Science Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Mobile Bay and Beyond – Watershed Implementation to enhance Marsh, Marine, and Estuarine Ecosystems

LOCATION

Baldwin & Mobile Counties, AL

SPONSOR(S)

USDA

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

Project, planning, technical assistance, implementation

REVIEWED BY:

DATE:

22 Dec 2014

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

There is one peer reviewed article supporting this work. The remainder of references are reports. The techniques to be used in this phase are land management agreements. There are no clear indications of what areas in the watersheds specific emphasis might be placed or why.

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

Proposal pertains directly to gulf region, so question is not relevant.

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

- ◉ YES
- ○ NO
- ○ NEED MORE INFORMATION

Comments

Citations are complete and in many cases include web addresses to the reports being cited.

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

- ◉ YES
- ○ NO
- ○ NEED MORE INFORMATION

Comments

Literature is mostly government documents.

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

Proposal states where uncertainties exist, but does not address uncertainty in any quantitative or semi quantitative way.

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

Only a brief statement of minimal risk and the fact that there may be hurricane damage.

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:

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:

It is unclear that there is a strong scientific foundation of the proposed research. There seems to be a strong history of standard practice and policy to underpin the approaches, but little empirically base science.

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)?

No. The methods selected are selected because they have been done before and because significant numbers of contracts and dollar figures have been expended in previous efforts. There are minimal indications of success criteria or how they would be measured.

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

Not on the same scale, but I have worked on erosion management in the midwest and coastal atlantic.

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)

No. The 12 line risk statement includes only risk of hurricanes and that land owners might not participate.

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

No. The proposal authors seem to perceive no risks.

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

Yes although very broadly defined as " implement [of] conservation treatment on 15,000 acres to improve hydrologic condition and water quality. " Likely conservation practices are listed in a table.

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

Again, only in a very broad sense. The most specific can be summarized as to a) work with land owners; b) reduce erosion and c) improve water quality.

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

No. A goal of treating 15,000 acres can mean almost anything. There is a reference ot calculation of sediment loss and measurement of turbitdity, nutrients, coliforms, and pesticides. No statistics were provided for parameters/thresholds of water quality might be important, if changed or even how they might be measured.

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)

There is a single statement that "many partners are already monitoring water quality."

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

The proposed Project considers recent land acquisitions and restoration activities in those areas. The project considers statutory limitations that have impeded land optimal management.

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)

The proposal makes this difficult to determine. Given that the proposed activities would augment ongoing improvement of land management in the area. The adaptive management strategy would imply that they have learned and will learn from pat efforts.

Please summarize any additional information needed below:

Improving land management is a laudable goal. Protection of farm lands and farm/ranch heritage is a critical national need. Providing funds to land owners for land management projects that may only one year appears problematic. The goal would be to have agreements in place for long term improvements in management, up to and including conservation easements.
It is necessary to know the extent to which different land management techniques improve water quality in the types of costal ecosystems describe. It is also important to know what amount of water quality improvement will improve ecosystem function. To properly judge the proposal the risk that an individual land management project will fail should be provided (Eg. if forest