

Implementation of A Wetlands Monitoring System Suitable for Assessing Ecosystem Response to Restoration Actions

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Initial Selection Panel Review

Not Recommended

Amount Sought: \$1,774,680

Fund This Amount: \$0

Brief explanation of rating:

This proposal offers a 3 tiered approach to assessing wetlands now apparently being used by EPA and others and apparently may be required on EPA wetland permits in the future. The first two tiers, including a rapid assessment method (CRAM) will be used while the third tier doing intensive site monitoring at selected sites will not. The tiers are well explained but their applicability to ERP monitoring and the PSP is not well documented. It is not explained how this method and outcomes will enable ERP to assess its "progress", although the method fits into state and national assessment goals (as used by EPA). This proposal does not focus on restoration projects per se, but may be applicable to evaluating the "quality" of restored or potentially restored sites, although it would be assessing a site after the fact with little prerestoration information. The proposal has little detail on teams, sites, etc., although the poor development of these items may be based on page limits and this was potentially a lengthy proposal. Adding Tier 3 intensive monitoring might have enhanced the usefulness of this project, but the primary emphasis is to train others to use CRAM, although it is not clear who, when or where the training will be. Implementation of CRAM requires testing which includes use of validation sites which do not appear to be a part of the proposed approach. Reviewers raised questions about CRAM weights which apparently can be changed which would require recalibration of earlier data at other sites. If recalibration of the evaluation methods is possible, it should be shown that it has been tested and validated. To demonstrate the usefulness of the 3 Tier method proposed, and CRAM specifically, to ERP sites, this proposal should be based on some demonstration projects for "preliminary" data to show its applicability.

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There was limited regional support for this proposal as some thought it would not be applicable to "their rivers". If "their rivers" have no wetlands, then the approach might be marginal because this rapid assessment method is not applicable to riverine riparian ecosystems. The Selection Panel recommends that based on these weaknesses, this proposal not be funded.

Technical Panel Review

Technical Review Panel's Overall Evaluation Rating:

Inadequate

Explanation Of Summary Rating

The proposer hopes to apply a new, 3-tiered monitoring scheme to the entire Estuary. Development of the method is not yet complete; it may be usable by the onset of the funding period, but this is not assured. Many of the components of interest to the ERP (comparison of CRAM with IRWM), are already funded and can be used to assess applicability and utility to the ERP. Much of the project cost will inventory wetlands; this task does not appear to be a critical ERP objective for this RFP. The scale is better suited for assessing the CALFED program, rather than individual or classes of restoration projects. The budget is poorly documented, too high, and the indirect rate is too high.

The technical review panel suggests the proposer limit future efforts to Tier 2 assessment of restoration projects within tidal systems where wetlands will already be inventoried under previous funding.

Goals And Justification

The San Francisco Estuary Institute proposes to extend to ERP of CALFED a 3-tiered effort to inventory wetlands in several watershed regions (Tier 1) and to rapidly assess some restoration sites using a new method it calls CRAM (Tier 2). No Tier 3 work is proposed. As such, the proposed inventory work does not easily fit into the request for restoration monitoring.

Overall, the proposal appears to be unresponsive to the RFP. The goals and objectives of the inventory and monitoring

Technical Panel Review

actions were clear and consistent. A conceptual model was presented that justified the monitoring approach. However, the conceptual model lacked scientific documentation, and no details were given of what hypotheses or knowledge gaps the monitoring would be testing. A table of monitoring actions and an example would have at least given the reviewers a basis to judge the proposed work.

Approach

Although monitoring is a critical part of the management process to restore function to this estuary and upstream watersheds, the inventory, training and monitoring work proposed was recognized by the external technical review as inappropriate and/or ineffectual in meeting management needs for several of the regions.

The general approach to the monitoring was presented well. However, the external technical reviewers could not determine how training would be accomplished or what would be measured in the monitoring. Many external reviewers were unclear whether Tier 3 monitoring was actually proposed (it was not). The new approach to monitoring does not build on previous ERP efforts to understand and restore the estuary, it establishes another monitoring layer. Furthermore, it was clear to some reviewers that the basic assumptions of this monitoring program (geology, climate and land use control wetland structure and function) do not hold in much of the estuary (water and sediment fluxes are often controlled by agencies). Finally, it was unclear how the monitoring would advance our ability to effectively restore habitats and populations in the estuary. It would, if successful and implemented throughout the estuary, be able to assess how the entire effort was going.

Feasibility And Likelihood Of Success

Most technical reviewers agreed that this project was technically feasible. Some had concerns about the assumptions and the conceptual model of wetland condition. The scale of the project is large, and the array of different bounds for

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different portions was confusing to most readers; perhaps a map of what was already funded and proposed for each section of the estuary would have helped. For example, one external technical reviewer wondered whether one or three new assessment teams were to be assembled and trained. Access to sites concerned several regional review panels, but as one regional panel pointed out, it would be best to select the sites to be assessed before requesting permission to visit them.

