i. Proposal number.#2001-C208*

ii. Short proposal title .# Tuolumne River Fine Sediment Management*****

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# The proposed project would likely make incremental contributions to Goal 1 (at-risk species--fall-run chinook); Goal 2 (rehabilitate natural processes--sediment budget); goal 3 (harvested species--fall-run chinook); goal 4 (protect/restore habitats--aquatic spawning habitat); and Goal 6 (water quality--by reducing turbidity).*

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. As the proposal states, Gasburg Creek has been identified as a major source of fine sediment into the primary spawning reach of the mainstem Tuolumne, so the proposed project would likely make significant contributions to ERP goals by quickly improving spawning habitat for fall-run chinook. The attempt to quantify a relationship between gravel permeability and egg survival and emergence would also be very valuable.*

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 would likely make a significant contribution to habitat- and process-oriented objectives (2-7 , 4-2) by better balancing the fine sediment regime, thereby enhancing spawning habitat. Contributing to these objectives would, in turn, likely make a significant contribution to species-oriented objectives (1-1, 3-1), principally fall-run chinook**.***

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.# 5 pts. The proposed project indirectly addresses a restoration action identified in the PSP under Channel Dynamics--sediment transport. The proposed project could give us a better understanding of discharge-fine sediment relationships.*

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.# 8 pts. The proposed project does directly address two Stage 1 actions identified in the Sacramento River, San Joaquin River and Tributaries bundle in the Implementation Plan: Actions 42 and 43--Tuolumne River sediment management plan and Tuolumne River implementation actions.*

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.# 8 pts. The proposed project would likely make a quick and significant contribution to recovering fall-run chinook salmon in the Touolumne, since the creek enters the mainstem in the primary spawning reach.*

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.# 9 pts. The proposed project would likely represent an important step toward better understanding how to balance the fine sediment regime on regulated streams where coarse sediment augmentation is necessary. There is some question about if gravel injection projects lose some of their value from fine sediment infiltration. Also, the attempt to quantify the relationships between gravel permeability and egg survival and emergence would mark a great contribution to better understanding how to restore ERP streams. The proposal also intends to evaluate the effectiveness of different management methods for cleansing spawning gravels, which would be applicable to other streams in the Bay-Delta system.*

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.# 9 pts. The proposed project could both make a significant contribution to ERP restoration goals and objectives, and our understanding of ecological processes on regulated streams. Gasburg Creek has already been identified as a major source of fine sediment for the mainstem Tuolumne, and it enters the mainstem in the primary spawning reach. So reducing the fine sediment contribution from Gasburg would likely make a quick benefit to fall-run chinook. Similarly, by evaluating different management methods for reducing fine sediment infiltration in mainstem channels, the proposed project would likely provide a valuable comparison to inform management decisions on other tributaries. The project proponents should also be encouraged to monitor macroinvertebrate production to determine how permeability affects trophic foodwebs. Or, the project proponent should be encouraged to coordinate with Larry Brown's proposed macroinvertebrate study if it is funded.*

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).# Fall-run chinook salmon and steelhead are expected to benefit from the project. The project is consistent with Tuolumne River Action 2 from the 1997 Revised Draft Restoration Plan for the AFRP, which reads: "Improve watershed management and restore and protect instream and riparian habitat, including consideration of restoring and replenishing spawning gravel and performing an integrated evaluation of biologic and geomorphic processes.? Excessive fine sediment in the Tuolumne River is thought to reduce production of the local salmon population. This conclusion is drawn from substrate composition and emergent fry trap work done by consultants for the Turlock and Modesto Irrigation Districts (Districts) in the late 1980's. But the data are far from conclusive on the extent to which fine sediment controls production relative to other factors. However, there are known sources that deliver an excess of fine sediment to the upper spawning section of the river and others that need to be better documented and quantified. This proposal applies a three tiered approach to the fine sediment issue. First is the sediment reduction strategy and restoration of a stream segment on Gasburg Creek, tributary to the Tuolumne River, to reduce fine sediment delivery to the Tuolumne spawning reach. Next is a pilot level fine sediment removal approach that tests the efficacy at five riffle sites. And last, is a field experiment that looks at the relationship between substrate permeability and egg to emergence survival. The Gasburg creek component will likely have a modest benefit by reducing potentially large inputs of fine sediments into a heavily used spawning section of the

river. Benefits of this action should accrue quickly as a result of the sediment settling basin, but this short-term fix will require maintenance; the Gasburg Creek watershed evaluation component will identify problems and solutions, but this proposal does not include implementation except for restoration of the short segment of Gasburg Creek at the lower end that runs through an abandoned sand mine site. The benefits of riffle cleaning are less certain, as is the longevity of any potential benefit, especially if fine sediment input continues at suspected elevated levels. This information could be used to further inform a long-term sediment management plan. The field experiment's value is in its potential to monitoring and adaptive management. If the experiment is successful it would provide information that could be used to develop an indicator that could be used to make inferences about ecological condition, the trajectory of that condition, and its potential implications to salmon survival.*

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 is a priority population for the AFRP. The fall-run chinook salmon was petitioned and considered for listing under the ESA but was determined to not meet the listing criteria at present. Secondarily, steelhead could also benefit from this action, although the extent to which the anadromous form occurs in the Tuolumne River is an uncertainty. The Central Valley steelhead is listed as threatened under the ESA. The primary community benefit of this action is likely to be at lower trophic levels that are critical to maintenance of salmon and other fish populations by maintaining substrate interstices required by aquatic invertebrates.*

