i. Proposal number.#2001-K218*

ii. Short proposal title.# Butte Creek, Big Chico Creek, and Sutter Bypass Chinook Salmon and Steelhead Evaluation*

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 monitoring/research proposal will contribute data to better understand chinook salmon-steelhead/habitat relationships. This will contribute to the recovery of chinook salmon and steelhead.*

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 fall/late-fall-run and spring-run chinook salmon, and steelhead.*

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.# The proposal addresses many elements primarily in the Fishery Monitoring Assessment, and Research element of the PSP. Specifically, conducting monitoring, assessment and research to improve our understanding of the ecological and physical processes affecting the fishery resources of the Central Valley.*

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.# This action is primarily a monitoring/research proposal and is not a Stage 1 action.*

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 and steelhead are MSCS "recover" species. This proposal is consistent with recommended conservation measures which include implement elements of the AFRP and recovery plans.*

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.# This proposal is quite varied and addresses two streams, three stocks of fish, and adult and juvenile life stages. The conceptual model is weak but the proposal does include testable hypotheses. One very interesting component is the paired release study to determine potential survival differences between juvenile chinook released in the Sutter Bypass versus fish released in the Sacramento River adjacent to the bypass.*

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 covers too many elements and could have been improved by better separation of the individual components. The conceptual model is weak and several models are needed. The hypotheses are adequate but additional hypotheses would have helped. Regardless, the proposed monitoring and research elements are all very important and needed.*

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).# Project is providing baseline life history information on Big Chico and Butte Creek spring run salmon and steelhead essential to the recovery and management of both species. Additionally, the juvenile spring run marking component provides key information on growth, harvest, and survival throughout the Delta and ocean residency phases. Information on Butte Creek steelhead population size and migration timing is virtually non-existent and is a key piece of this proposal. Additionally, limited information supports the enhanced juvenile rearing potential of the Sutter Bypass, which will be addressed in more detail by this project. The current project documented that spring-run chinook salmon remain in the Sutter Bypass in winter and early spring and grow to a large size before entering the mainstem Sacramento River. Sommer, et al. 2000, documented a similar result in the Yolo Bypass, finding that salmon grow at a faster rate in the bypass than in the mainstem Sacramento River. These results suggest that juvenile salmonids rearing in the bypasses grow to larger sizes than if they reared in the mainstem Sacramento River and enter the Bay-Delta system at a greater fitness level. These conditions may result in better survival rates and equate to greater year class production.*

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.# Research is specifically directed at Butte and Big Chico creeks spring run salmon (threatened) and steelhead (threatened), and additionally is providing key life history information for all upper Sacramento River fish which are traversing the Sutter Bypass reach of Butte Creek. Special status upper Sacramento River species include the state and/or federally listed winter (endangered) and spring run salmon, steelhead, and splittail (threatened) and additionally other CVPIA priority species such as green and white sturgeon, striped bass and shad.*

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.# Project is generally basic life history research but will provide key information relative to rearing of juvenile fish within the Sutter Bypass, a key component of assessing salmonid life history habitat needs and managing flows and riparian habitat in the bypass.*

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).# Project is generally basic life history research but will provide key information relative to rearing of juvenile fish within the Sutter Bypass, a key component of assessing and managing flows, among which is the recent water exchange agreement with the U. S Bureau of Reclamation , which provides 40 cfs in Butte Creek from October through June and could also help to define additional flow instream flow acquisitions under CVPIA Section 3406(b)(3).*

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 is providing key information relative to the identification, implementation and post project modification of restoration projects implemented under the CVPIA Anadromous Fish Restoration Program, Anadromous Fish Screen Program,and water acquisition program. Additionally, some components of the project are fulfilling the requirements of the Comprehensive Assessment and Monitoring Program. Project provides information on migratory pathways, time of migration, relative abundance, and growth , *