Performance Measures

It is not clear whether the data to be collected will be sufficient to evaluate restoration actions because no details were given regarding the variables or methods of sampling. Effective technical review requires these details. Specific performance measures were not offered. No conceptual models will be tested, and, as indicated previously, the proposal does not appear to address the RFP.

Products

The project may lead to some very good information useful to managers, especially a wetlands inventory for the entire watershed of the Estuary, but a wetland inventory does not appear to directly address the restoration assessment goal of ERP. The project depends upon identifying and developing strong partnerships, yet seems to ignore local watershed groups. Data handling and access appears well thought out, including incorporation into the SWAMP network. Data management appears to be part of previously funded work, so it is unclear if funding for this portion is needed. Considering the literature used to support the proposal (16 of the 19 references were not in peer-reviewed journals), it seems unlikely that the results will be published in journals.

Capabilities

The project team appears very capable of the work. Roles were not defined (aside from IT).

Budget

Since many aspects of the work were not defined (How many teams will be assembled and trained? How many ERP restoration sites will be assessed using CRAM?), it is difficult to evaluate the budget. However, the budget appears to be very high and poorly documented. Over 80% of the total costs are for indirect costs (over \$800,000). Such costs were not justified in the proposal and it is unlikely that they could be justified in a rebudget.

Regional Review

There were four regional reviews of this proposal. Rankings ranged from high to low and decreased from the Bay upstream into the upper delta regions. The regional reviewers made several good points that were incorporated into the previous comments listed in the appropriate sections.

Administrative Review

The Environmental Compliance review indicated no major problems with permits. They pointed out inconsistencies with permits required for scientific collecting and warned that property access could not be assumed.

The Budget review questioned the high rate of indirect costs. They indicated the budget would need to be redone so that indirect as well as labor costs would be detailed. Details are also needed for the subcontract costs.

Additional Comments

Bay Regional Review

Bay Regional Panel's Overall Ranking:

High

Summary:

This appears to meet the evaluation criteria that we were directed to use and should have local value, with little or no local implementation concerns. As noted, we do have some reservations as to whether the additional value to CALFED is high or medium, of the more intensive and quicker adoption of the protocol that the project would provide.

1. Applicability To ERP Goals And Regional Priorities.

We rate this proposal high for applicability to ERP goals. The project is an application of a new general wetland monitoring protocol focused on the ERP project area. While focused on the ERP area, it does not focus on restoration projects per se. The applicant states that it will provide a better and more consistent metric to rapidly assess wetlands. However, the project would involve a focus on ERP projects and provide linkage with the IRWM. Thus it would evaluate restoration outcomes for ecosystems that are high priority to CALFED.

2. Links With Other Restoration Actions.

The proposal ranked high for links with restoration actions. The project is linked w/ regional, state and national efforts to monitor wetlands status and stressors. The most intensive monitoring, tier III of the project, will be linked to the IWMP. Another example is that SFEI is a "node" for the SWAMP program and SWAMP is adopting the new monitoring protocol. The project will store data in a format that is consistent with and can be combined with data from other state and national

Bay Regional Review

wetlands monitoring for us in tracking wetlands status and trends. It fills an important gap in providing a status and trends assessment of CALFED wetlands.

3. Local Circumstances.

the project rates high in regards to local circumstances, there is no impediment to implementing the project. It is an extension of existing efforts, all of which appear to be well funded and ongoing.

4. Local Involvement.

SFEI is the project applicant. SFEI and the CRAM approach are linked to most of the regional, state, and federal agencies involved in wetland monitoring. The application does not provide a compelling exposition of the effectiveness of outreach proposed for the project. If, as the application suggests, everyone is adopting this approach, then perhaps a strong outreach program is not needed. Since this is a more intensive application within the CALFED area of many ongoing and funded programs, it has a demonstrated capability of attracting funding. The more relevant question is whether the CALFED funding is really needed for implementation.

5. Local Value.

The Monitoring Protocols Proposed As Part Of The Project Are Proposed By The Applicant As Tools That Local Managers Will Be Able To Use To Rapidly Evaluate Wetlands Functions In Relation To Other Wetlands Within The Region, State And Nation.