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.# This fine-sediment management plan proposes a combination of construction and restoration to reduce fine sediment delivery to the Tuolumne River from know fine sediment sources; pilot level evaluation of experimental fine sediment removal from mainstem Tuolumne River riffles and pools; and research to better clarify the relationship between substrate permeability and egg to emergence survival of chinook salmon to test the hypothesis that gravel permeability is a good indicator of ecological condition. The primary natural channel and riparian habitat values and natural processes that would be accrued would be that of improved bed mobility and intergravel flow that would assist in maintenance of salmon spawning and rearing habitat and possibly improve juvenile survival. The Gasburg Creek sediment basin would not promote natural channel and habitat value in Gasburg Creek but the watershed evaluation could lead to prescriptions that would do so and ultimately lead to the removal of the sediment settling basin. The experimental portion of the project would not directly benefit natural channel and riparian habitat values.*

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 has a linkage to Section 3406(b)(3). To accrue maximum benefit from sediment reductions and gravel cleaning, the use of peak flows over and above what could be achieved through existing flow requirements may be needed. Water could be acquired to mobilize and flush fine sediments as a channel maintenance component of a sediment management program which would help maximize and protect accrued benefits from fine sediment reduction activities.*

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.# Although the Tuolumne River is not a CVP-controlled steam, the project could provide information that would benefit Section B(13) of the CVPIA, the Gravel Restoration Program. Monitoring riffles after being cleaned could provide information useful to determine longevity of accrued benefit. Also, the research component if successful could provide more information on the magnitude of expected benefits to salmon from projects such as gravel addition.*

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 effort is most appropriately funded by the CVPIA?s AFRP and helps address Tuolumne River Action 2 from the 1997 Revised Draft Restoration Plan for the AFRP. This project could benefit fall-run chinook salmon and steelhead through action and sediment management planning. This is a three tiered project that includes tributary (Gasburg Creek) watershed assessment and sediment reduction, experimental removal of fine sediments currently stored in Tuolumne River riffles, and a field experiment that looks at the relationship between substrate permeability and salmon egg to emergence survival. All will contribute to the development of a fine sediment management plan for the Tuolumne River. Each tier has different levels of benefit. The sediment settling basin and restoration of lower Gasburg Creek will have the most immediate benefits,

although the action does not support natural channel and riparian values to its fullest extent, but would promote natural processes in the mainstem Tuolumne river. Fine sediment removal from Tuolumne River riffles has less certain benefits, but is a pilot level effort designed to evaluate efficacy of such a technique on a larger scale. The benefits of such an action could be reduced unless hydrologic conditions over the long term promote bed mobility and scour to maintain a healthy subsurface environment. Components of the previously funded coarse sediment management plan by the AFRP will assist in this evaluation.*

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.#

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 project developed response to recommendations in the Tuolumne River Restoration Plan and is being coordinated with ongoing substitute permeability monitoring by the Tuolumne River Technical Advisory Committee (TRTAC). This project represents the fine sediment component of the Tuolumne River Sediment Management Plan, which is partially funded for the coarse sediment work.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 .#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.#

Tuolumne River Setback Levees and Annual Restoration - Mining Reach #1 - 7/11 Segment = CALFED 97M09, 98F06; CVPIA #1448-11332-97-J189

Tuolumne River 97M09, - Mining Reach # 2-MJ Ruddy segment= CALFED 99F02, CVPIA #11332 - 9J025=CALFED SRP 9/10 - CALFED 97M08, CVPIA 1448-11332-97J189*

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):#Proponent has successfully completed or is progressing on earlier projects. Source: Proposal, quarterly reports*

REQUESTS FOR NOXT-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.# 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.# A minimal approach is described for landowner coordination, but there is very little discussion about more extensive outreach associated with the effort. At some point in time the Gasburg Creek restoration component could serve as a good interpretive or outreach opportunity. This

proposal has the support of the Tuolumne River Technical Advisory Committee but will require close coordination with its constituent agencies as planning and implementation proceeds.*

ENVIRONMENTAL COMPLIANCE
4d. List any potential environmental compliance or access issues as identified in the PSP checklists.# None*****

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, for three years*****

5b. Does the proposal include a detailed budget for each task identified? Type yes or no.#Yes, under Tables 5 and 6*

5c. Is the overhead clearly identified? Type yes or no.#No, in tables 5 and 6 it is stated that certain items are subject to overhead but it does not specify which ones nor what the overhead rate is.*

5d. Are project management costs clearly identified? Type yes or no.#Yes, under Tables 3a and 5.*

5e. Please provide detailed comments in support of your answers to questions 5a - 5d.#Very detailed tables; only item lacking is the exact amount of overhead.*

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*

6c2. Matching funds:#National Fish and Wildlife Foundation (proposed matching): 100,000 dollars.*

6c3. Show percentage that cost sharing is of total amount of funding requested along with calculation.#National Fish and Wildlife Foundation: 100,000 dollars; Carl Mesick Consultants: 82,030 dollars; USACE: 14,496 dollars; CVPIA: 200,000 dollars; CVPIA Anadromous Fish Restoration Program: 50,000 dollars. Total: 446,526 dollars or 18%*

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.*