SCIENCE EVALUATION

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE:Restoring resilence to oyster reefs through reclamation .....

LOCATION: Florida

SPONSOR(S):

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

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REVIEWED BY:

DATE: 15 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

But....
P5, line 5 from bottom:
Piling 24 cm of rubble (11 inches) does not provide growth opportunity within this area- you are making a dam from the deposited material that is not accessible for growth by oysters. Also no idea of the width of the reef in the proposal!

Drip irrigation is still extremely wasteful-ground trickle systems are much more efficient

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

Comments: local groups have worked in this region and seem aware of methods applicable. One alternative to the rubble approach is to use seawater electrolysis reefs as being done by Tom Goreau, and in Texas currently by USEPA/TAMUCC.

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

NEED MORE INFORMATION

Comments: Unfortunately several factual errors cloud their interpretation of published works: p3, line 4 from bottom: Fl does not contribute 1/3 to GLOBAL fishing!

Reef success measured as survival only is naive- it is critical to assess physiological state to determine stress levels before investing millions of dollars building a reef where the oysters can not survive already

There are a large number of personal observation statements on reef success, previous work that can not be evaluated via peer literature, project reports, etc.

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

YES but very limited citations demonstrating complete command of the three areas

Comments: the 12 km Suwanee River/Cedar Key region will not be protected from this construction (p9, bullet 1)

5. Does the proposal evaluate uncertainties and risks in the scientific basis for the proposal, including any identified by the public and Council members?

marginal

Comments: The irrigation section does not consider better alternatives.

The land acquisition (LEASE!!) does not consider that the protected wetland forest is not timberable at a reasonable cost by the land company, so the benefit is mute

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:

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

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)?
NO

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

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- the reef construction work is very expensive. We are creating a 0.8 acre reef for $220K, scaling up this equals $1.2 million for what is proposed

B. Has your agency/vendor/project manager conducted a project/program like the one proposed?
Yes- currently building reef habitat at ¼ price

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) measurement of oyster physiology during the reef development is critical- scope for growth, stress, versus live dead end points

The irrigation project does not consider alternative to surface irrigation such as ground drip which is 30-60% higher delivery/efficient!

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

yes

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

yes

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

yes

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

Yes, but weak for benefit assessment of irrigation and for oyster reef

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)

marginal

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

Yes/marginal

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)

Marginal. Ignores improvements in irrigation technology, and overstates benefits (P9, bullet point 1:: protection of 12 km of coastline from reefs!)

Please summarize any additional information needed below:

This was a very difficult proposal to evaluate- little information of involved groups presented, there was no flowchart/milestone schedule or personnel listing. It can be inferred that University of Florida has a significant role, but it is not clear otherwise.