Science Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Connecting Coastal Waters: Restoring Coastal Wetland Hydrology

LOCATION

Gulf Coastal Counties in all states

SPONSOR(S)

Department of Commerce Five Gulf States (?)

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

Planning, Tech Assist, Implementation

REVIEWED BY:

DATE:

January 12, 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

Dahl and Stedman 2013, GCERTF 2001, Turner and Lewis 1997, Mitsch and Gosselink 1993 and several other foundational documents were used in developing the proposal and cited appropriately. Projects selected were very sound being based upon the 'Inventory of Potential Gulf of Mexico Hydrological Restoration' projects which was a Gulf-wide program developed in collaboration with state and local partners.

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

Directly focused on Gulf and methods applicable to the Gulf

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

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

Comments

Everything seems to be appropriate and applicable.

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

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

Comments

See answer in 1 above.

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

There is an entire subsection devoted to Uncertainties and Risk that does a good job of identifying and evaluating these factors: Example of identifying: "There are inherent risks to any project based in a dynamic coastal system including, but not limited to: sea level rise, storms, subsidence, and at times unpredictable changing environmental conditions.". It also discusses upstream issues.
The actual evaluations of uncertainty and risk was fairly generic in nature and referenced Best Management Practices.
For example: "In general, restoring hydrology will result in wetlands becoming healthier and more resilient to the effects of

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

Proposal acknowledges the long-term risks involved in the work being performed and specifically discusses climate change, habitat alterations, changes in water management upstream, and changes in land use practices.

For example:
"Connecting Coastal Waters will restore coastal wetlands using an ecosystem approach by addressing a critical limitation to

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:

Seems technically sound based on both peer reviewed and technical publications along with lots of different input from a variety of local and state partners to each project.

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:

All statements, objectives, and goals appeared to be sound and appropriate. There is nothing discussing statistical inference or evaluation of monitoring or success based on statistical analyses. Such a discussion and approach would be worth additional exploration.

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:

See answers to 5 and 6 above.

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)?

Methods seemed to be scientifically sound and cost effective, but there was no substantive discussion of alternative methods.

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

Yes, but I do not see how that is relevant to my evaluation of the proposal.

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 is discussed sufficiently and appropriately.

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. For example-
"Connecting Coastal Waters will restore coastal wetlands using an ecosystem approach by addressing a critical limitation to restoration; an altered regional hydrology (Dahl and Stedman 2013, Mitsch and Gosselink 1993).This initiative will also achieve sustainable benefits because it focuses on restoring regional hydrologic processes that connect habitats."

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

Very clear description of goals:

Description of Goals:
Implement projects to restore the extent, functionality, resiliency, and sustainability of coastal wetland habitats by restoring natural hydrology;
• Leverage place-based collaborations to achieve measurable benefits for coastal wetlands; and

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

Objectives are project specific and they are briefly discussed in the description of each of the 11 projects. For the most part they were clearly defined within each specific project description.

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

Yes, addressed explicitly.
"Measures of Success
Connecting Coastal Waters will achieve measurable, region-wide benefits for Gulf Coast wetlands and demonstrate the following measures of success:
• Restore hydrology to benefit and restore over 22,000 acres of wetland and estuarine habitats.

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, addressed explicitly and broken down into appropriate stages with a commitment to address problems identified through Adaptive Management:
"Monitoring
Connecting Coastal Waters will use standard monitoring protocols including Science-Based Restoration Monitoring of Coastal Habitats (Thayer et al. 2003, Thayer et al. 2005). Each project will develop a monitoring plan that details specific parameters,

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

Yes. For example,

"NOAA proposes to build upon previous efforts that identified hydrological restoration projects through our community-based restoration grants program. NOAA will collaborate with the Gulf States and other partners to significantly improve the extent and sustainability of Gulf coast wetlands and the vital ecosystem services they provide to Gulf communities."

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, see answers to 4,5,6, I and B above

Please summarize any additional information needed below:

Overall, a very solid, sound, and worthy proposal. If adequate funding is available I recommend this proposal be fully funded, if not then recommend the phased approach offered up in the proposal.

"Phasing
The proposal also provides an optional phase funding approach (Phase 1: $2,893,750; Phase 2: $14,994,813) described in Section II: Implementation Methodology to offer the Council the choice to phase-in planning, design, and construction