Science Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Strategic Land Protection, Conservation, and Enhancement of Priority Gulf Coast Landscapes

LOCATION

Gulf Coast - all 5 U.S. States

SPONSOR(S)

Mississippi is lead, co-sponsors are DOI and USDA

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

Program Planning and Implementation

REVIEWED BY:

DATE:

December 17, 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

The proposal would benefit from additional citations that support some of the overall Gulf priorities (listed on page 8). In particular, include more citations related to "habitat that support wildlife" (also, does wildlife include fish here?) and "habitat quality and ecological services". How are habitat quality and ecological services defined? Measured?

The criterium of prioritizing lands on existing lists is a good one, but the descriptions of the criteria used to develop these existing lists (State, Federal, NGO) should be more explicitly tied to the primary goal of conserving and restoring habitat. How did the existing lists include habitat conservation and restoration in their selection criteria?

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 pertains to Gulf Coast Region

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

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

Comments

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

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

Comments

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 should also include some evaluation of risks in regard to sea level rise, land subsidence, and potential effects of proposed large-scale Mississippi River diversions.

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

Sea level rise/subsidence/longer term effects of proposed major MS River diversions may cause some acquired lands or easements to become functionally obsolete for the purposes of the RESTORE program within this time frame. While this land protection program is important, every effort should be made to avoid public expenditures on lands that a) are at greatest risk to these threats AND b) do not functionally contribute to protecting and conserving important habitats.

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:

The proposal would benefit from more discussion of scientific lessons learned from previous efforts at land protection in the Gulf region, if possible -- particularly, showing the benefits and challenges of tools used to a) prioritize lands for protection and b) monitor their efficacy thereafter.

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:

Some statistical information is provided but it is primarily economic. Additional science-based statistics on the value of land conservation to habitat protection could be provided. In particular, scientific case studies on the habitat benefits of land protection in the Gulf region.

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:

The uncertainties and risks associated with this proposal are more socio-economic than scientific. This is reflected in the uncertainty and risk section of the proposal. Risks based on science aren't really addressed - e.g., sufficiency of the connectivity achieved, risks and uncertainties due to sea level rise/subsidence/diversions. Modeling (e.g., USGS) and GIS-based spatial analyses could help address these issues in the planning stages. Consider also consulting the NASA's Gulf of Mexico Initiative Coastal Geospatial Tools and other geospatial tools and lessons learned through the NOAA Coastal Services Center projects.

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 reasons are presented, but one piece is confusing:
A case is strongly made for the need for land protection on private lands. The statement is also made that outright land acquisition is often infeasible and that easements are a better option: "Some 86%
of land1 in the five Gulf states is privately owned and is in agricultural or forestry use (USDANRCS

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)

Not really. The risk of government agencies, particularly the federal government, having the ability to meet operations and maintenance (O&M) needs of land extensions to its already financially-stretched system seems high. Many existing parks and refuges are very underfunded. What contingency is in place to help fund the O&M of these extensions?

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

Most of the risks are from inaction not implementation. One consequence to examine is the potential loss of taxes by local communities and how those losses might be more than compensated for by the ecosystem service values provided by the land protection activities.

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

Yes.The primary goal is protecting and restoring habitat, with many secondary goals. This is clearly a proposal that will provide multiple public benefits (habitat, community resilience, water quality, marine resources...)

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

Yes. The multi-level, multi-scale approach to this proposal (local/individual property owner to NGO to State to federal DOI and USDA levels) is very good.

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

It appears that measures of success will developed through the Monitoring objective, objective #4, of the proposal. These are not yet defined. Some initial measures should be suggested (e.g., areal extent or protected lands, connectivity statistics, protected species information).

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)

A monitoring program is proposed. Ideally, some of the tasks under the monitoring objective, objective #4, will be undertaken at a relatively early stage of the overall program to help inform decision-making -- in particular, "status and trends evaluation" and "assimilation of existing data".

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

The program briefly considers lessons learned through existing land protection activities, as well as priorities listed in the 2014 "Land Conservation Vision for the Gulf of Mexico Region".

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)

Not in detail. More discussion could be provided.The scale of this proposed program seems much greater than most others previously implemented.

Please summarize any additional information needed below:

The overall proposal is strong and and land protection is an important approach to restoring the Gulf. The fact that the State of Louisiana is not a partner in this proposal is a concern. Given that LA has a very large Gulf coastline and a significant portion of the Southern extent of the MS River watershed is in LA with large water quality and sediment delivery implications, it is important that the State of Louisiana and its property owners be full partners to ensure the effectiveness of this habitat-focused program Gulf-wide. LA has its own land acquisition priorities included in the Coastal Master Plan that could be complementary to - or included in - this program, as well as major restoration and diversion projects underway that could