6. Other Comments:

While This Appears To Be A Valuable Endeavor, It Also Appears To Be Well Funded And Currently In A Process Of Adoption Through A Variety Of Sources. Thus The CALFED Funding Will Intensify Its Application, Particular In The Estuary Watersheds. We Had Reservation As To The Value Relative To The

Bay Regional Review

Substantial Price Tag, Because It Appears That The Approach Will Be Implemented Regardless Of CALFED. The Question Is The Utility Of The Quicker And More Intensive Application

Delta Regional Review

Delta Regional Panel's Overall Ranking:

Medium

Summary:

The project, through its standardized approach, could produce a very valuable tool for assessing wetlands at a regional scale where riverine and floodplain processes are present or in tidal areas but its application to the managed wetlands throughout the valley would have to be evaluated further because of the assumptions used to develop the rapid assessment methods.

The proposal does not clearly identify what sites are being considered.

The applicants may find difficulties in obtaining access permission.

The applicants should complete the development, calibration, and test of the model for effectiveness with existing funding sources before applying it throughout the Stat. The model would be more useful for future evaluation of restoration sites in the Delta once that is completed. It may also have applicability for planning wetland and riparian restoration to assess potential sites.

1. Applicability To ERP Goals And Regional Priorities.

This proposal will develop and implement a monitoring approach through the California Wetlands Monitoring Venture (CWMV) to assess wetland and riparian habitats within the ERP watershed areas that could have applicability throughout California. It is a three-tiered approach to: 1) inventory and map; 2) rapidly assess regional ambient conditions and stressor gradients and evaluation of projects; and, 3) intensive monitoring at selected sites from the watersheds.

Delta Regional Review

This proposal does not identify any specific Delta or other high priority sites area but it does focus on key habitats targeted by the ERP as well as assessment of habitats identified in several milestones. It is also unclear from the proposal whether or not they will prioritize ERP funded projects. The development and validation of the model could be a valuable tool to assess Delta restoration sites in the future.

2. Links With Other Restoration Actions.

The CWMV was previously funded, by multiple sources, to assess wetlands in southern California and the coast. The data collected through the Wetland Tracker is being utilized to update the National Wetlands Inventory but it is unclear in the proposal how the tracker is connected to this effort. There is reference to implementation of the proposed approach in the Bay Zone but it is unclear if that effort will calibrate and test the model before applying it through the Central Valley.

The proposed approach will select representative wetlands from each of the watersheds once they have been inventoried.

3. Local Circumstances.

The standardized approach will be an invaluable tool for the assessment of wetlands in the State. The need for access to ERP sites that are privately owned is recognized but obtaining permission may be problematic and does not appear to have been given much thought.

It is unclear how the scientific foundation for the rapid assessment method is applicable to heavily managed wetlands because one of the assumptions for the method is that water and sediment supply are ultimately controlled by climate, geology, and land use. The vast majority of the wetlands in the Central Valley are in a severely altered state and human intervention and water management is critical to maintaining habitat diversity and value.

Delta Regional Review

Many of the watersheds have monitoring plans developed or in the works, but it is unclear if the applicants have given any thought to coordinating with local groups and it is unknown whether this effort might be duplicative to local watershed monitoring efforts. If the watershed groups are amenable to this effort and the data is not already available, there should not be any problems in moving forward. Since the sites have yet to be selected, written permission has not been pursued, but the applicants fully recognize the importance and need to obtain the proper permissions.

4. Local Involvement.

The sites for this proposal have not been identified at this time, but the applicants recognize the importance and need to contact local stakeholders once they expand the program.

Part of the proposal includes training regional assessment teams which could include local constituents who could continue monitoring on their own beyond the term of the ERP grant.

The principal investigators have a good reputation in regards to getting information posted and available to the appropriate stakeholders as well as the public at-large.

5. Local Value.

The standardized approach could be invaluable for assessment of wetlands throughout the State. The development of a standardized approach and data collected from this effort could be used to help wetland managers update management plans and make decisions.

6. Other Comments:

The proposal would be strengthened if it recognized and linked its efforts to ongoing mercury mobilization studies.

Sacramento Regional Review

Sacramento Regional Panel's Overall Ranking:

Low

Summary:

This proposal may be of greater value to the San Francisco Bay area than it is to the Sacramento region. It will not provide information on wetland restoration sites sufficient to ascertain whether project objectives for habitat quality and/or species benefits are being achieved nor will it be useful in making any needed project modifications. This is primarily a proposal useful for inventory purposes and to report on the general condition of the assessed sites.

