

i. Proposal number:# 2001-F-208

ii. Short proposal title .# Hg Fate and Transport Models*

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#See Item 1g***

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 .#See Item 1g.*

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 .#See item 1g.*

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.#See Item 1g.*

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 0"recover", "contribute to recovery" or "maintain" each species.#See Item 1g.*

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.#See Item 1g.*

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.#Not eligible for CALFED funding.*

1h. Initials.#

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 natural production of San Joaquin River fall-run chinook salmon and all races of Sacramento River-Basin chinook salmon, steelhead, white and green sturgeon, delta smelt, Sacramento splittail and various other species at all trophic levels in the Delta food web could benefit from this proposal. However, neither the expected magnitude of the contribution to natural production nor the certainty of the expected benefits can be determined because the extent to which mercury affects aquatic species in the Delta is largely unknown. The proposed study will model hydrodynamics, sediment transport and mercury cycling within the Delta.. No data are presented to suggest that salmonid or other Delta species contaminants burdens are a concern. Rather, models of mercury transport transportation and uptake will be developed to test hypotheses of mercury and methylated mercury exposure to Delta aquatic organisms. The proposal will conclude all work by December 2002.. Therefore, the immediacy of the expected contribution (i.e. utilization of the models developed in this proposal by adaptive management schemes intended to reduce the presence of mercury in the Delta aquatic habitat) will be realized two years after the work in the proposal is initiated. The duration of the expected contribution cannot be determined until the research is completed.*

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.#

Listed species, anadromous species and special status species with greatest residence time in the Delta/Estuary such as delta smelt and Sacramento splittail would be expected to be at greatest risk of exposure to mercury uptake; species such as steelhead and chinook salmon that typically have short residence time in the Delta/Estuary would be expected to be at lower risk.*

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 would protect and restore natural channel values and promote natural processes if the models to be developed and run in this proposal demonstrate first, that mercury is present in these areas in harmful concentrations and second, that some management action can be taken to reduce the harmful concentration. If the project neither demonstrates a problem, or a solution to a problem, the issue is moot. The project would be conducted over the two year period February 2001, through December 2002. The immediacy of the benefits to the natural channel values will not be realized until the project work is completed in December 2002. The duration of

the expected contribution cannot be determined until the project is completed and all reports and data developed in the project become available.*

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).# No evidence is presented to indicate whether/how the project would contribute to efforts to modify CVP operations. No such relationship is apparent.*

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 does not obviously contribute to implementation of the supporting measures in the CVPIA.*

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 appropriate for funding support from the Anadromous Fish Restoration Program. The project could contribute to meeting the goal of the Anadromous Fish Restoration Program to increase the natural production of anadromous fish by reducing the toxic affects of mercury contamination in the Delta. The proposal intends to model hydrodynamics, sediment transport, and mercury cycling and transport with the Sacramento-San Joaquin Delta. The models are intended to establish a link between mercury sources in the aquatic environment and mercury levels in fish in the Delta. Models will then be run to reflect the effects of source reductions and management decisions over time periods of 100 years. The proposal is consistent with Central Valley-Wide Action No.3 (Reduce toxic chemical and trace element.) in the Revised Draft Restoration Plan for the Anadromous Fish Restoration Program, May 30, 1997; this is identified as a high priority in the draft plan. The strength of the proposal is that the entire process from evaluation of the problem to the development of potential solutions will be done in one contiguous effort and under the singular control of one program manager. The weakness of the proposal is that it will only produce information that could ultimately be used in development of a mercury management plan. There is no guarantee if/when funding to implement the measures in such a plan will be secured.*

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. #CALFED funded projects with Hg-related and sediment transport research are collaborating with project proponent to complete this study on mercury and sediment transport, developing a model to predict Hg "hot spots" of exposure. CALFED projects include 99B06, 97B02, and 97C05. This project would provide the modeling links defined as needed for project 99B06, and help calibrate models developed in 97B02 and 97C05. Will help provide input into later decisions on where to best restore habitat in the Delta, based on potential location of mercury "hot spots". Information source: Proposal, CALFED tracking table, meeting notes from workshop on mercury, August 1999.*

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.# Entities involved with mercury management plans, such as State Regional Water Quality Control boards, should benefit from the products developed in this proposal and would be expected to support this work.

Fish and wildlife management agencies would be expected to support the development of the models in this proposal that would address the impact of mercury on the ecosystem.

Public health organizations would be expected to support the development of the models and other related techniques in this proposal that describe the contaminant burdens in organisms bound for human consumption.*

ENVIRONMENTAL COMPLIANCE

4d. List any potential environmental compliance or access issues as identified in the PSP checklists.# No issues identified as this is a modeling project.*

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 2 years*

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.# Overhead applies only to salary and is at 184%*

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.# 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:# n/a*

6c3. Show percentage that cost sharing is of total amount of funding requested along with calculation.# Sacramento River Watershed Program: 40,000

dollars; Danish Hydraulics Institute: 93,000 dollars. Total: 133,000 dollars
or 34%*

**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*