

**i. Proposal number.# 2001-K217.\***

**ii. Short proposal title.# Juvenile Salmon Migratory Behavior in the Delta**

**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# A\***

**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.#** This research proposal will provide information regarding the manner in which chinook salmon migrate through the Delta. This will contribute to our understanding of the role of the Delta in chinook survival, and could help design management options to improve chinook survival.\*

**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.#** Goal 1, Objective 1. Achieve, first, recovery and then large self-sustaining population of chinook salmon.\*

**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.#** Yes. This proposal directly responds to the PSP request for Fishery Monitoring Assessment and Research regarding the importance of the Delta for juvenile salmonids.\*

**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.**# Yes. It is described in the following Stage 1 action: Complete targeted research and scientific evaluations needed to resolve the high priority issues and the twelve uncertainties identified in the Strategic Plan.\*

**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.**# Chinook salmon are identified as "recover" species in the MSCS. This study is consistent with MSCS conservation measures for chinook salmon. Specifically "continue research to determine causes for low outmigration survival of fish from the San Joaquin River in the south Delta and identify and implement measures to improve outmigration survival.\*

**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.**# The proposal has a useful conceptual model and a series of testable hypotheses. The data will be useful to evaluate potential operational scenarios to optimize the survival of juvenile chinook.\*

**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 proposal has three severable elements, each of which can be implemented independently for the same cost. A suggested priority is (1) South Delta Study, (2) North Delta Study, and (3) Central Delta Study. One caveat is that the use of radio tagged fish requires large fish, probably yearling-sized. Information derived from the analysis of yearling migration will probably not be applicable to smolt or fry chinook salmon. Yearling fish will emulate late-fall and perhaps winter-run chinook salmon as they emigrate through the Delta. The alternative to fully funding this proposal is to fund at least one of the individual tasks. The South Delta element is recommended as it is linked to the Vernalis Adaptive Management Program, and can be use to determine if it would be useful to fund the other two tasks in subsequent years.\*

## **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).# All chinook salmon races and**

steelhead trout likely will benefit from project. A moderate contribution to natural production to all anadromous salmonids is expected if the information generated influences Delta water management operations so as to decrease their negative impacts to salmonids. The benefits are moderately uncertain as the research is very complex and the questions being asked of the radio tag techniques are very complex. New information from project hopefully will result in a more productive salmonid community but that is not guaranteed. The contribution will not be immediate (10+ years) but duration could be long term if actions then based on the project data are sustained.\*

**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.# Chinook**

salmon: spring run-threatened; fall-run and late fall candidates; winter run-endangered; steelhead-theatened. No other special status species are likely to benefit. There is some potential for information gained on salmon by the project would have application to other fishes as to their behavior to the Delta environment. Particularly relative to how fish respond to delta hydrology and channel splits in their movement.\*

**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 relate directly**

to restoration

of natural channel and riparian habitat values. It may describe how fish react to natural versus altered channel environment and their respective hydrology. The project does not promote natural

processes. The duration of benefits to habitat values is not applicable as this is a monitoring project.\*

**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 could influence the use of (b)(2) or (b)(3) water if the**

project results improve our understanding as to the mechanisms influencing juvenile salmon behavior. The influence of CVP exports or delta inflow on salmon survival in the delta will be evaluated. For example (Task 2) radio tagging methods are proposed to determine the influence of reverse flows on salmon out-migration.\*

**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 has potential**

to implement water acquisition (b)(3) and dedicated water, (b)(2).\*

**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**

dedicated water, Section 3406 (b)(2) is most applicable to funding this proposal as it should result in information to more efficiently use (b)(2) water. The proposal is designed to provide information to more efficiently use resources of the CVPIA by improving our understanding as to how juvenile anadromous salmonids are influenced by CVPIA water management operations in the Delta. Such information may help restore

salmonid populations, address impacts of the CVP on salmonids, improve operational flexibility and help achieve balanced use of CVP water.\*

**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.** # Compliments work conducted under the Vernalis Adaptive Management Program as part of the San Joaquin River Agreement, and information developed will improve understanding on how to reduce effects of water diversions. Complements ongoing juvenile salmonid studies in the Delta. 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.#CVPIA\***

**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.#The applicant was funded by CVPIA in FY2000 to do behavioral studies on radio tagged chinook salmon smolts under element 3406(b)(2). No project name or number.\***

**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 proposal provides a good detailed overview of the work done with CVPIA funding in late 1999 and early 2000. Proponent presented results of that work to form the basic design of the new proposal for FY2001, explaining observed behavioral traits of tagged fish in the proposal. CVPIA staff and other IEP staff and stakeholders have heard oral presentations of the results, with positive support for continuing the work. Past CVPIA funded work will be supplemented in Task 3 to gain further information.\*

#### **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.#** The support of the scientific community for this proposal has been substantial.

This is important as scientists and managers realize that good science should be a major foundation of restoration actions.\*

#### **ENVIRONMENTAL COMPLIANCE**

**4d. List any potential environmental compliance or access issues as identified in the PSP checklists.#** Nothing is needed for the tagging of fish at the hatchery. Need to Consult with CDFG and the Corps for a 1600 and Rivers and Harbors Act permit respectively, for the placement of the recording receivers placed in navigable waterways.\*

**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.#** Project Management

costs are proposed as in-kind services in the amount of 45,000. Overhead is quoted as 40%. Applicant indicates that project is severable into three independent years of performance. The need for contiguous years of study is not addressed.\*

#### **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:# \$45,000 proposed\*

**6c2. Matching funds:# \$0\***

**6c3. Show percentage that cost sharing is of total amount of funding requested along with calculation.# 21% or  $45,000/210,000=.214285714$ \***

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