

i. Proposal number.# 2001-F204*

ii. Short proposal title.# Ecosystem monitoring by GIS and remote sensing*

APPLICABILITY TO CALFED ERP GOALS AND IMPLEMENTATION PLAN

1a1. Link to ERP Strategic Goals: What Strategic Goal(s) is /are addressed by this proposal? List the letter(s) of all that apply.

- A. At-risk species**
- B. Rehabilitate natural processes**
- C. Maintain harvested species**
- D. Protect-restore functional habitats**
- E. Prevent non-native species and reduce impacts**
- F. Improve and maintain water quality# D, F***

1a2. Describe the degree to which the proposal will contribute to the relevant goal. Quantify your assessment and identify the contribution to ERP targets, when possible.# The proposal would contribute somewhat to Goals D and F.*

1b. Objectives: What Strategic Objective(s) is/are addressed by this proposal? List Objective (from the table of 32 objectives) and describe potential contribution to ERP Goals. Quantify your assessment, when possible.# ERP Goal D, Objective 1 (Habitats): Restore habitat types in the Delta and San Francisco Bay
ERP Goal F, Objective 2: (Water and Sediment Quality)
The proposal would contribute somewhat to these objectives.*

1c. Restoration Actions: Does the proposal address a Restoration Action identified in Section 3.5 of the PSP? Identify the action and describe how well the proposed action relates to the identified Restoration Action.# Restoration Action #5 (Shallow Water, Tidal and Freshwater Marsh Habitat) - The proposal somewhat relates to this restoration action.

Restoration Action #5 (Contaminants In the Central Valley) - The proposal relates to this restoration action somewhat significantly.*

1d. Stage 1 Actions: Is the proposal linked directly, indirectly or not linked to proposed Stage 1 Actions? If linked, describe how the proposal will contribute to ERP actions during

Stage 1.# Restoration Action #5 (Shallow Water, Tidal and Freshwater Marsh Habitat) - The proposal somewhat relates to this restoration action.

Restoration Action #5 (Contaminants In the Central Valley) - The proposal relates to this restoration action somewhat significantly.*

1e. MSCS: Describe how the proposal is linked to the Multi-Species Conservation Strategy and if it's consistent with the MSCS Conservation measures. Identify the species addressed and whether the proposal will "recover", "contribute to recovery" or "maintain" each species.# The proposal is not specifically linked to the MSCS.*

1f. Information Richness/Adaptive Probing related to the proposal: Describe the degree to which the proposal provides information to resolve one of the 12 scientific uncertainties (Section 3.3 of the PSP), and whether the proposal offers a prudent approach to answer these uncertainties.# Scientific Uncertainty #11(Contaminants in the Valley) - The study would provide somewhat useful information to address the scientific uncertainties described in the PSP.*

1g. Summarize comments from section 1a through 1f related to applicability to CALFED goals and priorities. Identify the strengths and weaknesses of the proposal, highlighting the applicability of the proposed project to CALFED and CVPIA goals and priorities. Focus on aspects of the proposal that may be important to later stages in the project review and selection process.# The researcher proposes to use remote sensing and GIS data bases and develop methods to use the data to assess ecosystem quality and water quality for the Bay-Delta region. The information obtained from the project may be more useful to assessing ecological conditions for the terrestrial domain (e.g., biomass, and vegetation density) rather than specific links to water quality. The techniques used to make linkage to water quality conditions are not widely used and the usefulness of the information, except in a broad and qualitative way, obtained is questionable. *

APPLICABILITY TO CVPIA PRIORITIES

1i. Describe the expected contribution to natural production of anadromous fish. Specifically identify the species and races of anadromous fish that are expected to benefit from the project, the expected magnitude of the contribution to natural production for each species and race of anadromous fish, the certainty of the expected benefits, and the immediacy and duration of the expected contribution. Provide quantitative support where available (for example, expected increases in population indices, cohort replacement

rates, or reductions in mortality rates).# There is not a direct expected benefit to anadromous fish from this project. The proposal states that San Joaquin and East side tributary fall-ran chinook salmon are the primary species addressed, but the link is not clear. Possibly they could benefit if this monitoring program were able to detect relationships between water quality data and ecological variables from which actions could be formulated and implemented to improve and increase ecological functions and water quality in the Bay-Delta region.*

1j. List the threatened or endangered species that are expected to benefit from the project. Specifically identify the status of the species and races of anadromous fish that are expected to benefit from the project, any other special-status species that are expected to benefit, and the ecological community or multiple-species benefits that are expected to occur as a result of implementing the project.# Potentially all species in the delta could benefit from improved water quality. This project proposes a monitoring plan to assess water quality through-out the Bay-Delta region. It's not clear what actions would be taken to improve water quality after the monitoring has been completed that would result in benefits to the fisheries community.*

1k. Identify if and describe how the project protects and restores natural channel and riparian habitat values. Specifically address whether the project protects and restores natural channel and riparian habitat values, whether the project promotes natural processes, and the immediacy and duration of benefits to natural channel and riparian habitat values.# The project does not protect or restore natural channel and riparian habitat values by the monitoring proposed. *

1l. Identify if and how the project contributes to efforts to modify CVP operations. Identify the effort(s) to modify CVP operations to which the proposed project would contribute, if applicable. Efforts to modify CVP operations include modifications to provide flows of suitable quality, quantity, and timing to protect all life stages of anadromous fish as directed by Section 3406 (b)(1)(B) of the CVPIA, including flows provided through management of water dedicated under Section 3406(b)(2) and water acquired pursuant to Section 3406(b)(3).# The project does not contribute to efforts to modify CVP operations. It may help to understand how modifications of the CVP impact water quality in the Delta.*