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 proposal funds additional components of an ongoing research project being conducted by the California Department of Fish and Game. This phase of the project will continue the development of spring salmon life history in Butte and Big Chico Creeks, evaluate steelhead migration timing and abundance in Butte Creek, and evaluate the importance of the Stutter Bypass to rearing juvenile salmon. This is a key ongoing research project vital to the implementation and adaptive management of restoration efforts implemented under the CVPIA and CALFED ERP. Project is directly implementing and/or developing information related to the CVPIA AFRP, AFSP, CAMP, Habitat Restoration Program and Water Acquisition Program. The project is an important component of the CVPIA AFRP goal of doubling the natural production of anadromous fish in the Central Valley and implementation of projects in the CVPIA Focus of Sacramento River Basin spring-run salmon and steelhead, for Big Chico and Butte Creeks. Project implements AFRP Butte Creek

evaluation 14. This is a key research project vital to the assessment of restoration efforts that specifically benefit the state and/or federally listed Butte and Big Chico Creek spring run salmon and steelhead. Additionally, within the Butte Sink and Stutter Bypass reaches of Butte Creek, the project benefits all upper Sacramento River anadromous salmonids, including state and/or federally listed winter and spring run salmon, steelhead, and splittail. Information generated by this project has been extremely beneficial in developing local stakeholder participation and buy-in for implementation of restoration projects in the Big Chico and Butte creek Watersheds. Additionally, project is providing, and will provide, key information relative to population recovery numbers for the eventual de-listing of spring run salmon and steelhead.*

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 CALFED/CVPIA projects on Butte Creek, including reconstruction of Parrott-Phelan Dam fish ladder and screen, removal of Pherrin and McGowan dams, installation of Wester Canal Water District siphon, and bifurcation at Sanborn Slough. 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.#FGR-4974-IF - Butte Creek Spring-Run Chinook Salmon-Juvenile Outmigration and Life History Evaluation*

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):#Project has documented life history strategies for spring-run chinook in Butte and Big Chico Creeks, as included in proposal and attached summary report "Butte Creek Spring-Run Chinook Salmon, Oncorhynchus tshawystcha, Juvenile Out-migration and Life History. Source: Proposal, 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.#FGR-4974-IF*

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):#Project to date has marked in excess of 150,000 naturally produced spring-run salmon, and will continue to mark additional year classes as the project progresses. Project should be extended to recover tagged salmon released to date, increase salmon releases, and continue evaluation for future restoration efforts. Migration patterns and adult escapements have been completed, which are essential to the recovery and management of Butte Creek spring run salmon. Source: Proposal, reports, CVPIA staff knowledge*

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.# Project has consistently closely coordinated with all local stakeholder groups and restoration projects being implemented under CVPIA, CALFED and other restoration programs, and there are no known local issues of significance.*

ENVIRONMENTAL COMPLIANCE

4d. List any potential environmental compliance or access issues as identified in the PSP checklists.# This project will have to comply with both CESA, CEQA, NEPA, and ESA. Although this project is a ?research project?, the primary target species is a State threatened species. As such, a categorical exemption does not apply.*

4e. Specifically highlight and comment on any regulatory issues listed above that may prevent the project from meeting the projected timeline.# See above 4d*

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.#no*

5e. Please provide detailed comments in support of your answers to questions 5a - 5d.# Three years of funding to support personnel costs for fishery technician, biologist, data analyst and campus coordinator. OH rate quoted at 18.5% for both federal and state CALFED funding. Applicant did not indicate if project could be funded annually in lieu of on the 3-year basis requested.*

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:# $495,000 proposed*

6c2. Matching funds:# $294,000 proposed*

6c3. Show percentage that cost sharing is of total amount of funding requested along with calculation.# approx. 50% with no supporting calculation*

6d. Please provide detailed comments in support of your answers to questions
6a - 6c3.# This proposal requests partial funding for a continuing project. Prior year cost share supporters are SFRA, CDFG and Proposition 204. Applicant indicated on summary sheet that cost share totaled 789,000 for three years, but narratively indicated on page 11 that the cost share funding constitutes more than 50% of the total project costs. Total project costs were not provided by the applicant.*