1. Applicability To ERP Goals And Regional Priorities.

The project will expand the wetland and riparian inventories to include SF Bay area tributaries (41% of the funds would be used for this purpose), would train regional teams for the application of the California Rapid Assessment Method (CRAM) for Wetlands for possible use in watersheds upstream of the Delta (16% of the funds), apply CRAM to cursorily evaluate ERP projects in a few selected watersheds in the SF Bay/Delta area (8% of the funds), and summarize the effect of multiple ERP projects in this area (26% of the funds for this purpose). The project proposes only a very limited assessment of the effectiveness of a few ERP projects in achieving ERP goals and/or regional priorities. No "Tier 3" detailed studies of ERP or CVPIA projects are proposed. CRAM also focuses on existing site conditions and does not assess a site relative to past or planned or anticipated future conditions. Consequently, the proposal would assist in inventorying and assessing the general state of wetlands in a region but would not provide sufficient information to evaluate restoration outcomes on Big R species or the habitat processes and stressors that affect them. Information generated would provide limited information on progress towards MSCS

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milestones. It could be used to compare restoration actions on a limited basis at a single point in time.

2. Links With Other Restoration Actions.

The project supplements several existing inventory and monitoring efforts currently underway in the SF Bay area, including the California Wetland and Riparian Inventories, the National Wetlands Inventory, and the Wetland Tracker information system, and provides a framework to extend them into upstream areas. By incorporating ERP representation into the California Wetland Monitoring Venture (CWMV), coordination of ERP projects and monitoring efforts could be more effectively coordinated with other inventory and monitoring programs in existence in and around the Bay/Delta ecosystem using a common tool (CRAM) for wetland evaluation at the landscape or watershed level. The CRAM methodology will apparently be adopted by the Surface water Ambient Monitoring Program to facilitate their wetland and riparian habitat status and trends reporting requirements. There is no apparent coordination with the Interagency Ecological Program or the CVPIA Comprehensive Assessment and Monitoring program although many of the same agencies are affiliated with the California Wetlands Monitoring Venture. The project does not fill an important gap in ongoing monitoring of restoration outcomes in the region nor will it significantly help to inform planning or design of imminent restoration actions proposed for nearby ecosystems. It will provide a tool that can be used to compare restoration actions based on several common, visible and easily measured metrics.

3. Local Circumstances.

Success of the proposed work will depend on the completion of the calibration efforts for CRAM as currently funded. There should be no constraints associated with the timing or outcome of other local projects (except the calibration mentioned above), with local natural or other operational conditions and with environmental compliance and permitting requirements. Scientific collecting permits may be required. Local permission to access may also be required but cannot be

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obtained until specific sites for evaluation are determined by the ERP representative to the Core Team

4. Local Involvement.

Press releases and public announcements directed to local and regional agencies about project plans and products as they are completed will be prepared.

5. Local Value.

The project would provide quantitative information on the acreage and current general condition of a few ERP projects in select Bay area watersheds. It would not provide information useful to understanding restoration action outcomes and would contribute little to future management decisions. Some general information on how restoration actions are attaining objectives and how ecosystems are responding to multiple actions will result. However this information will most likely not be sufficiently detailed to support project management adjustments. The inventory information will be useful at the watershed and regional level.

6. Other Comments:

The proposal is basically an extension of existing wetland inventorying programs and the application of the California Rapid Assessment Method (CRAM) for wetlands to a few select Bay area projects. It also includes training in the CRAM methodology for ERP personnel which would allow more widespread application of the technique in the future. However, the CRAM method provides very limited information on the current condition only of evaluated wetlands (CRAM is supposed to be able to be applied by two people in no more than 1/2 day of field plus 1/2 day of subsequent data analysis). The information generated will generally not be sufficient to measure how well the projects are attaining habitat and species objectives in the long term nor will it be sufficient to guide future projects. It is more useful in classifying wetland habitats for inventory purposes and to describe, in very general terms, the condition of the habitat

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being assessed.

San Joaquin Regional Review

San Joaquin Regional Panel's Overall Ranking:

Low

Summary:

The projects applicability to the highly managed riverine wetlands of the San Joaquin River watershed is unclear. It is also unclear that CRAM properly assesses wetlands with respect to endpoints of interest in the San Joaquin River watershed such as endangered species and water quality.

1. Applicability To ERP Goals And Regional Priorities.

If it is assumed that the California Rapid Assessment Method for Wetlands (CRAM) is the appropriate tool to assess the condition of wetlands with respect to wetland restoration, then the project would address strategic goal 4 of ERP to "protect and/or restore functional habitat types in the estuary and its watersheds for ecological and public uses..." Such a tool would provide a consistent region-wide tool to assess the condition of wetlands. This assumption, however, may not be valid. The description of the tool states, among other things, that CRAM assumes "that the supplies of water and sediment are ultimately controlled by climate, geology, and land use." This may not be a valid assumption for the highly managed riverine wetlands in the San Joaquin Valley.

It is not clear to which watersheds this tool will be applied as part of this project. In section 4 the proposal says that the tool will be used in portions of the Bay Area watershed draining to the San Francisco Estuary "downstream of the Delta."

2. Links With Other Restoration Actions.

Project appears to be linked and work with partners with a focus on the San Francisco Estuary downstream of the Delta.

