Science Evaluation

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Bayou Dularge Ridge Restoration, Marsh Creation & Hydrologic Restoration; Phase I

LOCATION

In the Terrebonne Basin marshes S of Lake Merchant along Bayou Dularge Ridge

SPONSOR(S)

USDA

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

Planning

REVIEWED BY:

DATE:

1/8/2015

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

For the salinity control portion of this project, they used 2 computer based modeling programs to model hydrodynamics and salinity to ascertain effects. These models are publicly available. The validity of the models have been peer reviewed, but it is unclear if this particular project was reviewed. Because the models were run/created by a contractor for NWRC, there is an assumption that the NWRC peer reviewed the results prior to accepting the deliverables under the contract. It is also a funded project for the CWPPRA program. Presumably, these projects have been peer reviewed.

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

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

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

Comments

The ridge restoration project in the Master Plan refers to restoration of the northern side of the Bayou not the southern Bayou as the plan infers. The funded CWPPA project TE-66 addresses the sill creation aspect of this project.

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 basis for the proposal is that land is being lost in the Terrebone Basin; however, if you look at the raw data for both locations that they present and the average amount of land present, there seems to be a stabilization (or even an increase) in the amount of land in the evaluation area since ~2000. They do not address this in their evaluation, choosing to use the historic (and much higher) land loss rates for effect. This could greatly influence the results of the models and their ability to actually detect a positive impact as a result of the 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

The "Yes" is not a strong "Yes", they give them a courtesy mention but do not get into much detail.

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:

1. These models need to be run using a more current data set rather than a historical data set where the information clearly shows that the negative trend is no longer as severe since ~2000.
2. The integrity of the information with respect to their results is low as they tout a reduction in the rate of land loss as

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:

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, it would have been nice to see why returning the ridge to its natural condition (without an opening) was not an option. It seems like it would be a more obtainable goal rather than trying to build a pass that will actually do very little to the salinity level.

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)

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

Not really, there will be consequences to the existing marsh they will cover up with the dredge material and some of the areas they are covering up are open water areas that have been open water since at least 1990 (Google Earth)

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

Yes

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

Not really.

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

There is no monitoring plan, this is just the planning phase of the project. But they do make the justification that the land/marsh and the reduction of salinity would be the result. They do not tell you how close to the expected 10% salinity reduction would be considered success and how much land creation at different year intervals would be considered a success.

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)

No not in this phase.

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

No not really, they base their results on models that use historical data rather than a smaller more current data set. You do loose power; however, there is a change that occurs ~2000 where the marsh seems to stabilize.

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)

No

Please summarize any additional information needed below:

It seems that the Sill part of the project may have been funded as this is from the most recent CWPPRA project status report report: "PROJECT STATUS: (Project Status Last Updated: 19Nov2014)
Modeling completed in December 2013. Project Team waiting on CPRA decision to move
forward with design. Revised benefits and preliminary costs were developed in 2014. Project
Team decision anticipated in January 2015.
FUND STATUS: