

**i. Proposal number.**#2001-C200

**ii. Short proposal title.**# Revised Phase 2- Merced Salmon Habitat Enhancement: River Mile 42 to 44 (Robinson Ranch Site)\*

**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**# If designed properly, the project will like contribute to Goal 1 (at-risk species); Goal 2 (rehabilitate natural processes); Goal 3 (harvested species); Goal 4 (protect/restore habitats); and Goal 5 (non-native invasive species).\*

**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.**# 8 pts. The project could restore sediment routing through the mining reach, and reconnect the channel with its floodplain, thereby contributing to process (Goal 2) and habitat (Goal 4) goals. The project will likely reduce a source of mortality for juvenile salmonids, and improve spawning habitat.\*

**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.**# 8 pts. The proposed project could contribute to process-oriented objectives (2-4, 2-5, 2-6, 2-7, 2-8) by restoring sediment routing and preparing the channel for the release of channel forming flows (once other channel modifications are completed). The project would also likely improve aquatic spawning and rearing habitats for salmonid species (Objective 4-2) and help eliminate lacustrine habitats that favor introduced fish species (Objective 5-7). The potential process and habitat benefits would likely make an incremental contribution to the species-oriented objectives (1-1, 3-1).\*

**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.# 7**

pts. The proposal does have the potential to address multiple restoration actions identified in the PSP, including: reconnecting channel-floodplain habitats; incorporating an experimental approach to re-vegetation of a re-graded floodplain habitat; better estimating geomorphic thresholds.\*

**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.# .6**

pts. The proposed project does not address a Stage 1 action in the Implementation Plan, but it does address a an ERP Stage 1 action (contained in appendix D of the Strategic Plan) to isolate mining pits from the active channel.\*

**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.# 6**

pts. The proposed project would likely contribute to enhancing fall-run chinook salmon. Appropriate design of the re-graded floodplain and riparian re-vegetation could also yield benefits for sensitive bird and amphibian species.\*

**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.# 7**

pts. If designed and monitored properly, the proposed project could provide some valuable opportunities for learning about process-habitat-species interactions. The project proponents should be required to convene a panel of outside experts to review the restoration design to incorporate more experimental elements and optimize the information yield of the project. Project proponents should also be encouraged to develop a riparian re-vegetation plan that examines process-based vs. cultivated riparian restoration. Project proponents should also be encouraged to design and monitor the project to try to ascertain geomorphic thresholds.\*

**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.**# 7 pts. The proposed project could represent a good opportunity to restore geomorphic function and aquatic and riparian habitats on the Merced. Any additional funding should be contingent upon the restoration design being reviewed by a panel of outside experts. Project proponents should be encouraged to test recruitment-based vs. cultivated riparian restoration. The total projected cost of the project seems considerably higher than for channel-floodplain reconstruction projects of similar scale.\*

#### **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).**#

The project is consistent with Merced River Action 1 from the 1997 Revised Draft Restoration Plan for the AFRP. The expected benefit to fall-run chinook salmon, and to a lesser extent steelhead, of this full-scale implementation project is expected to be large. The project includes a near-complete reconstruction and perpetual protection of a 2-mile length of river that was disturbed by mining and other land-use activities prior to 1997. This segment was further degraded as a result of the 1997 floods. Not only will this project provide near-term benefits to salmon smolt survival (remove or isolate 65 acres of pond habitat) and salmon spawning (estimated at 25,000 square yards based on physical habitat estimates), but more significantly, it provides a restored and protected floodplain that will be protected in perpetuity. Because the habitat has been so disrupted, the expected certainty of this high benefit project, is also high. Past CDFG spawning surveys indicate this project site was once productive spawning habitat, but after the 1997 floods not much spawning activity has been documented. Concurrent with the creation of new spawning habitat will be the removal of large in-river ponds and broad sections of river. This habitat is the result of gravel pit capture, and large broad areas of laminar flow through sections of floodplain with an undefined channel after the 1997 floods. Monitoring information from San Joaquin River tributaries indicate that the existing habitat conditions likely provide good nursery and adult habitat for predatory fish. Because more than 25% of the spawning occurs above this project site, juvenile survival, especially in dry water years, should be improved considerably by reducing direct mortality from predation and improving juvenile salmon rearing and passage habitat. Construction of this project is scheduled to begin in 2001 and will be complete in 2002 owed to the large nature of the intervention. Benefits are expected to accrue shortly after completion of construction. Benefits to anadromous salmonids are expected to be durable because a fully functioning floodplain and channel, that will include gravel augmentation, will help self maintain a dynamic channel and floodplain habitats.\*

**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.**

# San Joaquin fall run chinook salmon, a priority population for the AFRP. This candidate species for listing under the ESA has been slow to respond to favorable hydrology over the last four years compared to fall-run on many Sacramento River tributaries. Increasing the capacity for natural production can lead to increased productivity of this stock. (see specific benefits listed under 1i). The project is probably the largest single floodplain restoration site in the Central Valley by virtue of the amount of material moved, and the amount of floodplain recreated. This restored and re-vegetated floodplain will greatly benefit the floodplain and riparian dependent species that associate with this community type. One such species, the Federally listed valley elderberry longhorn beetle will likely benefit from the large area of functionally restored floodplain that will provide much more suitable colonization habitat for the elderberry bush, which will be protected in perpetuity.\*

**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 existing Robinson site is an extremely altered and dysfunctional riverine habitat due to channel avulsion into previously mining floodplain as a result of the 1997 floods. In 1997 the river abandoned its previously remnant floodplain, and is now characterized by broad and shallow sheet flow areas, steep riffles, and recaptured mining pits. This has led to a functional state that does not favor anadromous fish or processes that will sustain and support their production. Re-creating a broad, terraced floodplain and low-flow channel scaled to the contemporary hydrology will re-establish geomorphic and associated riverine and floodplain processes that can support and sustain anadromous fish production. Some natural channel and riparian habitat value benefits of this project will be nearly immediate, but these benefits can be expected to further accrue over time as the floodplain re-establishes a dynamic equilibrium and the riverine floodplain community is further established. Also, a nice component of the project is a sediment management element that will allow for long-term gravel addition maintenance using materials purchased on site to insure geomorphic function and maintenance of the channel and floodplain. This project has also leveraged an improved bridge re-construction design at the J59 highway. Project proponents were able to have the design span for the bridge increased so to better maintain geomorphic continuity above and below the bridge which is situated at the lower end of the Robinson site.\*

**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).**# This project does not directly contribute to efforts to modify CVP operations.\*

**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.**# This project will contribute to the Section of 3406 (b)(1) in the CVPIA that states, "...to make all reasonable efforts to address other identified adverse environmental impacts of the Central Valley Project not specifically addressed elsewhere in the Statute." In many riverine areas within the CVP, floodways are often maintained in a manner detrimental to species such as the VELB. This project will provide a broad expanse of river and floodplain habitat that can likely be colonized by the elderberry without the risk of removal as part of the natural floodplain succession. More elderberry bushes should assist in the recovery of the VELB. The associated long-term restoration easement will help to insure this.\*

**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.**# This project is most appropriately funded by the Anadromous Fish Restoration Program. It helps implement Merced River Action 1 in the 1997 Revised Draft Restoration Plan. This project already has secured nearly \$5 million of funding and needs about \$1.9 million more to implement an expanded project scope and to cover increased project costs. Planning is far along and implementation scheduled for spring of 2001. The project is an impressive large-scale restoration project that has good local support. It includes about 2-miles of reconstructed channel and floodplain habitat. The project will provide substantial benefits to natural production of fall-run chinook salmon through recreating a self-sustaining riverine habitat in an important production area of the Merced River. Importantly, this is part of a larger 4-mile restoration segment in which the first segment has been constructed and appears to be functioning well. Spawning habitat will be increased and adult passage improved, artificial and abundant predator habitat will be removed, and juvenile rearing and outmigration habitat should be improved. Coupled with a design that should establish the starting point for a dynamic and sustained riverine and floodplain system, this project is a great opportunity to have substantial and near immediate benefits to anadromous fish production. The project will also benefit other riparian-dependent species that have been impacted by the development and operation of the Central Valley Project. The VELB should benefit from implementation of this project.\*

## **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.**

#This proposal expands on work previously funded by CALFED, part of a 5 phase Merced River salmon habitat enhancement project designed to protect and enhance an important natural salmonid spawning reach on the Merced River. This proposal requests additional restoration on the second phase. The first phase has been constructed and planning for this phase is on schedule for year 2001 construction. Source: Proposal, quarterly reports.\*

## **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.#Both\***

**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.#**

CVPIA 11332-9-J023;CALFED/CVPIA 99B05 and 99FC200235 - Merced River Salmon Habitat Enhancement, River mile 40-40.5, Ratzlaff Reach

CALFED/CVPIA 99F11, 114209J032, 114209J045 - Merced River Salmon Habitat Enhancement, River mile 42-43.5, Robinson Ranch

CALFED/CVPIA 99B04, 113329J024 - Merced River Salmon Habitat Enhancement River mile 40-40.5, Lower Western Stone Reach\*

**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.#yes\***

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

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

**3c2. Please provide detailed comments in support of your answer, including source of information (proposal or other source):#**The first phase of the project has been constructed and pre/post project monitoring is ongoing. Pre-project monitoring is ongoing for the phase that is in this proposal and planning for the work is progressing satisfactorily. Source: Proposal, quarterly reports, monitoring reports.\*

#### **REQUESTS FOR NEXT-PHASE FUNDING**

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

**3d2. If the answer is yes, list previous-phase project number(s) here. If the answer is no, move on to item 4.#99F11\***

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

**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.#yes\***

**3e3. Please provide detailed comments in support of your answers, including source of information (proposal or other source):#**See notes under 3c2.\*

#### **LOCAL INVOLVEMENT**

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

**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.#** The project has outstanding local support and participation from the local landowner and respected leader in the stakeholder community. This project is part of the Merced River Corridor Restoration planning and stakeholder and technical advisory committee process. Project proponents have held two project design planning meetings with the local technical stakeholder community. Technical project design aspects are much better coordinated that the first segment

of this four-phased restoration reach.\*

#### **ENVIRONMENTAL COMPLIANCE**

**4d. List any potential environmental compliance or access issues as identified in the PSP checklists.**# County Special or Conditional Use permits may be required for increase in heavy vehicle traffic on county roads.\*

**4e. Specifically highlight and comment on any regulatory issues listed above that may prevent the project from meeting the projected timeline.**# Previous gravel placement projects have come under scrutiny by local county governments due to increased traffic of larger vehicle traffic associated with project operations.\*

#### **COST**

**5a. Does the proposal include a detailed budget for each year of requested support? Type yes or no.**#Yes, table with fiscal year breakdown included. Inconsistencies in contingencies (10%).\*

**5b. Does the proposal include a detailed budget for each task identified? Type yes or no.**#Yes, breakdown by task per cost share partner.\*

**5c. Is the overhead clearly identified? Type yes or no.**#No, overhead costs are not identified.\*

**5d. Are project management costs clearly identified? Type yes or no.**#Yes, line item on tables.\*

**5e. Please provide detailed comments in support of your answers to questions 5a - 5d.**#Calculations are difficult to reconcile. Inconsistencies in amount of project cost increase and amount requested for funding.\*

#### **COST SHARING**

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

**6b. Are applicants specifically requesting either state or federal cost**



share dollars? Type state, federal, or doesn't matter.#Doesn't matter\*

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

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

**Matching funds:#n/a\***

**6c2.**

**6c3. Show percentage that cost sharing is of total amount of funding requested along with calculation.#CALFED (secured): 2,443,000 dollars; Four Pumps Preliminary Engineering (secured and spent): 40,000 dollars; Four Pumps Project Obligation (secured/available): 2,693,800 dollars; DFG Proposition 70 funding (currently spending): 250,000 dollars; AFRP (contingent FFY01): 500,000 dollars; Additional Four Pumps Obligation (proposed): 500,000 dollars; Additional CALFED Obligation (proposed): 699,101 dollars; Additional AFRP (proposed): 500,000 dollars; DFG-Tracy Funding (proposed): 250,000 dollars. Total: 7,875,901 dollars or 463.5% of requested funding.\***

**6d. Please provide detailed comments in support of your answers to questions 6a - 6c3.#All information requested has been provided by project proponent in a clear, concise, and understandable format.\***