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San Joaquin Regional Review

Data will be made broadly available through the SFEI's node on SWAMP. The proposal states that SWAMP is "scheduled to adopt CRAM."

3. Local Circumstances.

none

4. Local Involvement.

The project appears to have sufficient local involvement in the Bay Area but little or none in the San Joaquin River watershed. The primary means of outreach will be the Wetland Tracker and the web sites of core team members.

5. Local Value.

The project will be useful at local project area for wetlands that appropriately assesses using CRAM. The project does not appear to be useful for San Joaquin River watershed wetland assessment.

External Technical Review #1

Goals And Justification

The proposal is laden with acronyms that are usually spelled out, but ERP was not. I was able to find it on the web (Ecosystem Restoration Program). ERP goals are to promote recovery of native species, to protect and restore functional habitats, and to rehabilitate natural processes through local partners. This proposal will test no hypotheses, the goal is simply to extend an assessment method to ERP projects. It is intuitively obvious that some means of assessment of ERP projects is needed, but the proposal did not make that case. Are there other means of assessment already on the ground?

The CWMV is organized into three tiers: (1) habitat inventories; (2) rapid quantitative monitoring (stressors, restoration and mitigation success); and (3) intensive scientific study (validation of tiers 1 and 2 at selected sites). This assessment method for wetlands would be extended into the 'ERP' by: 1. broadening the statewide Core Team to include ERP representation; 2. extending the Wetlands and Riparian Inventory updates into selected ERP watersheds; 3. Extending the Wetland Tracker information system to the ERP; 4. Training multidisciplinary regional teams to use CRAM on behalf of the ERP; 5. Using CRAM to evaluate ERP projects selected by the Core Advisory Team; and 6. Reporting on the ecosystem response of multiple ERP restoration projects based on CRAM. CRAM is a rapid assessment method that requires 2 people no more than ½ day of field work and ½ day of data analysis. There is a suite of standard metrics that probably vary in objectivity.

Approach

The approach will be to train multi-disciplinary regional teams of experts. It was never spelled out how this training would take place, when or where. What is a region? How many regions are there? Are there enough experts in every region?

Technical Feasibility

The project is technically feasible.

Performance Measures

I think the performance would be best measured by adding some tier 3 sites to ERP project areas, but I think there was no plan for this. There is a plan to calibrate CRAM for most or all wetland classes, based on tier 3 criteria, for natural wetland habitats and restoration projects, but the details were sketchy. There is a difference between calibration and validation. Perhaps some ERP sites should be validation sites, but this would require more intensive scientific studies than are probably planned. Other performance measures include the success in fielding teams of trained CRAM specialists, which will be a tangible product of this project.

Products

The project will lead to information that is useful to resource managers. I would expect that the results of the assessment would be put on a web site, but this was not clear. Web sites are mentioned several times in other contexts. A CRAM training manual and software for a table PC will be produced. The USGS NWI will be updated based on the field survey. An Access data base is used to manage CRAM results. Much of this list of products is under the heading of previously funded monitoring.

Capabilities

The project team is very capable of this work.

Budget

It is difficult for me to evaluate the budget for a project such as this.

Additional Comments

I believe that it is necessary to evaluate the success of public works projects, including wetland restoration projects. The CRAM approach seems reasonable, but the details were a bit sketchy, which is understandable given the page limits. Assessment manuals can be rather long, but some greater detail would have helped. I would like to have seen some validation sites included in the mix.

External Technical Review #2

Goals And Justification

Restoration actions are not specifically addressed because this proposal seeks to apply the California Wetlands Monitoring Venture (CWMV) to the ERP program. The acronym ERP was never spelled out. No specific hypotheses are provided, however there is a clear conceptual model and metrics that can be used to evaluate individual project performance. The metrics are being finalized and are part of the California Rapid Assessment Method (CRAM) for wetlands.

Approach

The approach is based on the conceptual models developed as part of the CWMV. The proposed rapid assessment method should give a good snapshot of the performance of the different ERP projects. The project will make a direct connection with ERP managers to respond to decision makers needs.

Technical Feasibility

It is not possible to fully document an effort of this type within the page limits of the proposal. In addition, many of the CRAM metrics are still under development making it difficult to evaluate the feasibility. The scale of the project is consistent with the objectives.

Performance Measures

The proposed work should be able to relate the relative wetland function of each project to its goals and objectives as well as provide a relative comparison of wetland function for different projects. Rapid assessment methodology can not be used to evaluate the conceptual models underlying the restoration actions.

External Technical Review #2

Products

The project is expected to provide useful to decision makers. Resource managers and scientists maybe more interested in the underlying conceptual models that are not funded through this proposal. Data produced during the proposed rapid assessment will be made available on the internet. The PIs are planning to publish the results in peer reviewed publications and should be successful in a wetlands or management oriented publication.