1m. Identify if and how the project contributes to implementation of the supporting measures in the CVPIA. Identify the supporting measure(s) to which the proposed project would contribute, if applicable. Supporting measures include the Water Acquisition Program, the Comprehensive Assessment and Monitoring Program, the Anadromous Fish Screen Program, and others.# The project may contribute to implementation of the b(1)-other Habitat Restoration Program and possibly to the 3406(g) ecosystem modeling effort.*

1n. Summarize comments from section 1i through 1m related to applicability to CVPIA priorities (if applicable, identify the CVPIA program appropriate to consider as the source of CVPIA funding [for example, the Anadromous Fish Restoration Program, Habitat Restoration Program, Water Acquisition Program, Tracy Pumping Plant Mitigation Program, Clear Creek Restoration Program, Comprehensive Assessment and Monitoring Program, and Anadromous Fish Screen Program]). Identify the strengths and weaknesses of the proposal, highlighting the applicability of the proposed project to CALFED and CVPIA goals and priorities. Focus on aspects of the proposal that may be important to later stages in the project review and selection process.

The program proposes to assess water quality in the Delta using remote sensing and GIS-based methods and procedures for assessing ecosystem/water quality and ecological/environmental conditions in the Bay-Delta region. The project qualifies for funding consideration under the Anadromous Fish Restoration Program or the Habitat Restoration Program.*

RELATIONSHIP TO OTHER ECOSYSTEM RESTORATION PROJECTS

2a. Did the applicant explain how the proposed project relates to other past and future ecosystem restoration projects, as required on page 57 in the PSP? Type in yes or no.#yes*

2b. Based on the information presented in the proposal and on other information on restoration projects available to CALFED and CVPIA staff, describe how the proposed project complements other ecosystem restoration projects, including CALFED and CVPIA. Identify projects or types of projects that the proposed project would complement, now or in the future. Identify source of information.

#Project hopes to develop methods and procedures to take remote sensing and GIS data and utilize the data to monitor and assess environmental conditions and ecosystem quality. If the environmental constituents could be monitored this way, would significantly reduce the amount of sampling and analyses associated with monitoring water quality parameters for CALFED projects that is the current protocol. Complements many projects requiring extensive monitoring to determine project success and overall ecosystem improvements. Information source: Proposal.*

RESULTS AND PROGRESS ON PREVIOUSLY FUNDED CALFED AND CVPIA PROJECTS, INCLUDING REQUESTS FOR NEXT-PHASE FUNDING

3a1. Based on the information presented in the proposal and on project reports and data available to CALFED and CVPIA staff, has the applicant previously received CALFED or CVPIA funding? Type CALFED, CVPIA, both, or none.#none*

3a2. If the answer is yes, list the project number(s), project name(s) and whether CALFED or CVPIA funding. If the answer is none, move on to item 4.#

If the answer is no, move on to item 4.*

3b1. Based on the information presented in the proposal and on project reports available to CALFED and CVPIA staff, did the applicant accurately state the current status of the project(s) and the progress and accomplishments of the project(s) to date? Type yes or no.#*

3b2. If the answer is no, identify the inaccuracies:#

3c1. Has the progress to date been satisfactory? Type yes or no.#*

3c2. Please provide detailed comments in support of your answer, including source of information (proposal or other source):#

REQUESTS FOR NEXT-PHASE FUNDING

3d1. Is the applicant requesting next-phase funding? Type yes or no.#no*

3d2. If the answer is yes, list previous-phase project number(s) here. If the answer is no, move on to item 4.#*

3e1. Does the proposal contain a 2-page summary, as required on pages 57 and 58 of the PSP? Type yes or no.#*

3e2. Based on the information presented in the summary and on project reports available to CALFED and CVPIA staff, is the project ready for next-phase funding? Type yes or no.#*

3e3. Please provide detailed comments in support of your answers, including source of information (proposal or other source):#*

LOCAL INVOLVEMENT

4a. Does the proposal describe a plan for public outreach, as required on page 61 of the PSP? Type yes or no.# No.*

4b. Based on the information in the proposal, highlight outstanding issues related to support or opposition for the project by local entities including watershed groups and local governments, and the expected magnitude of any potential third-party impacts.# No mention of local support or opposition.*

ENVIRONMENTAL COMPLIANCE

4d. List any potential environmental compliance or access issues as identified in the PSP checklists.# None required because this project utilizes remote sensing and GIS to monitor.*

4e. Specifically highlight and comment on any regulatory issues listed above that may prevent the project from meeting the projected timeline.#None*

COST

5a. Does the proposal include a detailed budget for each year of requested support? Type yes or no.# yes*

5b. Does the proposal include a detailed budget for each task identified? Type yes or no.# yes*

5c. Is the overhead clearly identified? Type yes or no.# yes*

5d. Are project management costs clearly identified? Type yes or no.# yes*

5e. Please provide detailed comments in support of your answers to questions 5a - 5d.# All information requested has been provided by project proponent in

a clear, concise, and understandable format.*

COST SHARING

6a. Does the proposal contain cost-sharing? Type yes or no.# no*

6b. Are applicants specifically requesting either state or federal cost share dollars? Type state, federal, or doesn't matter.# federal*

6c. List cost share given in proposal and note whether listed cost share is identified (in hand) or proposed.

6c1. In-kind:# n/a*

6c2. Matching funds:# n/a*

6c3. Show percentage that cost sharing is of total amount of funding requested along with calculation.# n/a*

6d. Please provide detailed comments in support of your answers to questions 6a - 6c3.# n/a*