the development of a model SAV restoration and monitoring program that is foundational in nature and can be applied Gulf-wide.

3. Engagement, Inclusion, and Transparency

(●) YES ( ) NO ( ) Not articulated

Notes:

As stated in the proposal, the Alabama Department of Conservation and Natural Resources (ADCNR) seeks to engage the public through traditional education and outreach efforts. The Lower Perdido Bay project will include the placement of educational signage describing the importance of SAV at strategic locations around the adjacent waterways. Additionally, an educational brochure previously developed by The Nature Conservancy (TNC), Dauphin Island Sea Lab (DISL) and the City of Orange Beach will be re-printed annually for distribution to tourist and residents at various venues around the coast. Further, the ADCNR and its project partners will promote the importance of SAV at events such as the DISL Discovery Day, Earth Day Mobile Bay, Delta Woods and Waters Expo, National Shrimp Festival, at the DISL Estuarium, at TNC education and outreach

4. Leveraging Resources and Partnerships

(●) YES ( ) NO ( ) Not articulated

Notes:

In addition to the collaborative education/outreach efforts described in Section D.3 of this form, the proposal describes an SAV mapping and monitoring effort that leverages data collected through Alabama's NOAA-funded Coastal Zone Management Program. Additional mapping and monitoring funding has also been received through the National Fish and Wildlife Foundation's Gulf Environmental Benefit Fund. These efforts combined with requested RESTORE funding will provide 3 complete cycles of SAV mapping over the next 10 years.

5. Delivering Results and Measuring Impacts

(●) YES ( ) NO

Notes:

As stated in the proposal, the ADCNR and its project partners have successfully implemented past seagrass protection and restoration projects in lower Perdido Bay. Additionally, Vallisneria seed collection and sowing projects have been successful in other locations. The ADCNR recently funded a pilot Vallisneria seed collection project conducted by the Dauphin Island Sea Lab which was successful at germinating collected seeds in a controlled setting. The submission describes there is a viable readily available seed source in the Vallisneria beds of upper Mobile Bay. As stated in the proposal, ADCNR and the MBNEP have successfully completed SAV mapping projects in 2001, 2008 and 2009.

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, this project will continue to collect aerial imagery and map SAV coverage in Alabama in order to track the dynamics of these habitats and measure the effectiveness of management techniques. SAV mapping will acquire vital SAV status and trends data, allowing further investigation to the factors that influence historic SAV loss as well as observed fluctuations in SAV coverage. Additionally, mapping will provide critical SAV extent and species composition data for resource managers and regulatory agencies, better informing regulatory decisions, future restoration efforts and the need for future SAV mapping, protection and restoration efforts.

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:

Alabama proposes the development of a model SAV restoration and monitoring program that can be applied Gulf-wide. As stated in the proposal, the foundation of SAV restoration is standardized, long term, consistent datasets from which status and trends information can be derived. Because of the dynamic nature of SAV, the cost of aerial imagery collection and the dependence of such aerial data collection on achieving the appropriate range of environmental parameters (e.g., low turbidity and minimal cloud cover during peak growing season), access to consistently collected, large scale data covering a long time frame is limited. As such, status and trends information is also quite limited. This project proposes to map SAV in coastal

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

(●) YES ( ) NO ( ) Not articulated

Notes:

The proposed project sustains SAV data collection in coastal Alabama for the next 10 years. As stated in the submission, due to the dynamic nature of SAV coverage, it is important that mapping efforts be sustained over time in order for status and trends information to be identified. Targeting these habitats for restoration is a foundational step toward sustainability of wildlife and fisheries resources.

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

(●) YES ( ) NO ( ) Not articulated

Notes:

As described in the proposal, Alabama has a proven track record in this field and relies upon tested techniques. The Lower Perdido Bay project utilizes educational signage to steer boaters away from grassbeds and installs bird stakes to repair propeller damage to grassbeds when a boat does enter the area. The Upper Mobile Bay restoration project relies on collection and sowing of Vallisneria seed, a technique that has been tested and found effective by the Dauphin Island Sea Lab. ADCNR and partner agencies have mapped SAV in coastal Alabama in 1980, 1987, 1994, 2001, 2008 and 2009.

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 detailed in the proposal, any effort to sustain or enhance SAV benefits the human community, as SAV is a nursery habitat for ecologically- and economically-important species of fish and shellfish and provides food for waterfowl and other animals. As the submission indicates, a healthy fishery is directly linked to resource dependent industries such as fisheries and tourism; and the coastal economy is intrinsically linked to healthy, productive waters.