Capabilities

The project seems appropriate and capable of completing this project.

Budget

I am not able to evaluate the adequacy of the budget, because I do not know how many projects are part of the ERP program.

External Technical Review #3

Goals And Justification

- The Implementation of a Wetlands Monitoring System Suitable for Assessing Ecosystem Response to Restoration proposal identifies the restoration actions, whose outcomes will be monitored, and presented clear and internally consistent statement of the goals and objectives of these restoration actions.
- This proposal presents a clear conceptual model that adequately explains the underlying basis for the restoration actions and states the hypothesis that the proposed monitoring will test. These hypotheses are well justified relative to existing knowledge and existing knowledge gaps.

- The proposal strongest points:
 - o Well written, demonstrating good editorial and QA/QC skills (almost no typos or miss-spellings), a trait that is only evident in excellent consulting firms,
 - o Excellent presentation of ideas and hypothesis, in an easy to understand and follow logic and sequence, demonstrating the thorough review that went into creating this proposal,
 - o In-depth literature review of existing monitoring methodologies, pros and cons of each method, and comparisons of the selected approach vs. previously applied methodologies, illustrating depth of knowledge of the project team.

Comment: o Any proposal needs to include a summary page to "spell" out all acronyms used in the text.

Approach

- The approach is well-designed and appropriate to meet the project's objectives, and adequately build upon previous monitoring.
- The proposal also is likely to make a significant contribution to our knowledge-base, and these contributions will be useful to decision-makers.
- The proposed approach is based on the tiered framework of the Coastal Research and Monitoring Strategy of USEPA, NOAA,

External Technical Review #3

Department of Agricultural, as adopted by the California Wetlands Monitoring Venture (CWMV). • Contributions from the proposed approach, and their significance, include: o Utilizes existing knowledge base (California Wetlands Monitoring Venture, CWMV, three-tier approach), to meet local, regional, local, state and federal wetlands managers, o Expands on our existing knowledge (i.e., extend to additional wetlands areas and extend tracker information to selected watersheds), o Train (extend and share the knowledge) additional state/personal to apply the proposed approach (i.e., use consistent methods across local/state/regional/federal agencies), o Use results obtained to report on ecosystem response to restoration and documents progress in terms of native species recovery, protection and restoration of habitats function, and rehabilitation of natural processes.

Technical Feasibility

• The proposal fully described and documented the technical approach and its feasibility. • The proposed scale for this project, as described, is consistent with project objectives and would enable and benefit ERP from ongoing efforts at the state and national level to improve the efficacy of wetlands monitoring science to evaluate and assess the cumulative benefits and ecosystem response to restoration project. • The proposed fieldwork only involves ERP projects for which access have been permitted for related activities.

Performance Measures

• Data collected by the proposed monitoring will allow evaluation of the restoration actions that are being monitored. • The proposal demonstrated the rationale for the performance measures clearly, particularly through the thorough review of existing literature and how the proposed approach is linked to existing local, regional, and national databases. • Data collected under this project and performance measures will allow evaluation of the conceptual models underlying the previous restoration actions. • The final product is also an integral part of existing data management obligations, and therefore this proposed work is likely to

External Technical Review #3

strengthen the relationship among all existing and proposed data handling, storage, and dissemination. • The monitoring and evaluation plan is explicit and detailed enough to assess the performance of the restoration actions. The planned monitoring measures existing conditions, truly rapid (two people no more than two days for field work and data analysis), and is a site assessment based on field conditions. • Training and technical transfer element in this proposed work will provide the tools to extend project performance monitoring into the future and beyond the length of the contract.

Products

• The proposed approach/project will lead to information that is useful to resource managers, other decision makers, and/or scientists. For example, the framework of the proposed approach is based on well-established locally and nationally adopted methodology. In addition, the proposed project will create a comprehensive assessment of wetland conditions at the watershed scale within California. Interim (e.g., NWI updates, riparian habitat maps, and wetland tracker system) and final products (e.g., presentation of technical findings at conferences and symposia, and through publication in peer-reviewed technical journals), will insure accuracy and relevancy of products to project goals. • Data, reports, and outcome of this project is well organized and accessible through easy to use web-enabled methods such as the Wetland Tracker Information System. All results will be retrievable and ecosystem context will be visible. On-line products will be announced through emails. • Data handling, storage, and dissemination measures such as the Wetland Tracker Information System is adequate and allow resource managers, other decision makers, and scientists to access and use project's results. • This well-designed project, based on well-established methodology, is more than likely to produce high-quality results that are likely to stand up under peer-review. The fact that all project results are posted on the web for all to see/access/review, and the intended scientific presentation in conferences and symposia (which serves as an additional QA/QC for the final product), would lead to published peer-reviewed

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journal articles. • Data generated through this project will become part of the SWAMP database and the emerging CalEPA and the Department of Water Resources.

