Science Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Bahia Grande Coastal Corridor

LOCATION

Adjacent to the Lagua Madre and between Bahia Grande and the Laguna Atascosa National Wildlife refuge in south Texas

SPONSOR(S)

Texas

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

Implementation

REVIEWED BY:

DATE:

12 January 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 objectives and methods used for this proposal have been outlined fairly specifically yet the scientific justification behind the objectives and methods are not specifically justified. Based on my experience in science-based conservation planning and landscape-design efforts, such a Joint Venture bird conservation plans, recovery plans, and state wildlife action plans, there are likely strong underpinnings and science-based justification for objectives and methods. These have not been laid out in any detail for this particular 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

All of the relevant and important information supporting this proposal directly pertains to the Gulf Coast Region, and specifically the southern coastal areas of southern Texas and Northern Mexico.

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

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

Comments

Yes, the literature sources are accurately and completely cited. However, as noted previously, from a scientific justification perspective it would be good to see a more peer-reviewed publications cited in support of this overall effort.

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

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

Comments

Yes, based on my knowledge of the peer-reviewed articles cited they are fairly represented. Given that I am less familiar with the more 'regional' documents and plans cited for this effort, I assume the authors represent the contents in a fair and unbiased manner.

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 authors of the proposal do generally discuss various risks and uncertainties associated with this proposal. However, they do not provide any specifics regarding which risks are more likely nor do they cite any potential peer-reviewed literature which could help address. As one example, they stress the threat of various types of develop to lands in the project area yet to not provide any information regarding development plans, zoning information, etc. to project out where development is most likely to occur.

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

This proposal very generally evaluates uncertainties and risks for achieving objectives over time. In fact, they highlight how future sea level rise (SLR) will actually help support their desired future landscape conditions through increased 'salt water flows into this wetland system to reduce hypersaline conditions', although I am not sure I follow their logic here. The authors also fail to provide any science-based data or models projecting future changes in SLR for this region of the Gulf. I know of at least a couple of Sea Level Affecting Marshes Model, or SLAMM runs that have been made for some coastal area of Texas

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:

Yes, the applicant has made a reasonable determination although the details are lacking. Based on my experience in science-based conservation planning and landscape-design efforts, such a Joint Venture bird conservation plans, recovery plans, and state wildlife action plans, there are likely strong underpinnings and science-based justification for objectives and methods. These have not been laid out in any detail for this particular proposal but would be very beneficial to the evaluation

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:

Based on my read of this proposal, I did not see any direct discussion of the quality, objectivity, or integrity of the information. However, my knowledge of the process for the planning efforts cited suggests to me some of this information exists and should be provided to the RESTORE Council to aid in their project selection efforts.

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 applicants specifically address only one set of risks and uncertainties - that being sea level rise. However, are there are several other risks associated with this project that could affect its success. For instance, the vagaries of changing climate and regional weather patterns could affect the applicants ability to mange water flow resulting in not meeting projected/planned salinity targets. It would benefit both the applicants and RESTORE council if there would be a focused effort to investigate various future climate scenarios and their potential impacts on their project targets. One suggestion would be the Standardized Index of Vulnerability and Value, or SIVVA approach, which would allow for a more quantitative and

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 is no real discussion of alternative methods or approaches to this project. However, due to the multi-faceted nature and approach to manging for multiple targets and endpoints, the various methods outlined here are perfectly suited to a successful outcome. The science-based planning approaches referenced in this plan have shown past successes which implies that scientific methods outlined here should lead to a successful project.

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)

This proposal does not have an explicitly stated risk mitigation plan. However, it does provide some general comments regarding the risks and uncertainties of the proposed acquisition activities with regards to future change in sea level rise.

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

This proposal does include some fairly specific measures of success and provides some general comments regarding the broad consequences of a successfully implemented project. Based on the use of various science-based conservation plans, there is likely a more detailed, science-based evaluation of consequences of a successful project implementation.

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

This project has fairly well-defined and stated goals that should lead to the successful implementation of this proposed project.

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

This program provides very specific, targeted, and prioritized objectives for land acquisition and conservation easement activities which if met will likely lead to a successful project outcome.

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

This project does outline several measures of success in very qualitative terms rather than specific, scientifically-based quantitative terms. Quantitative success criteria are likely contained with several of the conservation planning efforts referenced as the basis for this larger landscape project.

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)

This proposal does not contain an explicitly stated monitoring plan. The applicants state that if successfully funded, Inventory and Monitoring plans will be written and implemented to monitor restoration prescription effectiveness.

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

This proposal does reference recent and relevant information as defined by the Comprehensive Plan and RESTORE Act. In particular, the applicants make excellent use of various economic data which have been generated in the past two to three years.

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 project proposal does not provide an evaluation of past successes or failures of similar efforts in an explicit manner. The applicants do however provide a general overview of successful past efforts with in the Bahia Grande Coastal Corridor, several of which were led by members of the current proposed effort.

Please summarize any additional information needed below:

The biggest concern for the successful implementation of the project revolves around the proposed use of an adaptive management framework. I have reviewed many restoration and conservation-oriented proposals which claim to use and adaptive management framework. This proposal is no different; they refer to an adaptive management framework in a general sense but do not provide any evidence they have followed a true adaptive approach with learning being one essential elements. For example, the applicants fail to explicitly define models used to evaluate management outcomes, learn from these models, and refine their future efforts based on models weights. A true adaptive framework would require the