Science Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Alabama Living Shorelines Restoration and Monitoring Project

LOCATION

Mobile and Baldwin Counties, Alabama

SPONSOR(S)

Alabama Department of Conservation and Natural Resources

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

Planning, Technical Assistance, Implementation

REVIEWED BY:

DATE:

12 January 2015

Best Available Science:

These 6 factors/elements help frame the reviewers answers to A, B and C found in next section:

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

- (●) YES
- ( ) NO
- ( ) NEED MORE INFORMATION

Comments

Objectives and conventional methods are currently in use by ADCNR and its partners to promote living shoreline restoration and coastal stability. Ongoing studies will continue, expand and integrate comprehensive monitoring of important environmental and ecological parameters. These data will provide valuable information needed to assess the changing status of several representative areas along the Alabama coast. All data cited are readily available to the public.

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

- (●) YES
- ( ) NO
- ( ) NEED MORE INFORMATION

Comments

The information supporting the proposal pertains directly to the "spill - affected" Alabama Gulf Coast region that is in need of study, assessment and oversight.

3. Are the literature sources used to support the proposal accurately and completely cited?

- (●) YES
- ( ) NO
- ( ) NEED MORE INFORMATION

Comments

The major representative and relevant citations for the proposal are listed. Although more literature sources are probably available, the partner institutions (TNC, DISL, Weeks Bay) would know about them, and will have ready access to them.

4. Are the literature sources represented in a fair and unbiased manner?

- (●) YES
- ( ) NO
- ( ) NEED MORE INFORMATION

Comments

The literature sources cited represent recent, pertinent information that is relevant to the Alabama coast. They appear to have been presented in a reasonable, fair and unbiased manner.

5. Does the proposal evaluate uncertainties and risks in the scientific basis for the proposal, including any identified by the public and Council members?

- (●) YES
- ( ) NO
- ( ) NEED MORE INFORMATION

Comments

Reasonable uncertainties and risks are identified and addressed. Ecological studies along the coast always contend with stated factors such as weather (including storms), near-by development, currents, and substrate changes.

6. Does the proposal evaluate uncertainties and risks in achieving its objectives over time? (e.g., is there an uncertainty or risk that in 5-10 years the project/program will be obsolete or not function as planned given projections of sea level rise?)

- (●) YES
- ( ) NO
- ( ) NEED MORE INFORMATION

Comments

Uncertainties and risks are addressed and objectives should be achievable over the proposed time frame. Data collected should certainly remain relevant for the for-seeable future. The proposal includes basic ecological, environmental, and habitat information that would not become obsolete, but provide baseline data on status, stability and biological diversity. Any rise in sea level will just be another potential factor that will be considered in the overall analyses.

Based on the answers to the previous 6 questions, and giving deference to the sponsor to provide within reason the use of best available science the following three questions can be answered:

A. Has the applicant made a reasonable determination that the proposal is based on science that uses peer-reviewed and publicly available data?

- (●) YES
- ( ) NO
- ( ) NEED MORE INFORMATION

Information Needed:

B. Has the applicant made a reasonable determination that the proposal is based on science that maximizes the quality, objectivity, and integrity of information (including, as applicable, statistical information)?

- (●) YES
- ( ) NO
- ( ) NEED MORE INFORMATION

Information Needed:

Comment: The proposal will be using the best (current scientific) methods. Data collected will be relevant and interpretable. The partner agencies are well experienced in data collection, maintenance, assessment, and statistical analysis.

C. Has the applicant made a reasonable determination that the proposal is based on science that clearly documents and communicates risks and uncertainties in the scientific basis for such projects?

- (●) YES
- ( ) NO
- ( ) NEED MORE INFORMATION

Information Needed:

Comment: The usual risks and uncertainties (common to ecological field research) are acknowledged, addressed, and assessed.

Science Context Evaluation

A. Have other methods been discussed and reasons provided to why the method is being selected (e.g., scientifically sound; cost-effectiveness)?

The proposed project continues to use and modify standard, proven, conventional data collection and analysis techniques (some already in use). Methods will be further assessed and modified to meet specific locations.

B. Has your agency/vendor/project manager conducted a project/program like the one proposed?

We have conducted similar ecological field studies, using comparable data collection and analysis techniques (although not to the extent of this project).

C. Is there a risk mitigation plan in place for project objectives? (captures risk measures as defined under best available science by the Comprehensive Plan and Act)

Risk mitigation for changes in weather, currents, etc. is not feasible. However, given the broad spread of the study area (and multiple focuses), not all areas should likely be influenced (except for a massive hurricane). However, those data would still be quite valuable.

D. Does the project/program consider consequences with implementation? (captures risk measures as defined under best available science by the Comprehensive Plan and Act)

Yes. Implementation consequences will be limited, localized, minimal and reasonable. The stated methods and techniques are not unreasonably invasive or disruptive.

E. Does the project/program have clearly defined goals?

Yes. [Page 7] Focusing on living shoreline restoration techniques, the project will integrate all available monitoring information currently available along coastal Alabama. Further, it will conduct a modified, robust, comprehensive monitoring program in multiple, representative areas of the Alabama coast.

F. Does the project/program have clearly defined objectives?

Yes. [Page 3] 1. Employ several conventional living shoreline techniques (LST), 2. Design and engineer additional living shore techniques, 3. Enhance living shoreline restoration efforts, 4. Implement comprehensive living shoreline monitoring across multiple areas in Alabama.

G. Does the project/program have measures of success? (captures statistical information requirement as defined by the Comprehensive Plan and Act)

Yes. [Page 8] Success will be measured by the following: 1. Living shoreline assessment, 2. Engineering, design, and regulatory compliance, 3. Successful and effective monitoring, and 4. Enhancement of a healthier, more bio-diverse and more productive Alabama shoreline.

H. Is a monitoring program in place to determine project goals, success and help adaptive management (if applicable)? (captures statistical information requirement as defined by the Comprehensive Plan and Act)

Yes. Preliminary monitoring exists, which will be assessed, revised, integrated, and expanded to confirm ecosystem status, stability and biodiversity. Data analysis will provide assessments of the most appropriate living shoreline techniques to manage the various sites.

I. Does the project/program consider recent and/or relevant information? (captures statistical information requirement as defined by the Comprehensive Plan and Act)

Yes. Recent, relevant information will be assessed, compared, and expanded with information collected at multiple field sites along coastal Alabama.

J. 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 Comprehensive Plan and Act)

Yes. All previously monitored sites will be integrated into a wider habitat and community assessment. Successes in on-going monitoring efforts will be incorporated into the methods of this proposed study and modified when necessary.

Please summarize any additional information needed below:

Comment: This kind of study needs to be done to provide for needed current, baseline ecological and environmental data. The partner agencies are competent and experienced using the methods and techniques proposed. The DISL is experienced and competent to conduct the proposed field monitoring.