Capabilities

• Qualifications of the assembled project team are more than adequate to complete this project. • The mix of disciplines among team members is clearly appropriate to the project as described (i.e., ecology, landscape ecology, geography, agricultural sciences, information technology, Etc.). • Past experience and performance record of project team members demonstrated their abilities to complete work proposed under this project.

Budget

• The proposed budget is reasonable and adequate for the work proposed. • The labor section as presented is a bit confusing, or hard to follow. It would've been better to have "labor" distribution put in a table by task, cost per task, and hours per task.

Additional Comments

I have a couple of comments/questions that needs to be addressed by the project team.

1. Training:

• Why not select and train all local team members during the first year? This approach would at least provide for additional training should the outcome/results produced by the new trainees did not match expectations. Also, this approach would provide for opportunities to modify training scheme/methods, which would requires modification for the final training user's manual (CRAM training manual).

• The proposal was not clear in identifying the number of teams, or personal, to be trained during the three-year project. Budgeted amount for training for first, second, and

External Technical Review #3

third years are approximately, \$22K for seven months, \$37K for twelve months, and \$19K for six months, respectively. It would be very helpful, at a minimum, to estimate/clarify how many teams will be trained? For example, on page 11 Task 3, the proposal stated that "one or more new Regional Teams will be required to extend the CRAM upstream of the Delta." However, Appendix 1 listed/proposed three regional teams (South Coast, Bay Area, and Central Coast Area); my question is how many teams will be trained?

2. QA/QC:

- Page 9 stated that "The conceptual framework for the CRAM can change as the results of CRAM-based assessments are analyzed. The most likely changes will occur to the weights used to scale the relative contribution of each metric .. If the weights are changed, previous assessment can be recalculated, such that the data record for any site or group of sites can be sustained." This hypothesis needs to be tested at the outset of the project to insure its applicability and proof that changing assigned "weights" would indeed sustain scores for a wetland site(s).

- On page 11 Task 4, the proposal stated that "It is anticipated that by the time of ERP funding, the CRAM will have been calibrated for all classes of wetlands within the ERP domain, except perhaps alpine systems." It would be very helpful to provide an estimate of how big/small (percentage-wise) the total alpine systems compared to all other systems (i.e., 10% or 60% of the total systems) included in CRAM. For example, a small percentage of alpine is not significant compared to the total system included in CRAM. However, it would be a concern if existing alpine systems make up a significant (e.g., more than 50%) portion of CRAM.

Budget Review

1. Does the proposal include a detailed budget for each year of the requested support?

Yes.

If no, please explain:

Comments: 1. IDC is almost 100% of direct cost 2. Provide detailed on on what applicant considers expendable supplies - check for duplicative charges OH/IDC 3. Labor breakdown by category confusing & unclear only \$'s no category provided

If proposal is funded, a detailed list of items for all chages must be provided.

2. Does the proposal include a detailed budget for each task identified?

Yes.

If no, please explain:

Comments: 1. 23% or \$416,421 of total project \$ is for subs

Task and Deliverables - Grantee must provide detailed information for all work including subcontractor work for each specific task, services, and work to be performed with the appropriate and corresponding deliverable or end product for each task(s) and/or sub-task(s). Costs associated with each task and deliverable should be evaluated based on what is considered to be reasonable costs for performing similar services.

3. Are project management expenses appropriately budgeted?

Yes.

If no, please explain

Comments: 1. Proj Mgmt charges average 6 to 10% with almost 100% IDC charged

4. Does the proposal clearly state the type of expenses encompassed in indirect rates or overhead costs? Are indirect rates, if used, appropriately applied?

Budget Review

Yes.

If no, please explain

Comments: 1. Narrative seems to show duplicate charges for what is generally considered part of OH/IDC 2. Carefully review OH & IDC % rates

Budget Detail/Administrative Overhead Fees - Budget detail combines the labor rates with the direct overhead rate. The labor rate, benefits and indirect rate should be itemized in the format provided by the PSP to enable reviewers to better evaluate and ensure that proposed labor rates are comparable to state rates.

If proposal is funded, a detailed list of items included in the indirect cost rate should be provided by the grantee. Grantee must provide itemized and detailed information included and charged as part of Indirect Rates (IDC) charges.

Note: No overhead or indirect rate charges on the equipment purchases should be allowed as part of the budget that shall be funded as a result of this PSP.

The Grantee should charge a reduced indirect cost rate to the state for services that will be subcontracted by the grantee. (Researching SCM Section 3.06 B).

