Science Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Egmont Key Restoration and Storm Damage Reduction (Tribal Proposal)

LOCATION

Hillsborough/Tampa Regional Area, Florida

SPONSOR(S)

Department of the Army

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

Implementation

REVIEWED BY:

DATE: 01/11/15

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

Although there is a reference section (8), specific facts/approaches cited in the body of the proposal are not specifically linked to those documents. It appears there was a feasibility study conducted in 2008 and a majority of the planning for this project is based on that document, but the reviewer has to interpret what documents are associated with statement in the proposal.

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 does directly pertain to the Gulf Coast region.

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

- ○ YES
- ○ NO
- ◉ NEED MORE INFORMATION

Comments

There are references cited in section 8, however, there are no citation made in the body of the proposal that link the reference to a particular strategy, plan, or fact/statement. There is no explanation of how the figure of 676,000 cubic yards of material was determined. References are simply listed in section 8 and are either very loosely referred to in the body of the proposal (example- section 5: "The feasibility study performed in 2008 ")- no specific citation which does not clearly identify where/what information regarding restoration methods are coming from.

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

- ○ YES
- ○ NO
- ◉ NEED MORE INFORMATION

Comments

Poorly linked to narrative.

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

Section 5, page 7, does address uncertainties, but basically summarizes by stating that there are none. Certainly severe weather events, hurricanes, and sea level rise could have unknown impacts on this project.

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

As referred to earlier, on page 7 of the proposal, they basically state that there are no uncertainties and so do not address how they would respond over a fairly long project duration to changes.

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:

Obviously, the US Army Corps has vast experience at restorations such as this. However, the proposal itself does not clearly articulate the approach for restoration presented in the proposal. Why was a 'sheet pile wall' (pg 4) selected as the approach and again, how was it determined to use 676,0000 cubic yards of material? If this is standard practice, a citation should have been provided.

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:

The proposal states well the treasure that Egmont Key is to Florida and the United States. Providing critical habitat for shore birds and sea turtles, as well as preserving historic fixtures is well argued. However, the approach taken is poorly described and/or referenced.

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:

Again, uncertainties such as severe weather, hurricanes, and sea level rise which could have significant impact on the porject are not addressed.

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 primary document appears to be the 2008 feasibility study cited in the references. There is no discussion comparing possible alternative approaches (again, as a specific example- the selection of the sheet pile wall on the north end of the island with no discussion regarding alternatives ro eve the how/why it was selected)..

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

No.

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)

Minimally, yes. They will relocate seat turtle nests as needed and a special monitoring program will be implemented to protect active migratory bird nests.

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

The proposal really argues the consequences of not implementing the program- continued loss of beach for sea turtle and nesting birds, loss of historical and tribal properties.

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

Yes. From the proposal:
"The Egmont Key project’s primary RESTORE Act goal is to Restore and Conserve Habitat while the projects also meets several goals secondarily,Replenish and Protect Living Coastal and Marine Resources , Enhance Community Resilience, and Restore and Revitalize the Gulf Economy."

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

Yes. 1) Restore coastal habitat 2) Protect Imperiled species 3) Preserve America's heritage, and 4) Community Resilience and the Gulf Economy

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

Yes. 1) Physical monitoring will assess beach berm design.2) Endangered species success criteria- nesting rates for sea turtles and shore birds will increase will be greater than pre-construction rates the first year post construction.

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)

As discussed above, on page 7, there will be monitoring of nests one year post construction. If this is an industry standard, there is no reference citing this. The reviewer questions why only 1 year post construction would be evaluated on a project of this duration.

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

Perhaps, difficult to assess as references are so poorly cited within the document.

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)

I believe so, however, I was not able to go to the link in the citations of the 2011 report (error message).

Please summarize any additional information needed below:

Egmont Key is certainly a treasure from a natural resource, tribal and local history point of view. Beach re-nourishment to protect it is most likely, vitally important. The proposal gave little information about the scientific selection of the approach t o be taken. The monitoring plan for the argues sensitive species was only 1 year post re-nourishment, which I found extremely minimal to determine if the restoration project was successful.