Science Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

THE MISSISSIPPI GULF COAST FOREST RESTORATION AND CONSERVATION INITIATIVE

LOCATION

Mississippi Gulf Coastal Plain

SPONSOR(S)

USDA

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

Project/planning/technical assistance/implementation

REVIEWED BY:

DATE:

January 8, 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

The proposal includes references to journal articles to justify the linkages between proposed activities and species/water quality responses. The material referenced includes recent work by McLaughlin et al. 2013 and Formby et al. 2013. Also of note is the work by Johnsen et al. 2009 and international references, such as the work by Fagan et al. 2008. Good rationale for the area of focus, including Turkey Creek - one of Mississippi's most endangered historical places. Methods and expected outcomes are well referenced, and include technical reports such as that edited by Wear and Greis, 2013. The partners involved bring a wealth of expertise to this project.

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

It does pertain to the Gulf Coast region - strong linkage to both restoration of forests for species and water quality.

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

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

Comments

All references seem in order and include a wide variety of sources, many of which are peer reviewed journals.

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

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

Comments

The diversity of sources, including international articles, support the objectives of the proposal. It is a well referenced proposal.

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

The proposal includes reference to a reduction in the risk wildfires by reducing volatile fuel types in forests for a more manageable fuel type by applying thinning techniques and prescribed fire regimes. The proposed restoration methods would also help reduce the risks posed by invasive species and soil erosion. The data collection and monitoring protocols that will be put in place should help to quantify the reduction in these risk areas.

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

The experience of the partners in delivering the conservation and restoration work covered in this proposal may negate the need to include this evaluation of uncertainty upfront. The assumption is that the restoration itself will work - one thing that may need to be looked at is the restoration given predicted changes in climate. But perhaps the monitoring efforts will enable techniques to be modified throughout the term of the work.

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:

I'm not sure this question is applicable. The work builds upon ongoing efforts and is well cited. The techniques proposed seem to be well founded and are not experimental in nature. The use of ecological systems mapping to do the planning will help reduce risks associated with incompatible species and increase the probability of success.

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)?

There are various methods and sites included. Although specifics regarding planting methods are not included in the proposal, the overall proposal is well referenced.

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

No - not our area of expertise.

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 - there is a data and information sharing plan though that could be required to address risks identified through any monitoring efforts. There also seems to be good communication across the partners to learn from each other regarding effectiveness of various techniques.

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

I'm not sure this is applicable given that the science that will guide this is well cited and not experimental in nature.

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

Yes - including building on existing efforts.

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

Yes - include specific acres suitable for (e.g.) longleaf ecosystem restoration, gopher tortoise and gopher frog restoration, and some stream restoration specifics. A summary of objectives (table format) would have been helpful but the information does seem to be included.

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

Yes - there is a specific section on monitoring and measures of success. This section includes critical data elements.

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 monitoring in place - as well as technical assistance and dissemination of information (which I assume will include lessons learned)

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

not applicable

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)

this component is under-developed although material referenced likely addresses this issue they did not pull it into the body of the proposal.

Please summarize any additional information needed below:

This is a well referenced project that builds on existing efforts to restore and conserve critical areas in the MS Gulf Coastal Plain. There are a number of partners engaged, all of whom are well known experts in the field of forest restoration and conservation. I would recommend this be funded.