5. Does the budget justification adequately explain major expenses? Are the labor rates and other charges proposed reasonable in relation to current state rates?

No.

If no, please explain:

Comments: 1. This portion looks like a lot of meaningless numbers (labor category or \$ associated not clear)

Grantee must provide itemized and detailed information included and charged as part of all items charged - explain, & provide justification & list of items included for all categories & items included in "othre charges" (e.g. Indirect

Budget Review

Rates (IDC) charges.)

Major Expenses - If the grant is awarded a detailed list of equipment purchases should be provided by the grantee so reviewers can better evaluate whether it is more cost effective for the state to purchase large dollar equipment items through the state procurement process. If the equipment list is available within the State inventory or stock, then purchase of some or all of the listed items may be provided, loaned, or leased by the state to the grantee. In the event, that the equipment is purchased by the grantee, the grantee shall maintain an inventory of major equipment for auditing purposes and potential use for future projects. Grantee shall follow State Contracting Manual [SCM] Section 7.61 thru 7.62 rules pertinent to equipment purchase, lease, etc.

Budget Detail/Administrative Overhead Fees - Budget detail combines the labor rates with the direct overhead rate. The labor rate, benefits and indirect rate should be itemized in the format provided by the PSP to enable reviewers to better evaluate and ensure that proposed labor rates are comparable to state rates.

Presently not clear if there are duplicative charges & what the "numbers" represent.

6. Are other agencies contributing or likely to contribute a share of the projects costs?
No.

7. Does the applicant take exception to the standard grant agreement's terms and conditions?
If yes, are the approaches the applicant proposes to address these issues a reasonable starting point for negotiating a grant agreement?
Yes.

If no, please explain:

Applicant accepts T

8. Are there other budget issues that warrant consideration?
Yes.

Budget Review

If yes, please explain:

Comments: 1. OH/IDC rates are extraordinarily high need careful review/evaluation prior to award

If proposal is funded, a detailed list of items included in the indirect cost rate should be provided by the grantee. Grantee must provide itemized and detailed information included for all charges by category.

Note: No overhead or indirect rate charges on the equipment purchases should be allowed as part of the budget that shall be funded as a result of this PSP.

Other comments:

SUPPLEMENTAL COMMENTS: 1. Proposal will need MAJOR re-work to convert to SOW/agreement & BUDGET into a meaningful format with all items listed/justified by category.

2. No specific or clear deliverables identified for each task - need detailed info - Task and Deliverables - Grantee must provide detailed information for all work including subcontractor work for each specific task, services, and work to be performed with the appropriate and corresponding deliverable or end product for each task(s) and/or sub-task(s). Costs associated with each task and deliverable should be evaluated based on what is considered to be reasonable costs for performing similar services.

A financial evaluation is recommended to ensure organization has the financial capability to do business with the State.

END OF REVIEW

Environmental Compliance Review

1. Is compliance with California Environmental Quality Act (CEQA) required for this project?

No.

2. Is compliance with National Environmental Policy Act (NEPA) required for this project?

No.

3. Does this project qualify for an Exemption or Exclusion under CEQA and NEPA, respectively?

Does not apply.

4. Did the applicant correctly identify if CEQA/NEPA compliance was required?

Yes.

5. Did the applicant correctly identify the correct CEQA/NEPA document required for the project?

Does not apply.

6. Has the CEQA/NEPA document been completed?

Does not apply.

7. If the document has not been completed, did the applicant allot enough time to complete the document before the project start date?

Does not apply.

8. If the document has not been completed, did the applicant allot enough funds to complete it?

Does not apply.

9. Did the applicant adequately identify other legal or regulatory compliance issues (Incidental Take permits, Scientific Collecting permits, etc.) that may affect the project?

No.

Comments:

It is unclear why the applicant indicated that a Scientific Collecting Permit will be necessary. The CRAM methodology, as per the provided website, only employs visual assessments. It is also unclear as to what the applicant is referring to in

#0117: Implementation of A Wetlands Monitoring System Suitable for Assessing ...

Environmental Compliance Review

the Feasibility section, in which they state: In the case of some wetland types or locations, non-take permits for access to critical habitat for endangered species may be required.

Identify those additional permits that may be needed by this project:

None

10. Does the proposal include written permission from the owners of any private property on which project activities are proposed or, if specific locations for project activities are not yet determined, is it likely that permission for access can be obtained?

Yes.

Comments:

The applicant makes the assumption that since all monitoring need only involve existing ERP project sites, access permission will be easily obtainable--since access will have already been permitted for related activities. This assumption that land access will be easily obtainable may not be the case.

11. Do any of these issues affect the project's feasibility due to significant deficiencies in planning and/or budgeting for legal and regulatory compliance or access to property?

No.

Comments:

See comment for land access (Question 10 above).

